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From the Editor:

Dear Reader,

What was the reason for last year's food price increase? Was it a temporary phenomenon, caused by droughts, or was it the result of long-term changes in supply and demand fundamentals? The article by von Braun in this volume argues that it is mainly the changes in demand and supply over the past few years that have lead to price hikes. Troublingly, there are many factors that can lead to a permanent, or at least long-term, price rise on agricultural products. Examples include increased incomes, and hence increased food consumption, and furthermore changes in the structure of consumption itself in the fast-growing developing countries. Then there are the negative effects of global warming on food production and some distortionary policies in support of biofuels (though there are positive examples of biofuels production as Moreira's account of Brazil's experience shows).

To change the situation developed countries need to remove trade barriers, and developing countries need to increase their efforts to stimulate agricultural investments. In most developing and transition countries such efforts must also include the removal of distortions to agricultural incentives (Anderson and Swinnen). Land reform and privatization of land to small family farmers can help to increase productivity, as Moldova's experience has shown (Cimpoies and Lerman), however, even a rapid and intense land reform, such as in Albania, does not guarantee the speedy development of agricultural areas (Miluka et al.). The presence of transaction costs is one of the major determinants of agricultural production structure (Ciaian et al.), and measures aimed at reducing such costs and improving farmers' access to the markets (Shilpi and Umali-Deininger) should be part of any policy program aimed at promoting rural economic development.

Having such programs is particularly important for poor agriculture-based and transforming countries, where the majority of the population lives in rural areas and is distinctly poorer than the urban population (summary of the World Development Report), and, consequently, more vulnerable to various shocks, including health shocks (Yao). Moreover, economic growth in poor and transforming countries has led to a widening income gap between urban and rural dwellers (the World Development Report, and Gerry et al. on Russia). So special policies designed to promote rural development and address rural poverty issues, including policies fostering non-agricultural employment, need to be put in place (Serova et al.). Implementation of such policies should be put in the hands of municipal authorities. Thus, providing proper incentives to municipalities — via elections — is an important part of the rural development agenda.

A related question on the efficiency of government spending is addressed in the article by Gray et al. in the New Findings section of this issue. To be effective, a policy needs to receive fairly large support from the population; ways of strengthening such support is further studied in the article by Denisova et al. Specifically, the latter looks at the attitudes towards the revision of privatization in transition countries in Europe and Central Asia and discusses why such attitudes prevail.

Ksenia Yudaeva, Managing Editor

Agriculture for Development

The prospects for implementing agriculture-for-development agenda are quite bright today

Three out of four poor people in developing countries live in rural areas and most depend on agriculture for their livelihoods. Thus, a more dynamic and inclusive economy in terms of agriculture could dramatically reduce rural poverty.

There are already many success stories of agriculture as a major force for poverty reduction. Most recently, China's rapid growth in agriculture has been largely responsible for the decline in rural poverty from 53% in 1981 to 8% in 2001. Cross-country estimates show that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture.

Parallel to these successes are numerous failures in getting agriculture moving. Most striking is the still unsatisfactory performance of agriculture in Sub-Saharan Africa. Another challenge is the reallocation of labor out of agriculture in those regions/countries where the accelerated growth in nonagricultural sectors has concentrated poverty in rural areas and widened rural-urban income disparities. This subsequently becomes a major source of political tension and insecurity. Finally, agriculture is a major user and a frequent abuser of natural resources in most places.

Heterogeneity Defines the Rural World

Economic and social heterogeneity is a defining characteristic of rural areas. Large commercial farmers coexist with smallholders. Some smallholders deliver surpluses to food markets and share in the benefits of expanding markets for new high-value agricultural activities. However, many others are engaged in subsistence farming, consuming most of the produced food and participating in markets as buyers of food and sellers of labor.

Heterogeneity is found in the rural labor market where there are many low-skilled, poorly remunerated agricultural jobs and a small number of high-skilled jobs that offer workers pathways out of poverty. Heterogeneity is found in the rural nonfarm economy where low-productivity self and wage employment coexists with employment in dynamic enterprises. And it is found as an outcome of migration, which lifts some of the rural poor out of poverty but condemns others to urban slums and continued poverty.

Three Distinct Worlds

Agriculture operates in three distinct worlds — one agriculture-based, one transforming, and one urbanized (see Table).

- In many poor a*griculture-based countries* (most of them in Sub-Saharan Africa), agriculture still makes up a high share of GDP and employment.
- In *transforming countries* in the US$400-US$1,800 GDP per capita range, many of them in Asia, North Africa and the Middle East and some in Europe (e.g. Albania) and Central Asia, agriculture is on average 20% of GDP and 43% of the labor force. Despite rapid growth and declining poverty rates in many of these countries, poverty remains widespread and largely rural.
- The ratios of agriculture in GDP and in the labor force decline to 8% and 22%, respectively, in countries in the US$1,800-US$8,100 GDP per capita range, many of them in Eastern Europe and Latin America. In these *urbanized countries* poverty is no longer primarily a rural phenomenon, although the US$2-a-day poverty incidence is 63% higher than in urban areas.

Countries follow evolutionary paths that can move them from one country type to another. China and India, for instance, moved from the agriculture-based to the transforming group over the past 20 years.

In each of the three groups of countries the agriculture-for-development agenda differs in pursuing sustainable growth and reducing poverty. In the agriculture-based economies the key policy challenge is to help agriculture play its role as an engine of growth and poverty reduction and to ignite a productivity revolution in smallholder farming. The agendas for transforming and urbanized economies are examined below.

Characteristics of the Three Country Types, 2005

	Agriculture –based countries	Transforming countries	Urbanized countries
Rural population (millions), 2005	417	2,220	255
Share of population rural (%), 2005	68	63	26
Share of agriculture in GDP (%), 2005	29	13	6
Annual agricultural GDP growth, 1993-2005 (%)	4.0	2.9	2.2
Annual nonagricultural GDP growth, 1993-2005 (%)	3.5	7.0	2.7
Number of rural poor (millions), 2002	170	583	32
Rural poverty rate, 2002 (%)	51	28	13

Transforming Countries: Addressing Urban–Rural Gap

In transforming countries agriculture is almost exclusively in the hands of smallholders. Continuing demographic pressures imply rapidly declining farm sizes, with acute competition over access to water, rising urban demands and deteriorating quality from runoffs.

A distinguishing feature of transforming economies is the widening gap between rural and urban incomes (see Figure). In China the incidence of urban poverty declined twice as fast as that of rural poverty between 1980 and 2001; in Indonesia, this decline was 2.5 times as fast over the same period. The transition of people out of agriculture and rural areas is not keeping pace with the restructuring of economies away from agriculture. In China, longstanding policy impediments to labor mobility held the rural population back while urban economies were expanding rapidly. In India, the low level and quality of education of most rural workers is mainly responsible for their inability to find jobs in the booming services economy.

The main challenge for transforming countries is to reduce the rapidly rising urban-rural income gap and rural poverty. All pathways out of poverty should be mobilized: farming, employment in agriculture and the rural nonfarm economy, and migration.

Rapidly expanding markets for high-value products — especially horticulture, poultry, fish, and dairy — offer an opportunity to diversify farming systems and develop a competitive and labor-intensive smallholder sector. Export markets for such products are also accessible because transforming countries have a comparative advantage in labor and management-intensive activities. The poverty impact of growth in the agricultural sector will thus depend increasingly on the poor connecting to these new growth processes, either as smallholders or laborers. Vertically integrated supply chains may pose particular challenges for them, although recent evidence from China suggests that small and poor farmers take an active part in China's rapidly expanding horticulture economy.

Agriculture alone cannot relieve rural poverty; rural nonfarm employment is also important. In India and Indonesia, for example, growth in rural services has contributed at least as much as growth in agriculture toward reducing poverty. Growth in rural nonfarm employment often remains closely linked to growth in agriculture, as agriculture becomes a larger supplier of intermediate inputs to other sectors such as processed foods. However, with urbanization and globalization, growth in nonfarm employment occurs increasingly independently of agriculture. Regions in India with the slowest growth in agricultural productivity had the largest increase in the rural nonfarm tradable sector. When capital and products are mobile, investors seek low-wage opportunities in areas that did not increase their incomes through higher agricultural productivity.

Faster absorption of the agricultural labor force in the urban economy should be facilitated through investments in human capital and labor market policies, such as vocational training, transport services, and job matching. Complementing these policies with those that foster rural income growth and slow migration out of the traditional sector can provide important synergies.

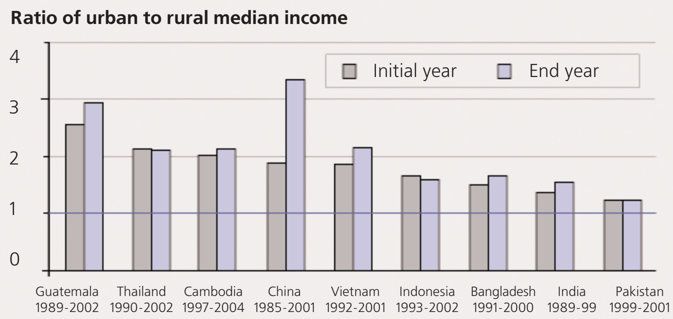
Urbanized Countries: Linking Smallholders to Modern Food Markets

Agriculture makes up only 6% of the urbanized economies and contributes proportionately to growth, however the agribusiness and food industry, and services can account for 30% of GDP. Although almost three-quarters of the population of urbanized countries lives in urban areas, 45% of the poor are in rural areas, and 18% of the labor force still works in agriculture.

The broad goal is to capitalize on the rapid expansion of modern domestic food markets and booming agricultural subsectors to create opportunities for smallholders and sharply reduce the remaining rural poverty, which remains stubbornly high. The urbanized countries are experiencing the supermarket revolution in food retailing. For smallholders, being competitive in supplying supermarkets is a major challenge that requires meeting strict standards and achieving scale in delivery, for which effective producer organizations are essential.

Increasing the access of smallholders to assets, particularly land, and increasing their voice in unequal societies can enhance the size and competitiveness of the smallholder sector. Beyond farming, territorial approaches are being pursued to promote local employment through interlinked farming and rural agroindustry. Agricultural growth is especially important to improve well-being in geographic pockets of poverty with good agricultural potential. For regions without such potential, the transition out of agriculture and the provision of environmental services offer better prospects. But support to the agricultural component of the livelihoods of subsistence farmers will remain an imperative for many years.

Urban–Rural Income Disparity Has Increased in Most Transforming Countries



Source: WDR 2008 team, based on national household surveys

Implementing the Agenda

The agriculture-for-development agenda presents two challenges for implementation. One is managing the political economy of agricultural policies to overcome policy biases, underinvestment, and misinvestment. The other is strengthening governance for the implementation of agricultural policies.

The prospects are brighter today than they were two decades ago. The anti-agriculture bias in macroeconomic policies has been reduced thanks to broader economic reforms. Agriculture is likely to benefit from general governance reforms, such as decentralization and public sector management reforms. But reforms specific to using agriculture for development are yet to be widely implemented.

There is also evidence that the political economy has been changing in favor of agriculture and rural development. Democratization and the rise of participatory policymaking have increased the possibilities for smallholders and the rural poor to raise their political voice. The private agribusiness sector has become more vibrant, especially in the transforming and urbanized countries. New, powerful actors have entered agricultural value chains, and they have an economic interest in a dynamic and prosperous agricultural sector and a voice in political affairs. Yet these improved conditions alone do not guarantee the more successful use of agriculture for development — smallholders must have their voices heard in political affairs, and policymakers and donors must seize the new opportunities.

Full text of the report can be accessed at: www.worldbank.org/wdr2008. **BT**

Distortions to Agricultural Incentives in Transition Economies

Average protection levels in ECA are relatively low, yet some countries need to do more

Kym Anderson and Johan Swinnen

Incentives for agricultural producers and food consumers were massively distorted in European and Central Asia (ECA) transition countries under central planning. The distortions resulted from a combination of collective farm property rights, centrally controlled organization of production allocation, processing, input provision and marketing, price-setting unrelated to demand-supply conditions, and state controlled trading and exchange rate systems. There may have been a net subsidization of agriculture relative to other sectors, but data are too inadequate to tell with certainty.

How have policies affecting agriculture evolved in the region over the past two decades? We assess the changing landscape of agricultural protection or taxation patterns in 11 Central and Eastern European (CEE) countries (the ten new EU members plus Turkey), and seven CIS countries. Together these countries in 2000-04 accounted for 89% of the region's agricultural value added, 91% of its population and 95% of total GDP.

Our analysis shows that beginning in the early 1990s, many trade and price distortions were removed throughout the region. Price, exchange rate, and trade policies were all liberalized, subsidies were cut, hard budget constraints were introduced, property rights were privatized, and production decisions were shifted to companies and households. Support for agriculture fell to very low levels (Table 1). Between 1992 and 1995, nominal rates of assistance to agriculture (NRA, defined as the percentage by which government policies have raised gross returns to producers above what they would be without the government's intervention) averaged just 12% in the CEE-10 and were below zero in Bulgaria, the three Baltic nations, Russia and Ukraine.

In the second half of the 1990s, assistance to agriculture increased again, to an average of 22% in 1996-99 for all ECA countries, before it fell somewhat to an average of 17% in 2000-03.

Table 1. Nominal Rates of Assistance to Agriculture*, 1992 to 2005 (percent)

	1992–95	1996–99	2000–03	2004–05
Bulgaria	-19	-10	0	13
Czech Rep	20	19	27	na
Estonia	-14	20	20	na
Hungary	19	18	34	na
Latvia	-15	30	36	na
Lithuania	-19	29	32	na
Poland	10	24	7	na
Romania	24	30	55	67
Slovakia	28	26	30	na
Slovenia	64	79	80	na
CEE-10	12	22	24	na
Turkey	15	25	22	30
Russia	-8	25	13	22
Ukraine	-21	-1	-11	-3
All ECA studied countries	**3**	**22**	**17**	**na**

** Weighted average, with weights based on gross value of agricultural production at undistorted prices*
Source: Ch. 1 of Anderson. K. and J. Swinnen (eds.), Distortions to Agricultural Incentives in Europe's Transition Economies, Washington DC: World Bank, forthcoming 2008.

Distortion levels vary considerably among countries and across commodities. The CEE-8 countries moved first and most rapidly towards market-based systems. The reforms in Romania and Bulgaria were initially half-hearted and involved many inconsistencies during most of the 1990s, with government interventions continuing to heavily distort incentives. In Russia, Kazakhstan and Ukraine, governments continued important controls of the agricultural economy through a variety of interventions such as regional trade controls, input supply controls, and the continuation of soft budget constraints. While the Kyrgyz Republic liberalized relatively quickly, the other Central Asian countries have restricted reforms and liberalization. In particular, major controls still remain in place in Uzbekistan and Turkmenistan.

In the 1980s virtually all commodities were supported, but some more than others. With transition there is substantial variation among commodities and in the CIS producers of some commodities are now effectively taxed. Government intervention and controls are especially important in a few key commodities within each country, often because of food security concerns or the need to raise government revenue to meet other priorities, or because the government wishes to extract rents from those activities.

Changes in Agricultural Policy Instruments

In ECA, most support for agriculture was and, despite the reforms, still is provided via highly distortive and hence inefficient policy instruments. Under the communist regime, output price distortions (which accounted for more than 80% of the NRA) were complemented with heavy distortions in input prices, in particular low fertilizer and energy prices and subsidized irrigation, while in the 1990s the majority of farm support in the CEE countries was provided by output prices being kept above border prices.

In the CIS countries, soft loans and debt forgiveness continue to play an important role, although fiscal constraints for most of the 1990s limited the government's ability to support farms by this means. Due to the improved budgetary situation this may well become an even more important source of government assistance to farmers in the near future.

The inefficiency of policy instruments is typically correlated with the distortions that they cause. In general, the most efficient instruments (such as lump sum transfers) cause least distortions. In contrast, price and trade interventions, such as price supports or import tariffs, are much less efficient.

The efficiency of policies used by ECA countries is often low. In replacing budgetary transfers to the food sector under the communist system, a different set of inefficiencies has been introduced, such as transfers from consumers to producers by way of import restrictions. Up to the mid-1990s, policies in all countries except Turkey and Slovenia imposed the equivalent of low or negative taxes on food consumers, which thereafter have become positive.

Many of the direct subsidies to producers do not reach the farmer. This is due to a combination of institutional constraints and induced reactions to policy changes. For example, benefits targeted at the farms dissipate to other groups, e.g. agribusiness or food industries or landowners; they often go to a subset of the farms, typically those with the best political connections. Other important constraints include poor physical infrastructure; corruption; inadequate human capital; the incompatibility between the large-scale input supplying or food processing firms and the small farmers; as well as policy interventions, such as trade controls by regional authorities.

Table 2: Relative per Capita Income*, Agricultural Comparative Advantage Index, and NRA, 2000–03**

	Relative per capita income	Agricult. compara-tive advantage	NRA
Slovenia	216	52	80
Czech Rep.	135	61	29
Hungary	122	90	34
Estonia	102	199	20
Poland	93	105	7
Slovakia	92	57	30
Lithuania	80	176	32
Latvia	76	364	36
Turkey	55	131	22
Russia	47	53	13
Romania	41	74	55
Bulgaria	39	143	0
Ukraine	17	112	-11

* *Income per capita relative to the world average, 2000-04*
** *Agriculture and food's share of national exports as a percentage of agriculture and food's share of global exports, 2000-04*
Source: Ch. 1 of Anderson. K. and J. Swinnen (eds.), Distortions to Agricultural Incentives in Europe's Transition Economies.

Political Economy Forces Behind Policy Choices

On average, farmer assistance tends to be higher in higher-income countries, and in countries with weaker comparative advantage in agriculture (Table 2). However, these correlations are becoming weaker over time as international forces (particularly accession to the EU) become relatively more important than domestic political forces.

The forces underlying the political economy of agricultural taxation and assistance in the ECA region have changed considerably during transition:

- *Rent extraction.* Heavy negative government intervention tends to be concentrated on commodities that have the potential to provide export tax revenue for the government. This is especially the case in the cotton sectors of Uzbekistan, Turkmenistan and Tajikistan, where governments expressly control the cotton value chain so as to extract rents.
- *Increases in agricultural support* in the second half of the 1990s in CEE and more recently in the CIS are the result of the interaction between domestic political forces and international events. The EU accession process has induced changes in policy instruments and increased support in CEE. In the CIS the improvements in the government's budgetary situation has reduced fiscal constraints on agricultural subsidies.
- *Crises, political change, and reforms.* Most often the policy reforms come only after new elections induce a change in government, reflecting changed electoral preferences. However, democratic political change is not a sufficient condition in itself for better agricultural policies, as evidenced for example in Ukraine and the Kyrgyz Republic.
- *International agreements.* The CEE-8 countries that joined the EU in 2004 have raised domestic agricultural and food prices and have been gradually increasing subsidies towards EU-15 levels, and have changed trade policies and improved regulatory environment to stimulate their markets. WTO accession has not strongly disciplined ECA countries.

Prospects for Reducing Distortions

With the major reductions in distortions to agricultural incentives in ECA over the past two decades, average protection levels there are now relatively low. However, some of the ECA countries still have considerable scope for removing the remaining distortions.

- Removing the most distortive taxation of agriculture would allow a substantial improvement in incentives to domestic producers in the cotton sectors in some Central Asian countries.
- Countries should focus on efficiency improvements, i.e. a shift from a focus on quantity and minimum standards to a policy framework focused on quality and high standards. Other reforms remain important, e.g. macroeconomic and regulatory reforms to stimulate food industry investment, labor market reforms to enhance off-farm employment opportunities, and credit reforms to stimulate access to rural credit.
- Increased funding should be focused on upgrading infrastructure, quality and efficiency of the agri-food system, and the introduction or improvements of a variety of institutions to support rural markets.
- Competition and anti-trust policy are important across the region. In supply chains where farms have to sell their products to trading, processing, and retailing companies, the ability to choose freely between companies is of crucial importance in getting better returns.
- Across ECA countries, and particularly in countries where the contiued high energy prices may lead to 'Dutch disease' effects for agriculture, exchange rate distortions and adjustments will continue to have very substantial impacts on farmers' incentives.

While it is important to understand the political economic forces identified above that may constrain the prospects for further reducing distortions to agricultural incentives in the foreseeable future, it is equally important to identify areas where there is potential for policy improvement so that advisors can try to influence outcomes whenever and wherever opportunities arise.

Kym Anderson is George Gollin Professor of Economics at the University of Adelaide, Australia, and a CEPR Research Fellow; Johan Swinnen is Professor of Economics and Director of LICOS Center for Institutions and Economic Performance at the Katholieke Universiteit Leuven, Belgium. The article is based on the summary chapter of the World Bank book "Distortions to Agricultural Incentives in Europe's Transition Economies" (forthcoming in mid-2008). **BT**

The World Food Equation, Rewritten

Supply and demand changes have led to imbalances on the food markets and drastic price increases

Joachim von Braun

The world food situation is currently being rapidly redefined by new driving forces — income growth, climate change, high energy prices, globalization, and urbanization. The influence of the private sector in the world food system, especially the leverage of food retailers, is also rapidly increasing. Changes in food availability, rising commodity prices, and new producer—consumer linkages have crucial implications for the livelihoods of poor and food-insecure people.

Demand: Economic Growth and Population Change

Many parts of the developing world have experienced high economic growth in recent years. Developing Asia grew on average by 9% per annum between 2004 and 2006, and Sub-Saharan Africa by about 6% during the same period. This growth is a central force of change on the demand side of the world food equation. High income growth in low income countries readily translates into increased consumption of food.

Another major force altering the food equation is shifting rural-urban populations and the resulting impact on spending and consumer preferences. Within the next three decades, 61% of the world's populace is expected to live in urban areas.

Higher incomes, urbanization, and changing preferences are raising domestic consumer demand for high-value products in developing countries. The composition of food budgets is shifting from the consumption of grains and other staple crops to vegetables, fruits, meat, dairy, and fish. The demand for ready-to-cook and ready-to-eat foods is also rising, particularly in urban areas. These consumption patterns are expected to be reinforced in the future.

Supply: Climate Change and the Corporate Food System

Risks from climate change will have adverse impacts on food production, compounding the challenge of meeting global food demand. With the increased risk of droughts and floods due to rising temperatures, crop-yield losses are imminent. The impact of global warming on developing countries will be much more severe than on developed ones. Agricultural output in developing countries is projected to decline by 20%, while output in industrial countries is projected to decline by 6%. Technological change is unlikely to alleviate output losses and increase yields to a rate that would keep up with growing food demand.

In addition, the growing power and leverage of international corporations are transforming the opportunities available to small agricultural producers in developing countries. While new prospects have arisen for some farmers, many others have not been able to take advantage of the new opportunities since the rigorous safety and quality standards of food processors and food retailers create high barriers to their market entry.

Transactions along the corporate food chain have increased in the past two years. Between 2004 and 2006, total global food spending grew by 16%. In the same period, the sales of food retailers increased by a disproportionately large amount — more than 40% for top retailers — compared to the sales of food processors and of companies in the food input industry (which grew by 13% and 8% for top companies in the respective field).

The Changing Equation

The changes on the supply and demand side of the world food equation have led to imbalances and drastic price changes. Between 2000 and 2006, world demand for cereals increased by 8% while cereal prices increased by about 50%. Thereafter, prices more than doubled by early 2008 (compared to 2000). Supply is very inelastic: it typically increases by 1 to 2% when prices increase by 10%. Supply response decreases further when farm prices are more volatile, but increases as the result of improved infrastructure and access to technology and rural finance.

The consumption of cereals has been consistently higher than production in recent years. The greater increase in consumption is explained not just by growing cereal use for food and feed (which increased by 4 and 7% since 2000, respectively) but also by the use of cereals for industrial purposes — such as biofuel production.

Supply an demand changes do not fully explain the price increases. Financial investors are becoming increasingly interested in rising commodity prices, and speculative transactions are adding to increased commodity-price volatility. In 2006, the volume of traded global agricultural futures and options rose by almost 30%. Commodity exchanges, which are becoming more relevant in India and China, and some African countries, can help to make food markets more transparent and efficient.

Policy Recommendations

While maintaining a focus on long-term challenges is vital, some policy actions should be undertaken immediately:

- Developed countries should facilitate flexible responses to drastic price changes by eliminating trade barriers and programs that set aside agriculture resources, except in well-defined conservation areas. A world confronted with greater food scarcity needs to trade more, not less, to spread opportunities fairly.
- Developing countries should rapidly increase investment in rural infrastructure and market institutions in order to reduce agricultural-input access constraints, since these are hindering a stronger production response.
- Placing agricultural and food issues onto the national and international climate-change policy agendas is critical for ensuring an efficient and pro-poor response to the emerging risks.

Joachim von Braun is Director General of the International Food Policy Research Institute (IFPRI). The article is based on the Food Policy Report No. 18 "The World Food Situation: New Driving Forces and Required Actions" published by in December 2007. Full text of the report can be downloaded at: http://www.ifpri.org/pubs/fpr/pr18.asp. **BT**

Biofuels — A Revolution in the Making?

The challenge is to avoid supporting biofuels through distortionary incentives

With oil prices near an all-time high and few alternative fuels for transport, Brazil, the European Union, the United States, and several other countries are actively supporting the production of liquid biofuels — ethanol and biodiesel. The economic, environmental, and social impacts of biofuels are widely debated. As a renewable energy source, biofuels could help mitigate climate change and reduce dependence on oil in the transportation sector. They may also offer large new markets for agricultural producers that could stimulate rural growth and farm incomes. On the downside are environmental risks and upward pressure on food prices.

About 90% of the global ethanol fuel production in 2006 was produced in Brazil and the United States, and 75% of biodiesel was produced in the EU — mainly in France and Germany. Brazil is the most competitive producer and has the longest history of ethanol production (dating back to the 1930s), using about half its sugarcane to produce ethanol and mandating its consumption. However, new players are emerging, such as Indonesia, Malaysia, Mozambique, and India.

Economic Viability and the Impact on Food Prices

Governments provide substantial support to biofuels so that they can compete with gasoline and conventional diesel. These supports include consumption incentives (fuel tax reductions), production incentives (tax incentives, loan guarantees, direct subsidy payments), and mandatory consumption requirements. Are biofuels economically viable without subsidies and protection?

The most important determining factors are the cost of oil and the cost of the feedstock, which constitutes more than half of today's production costs. Biofuel production has pushed up feedstock prices. The clearest example is maize, whose price rose by 23% in 2006 and by some 60% over the past two years, largely because of the U.S. ethanol program. Spurred by subsidies and the Renewable Fuel Standard issued in 2005, the United States has been diverting more maize to ethanol. Because it is the world's largest maize exporter, biofuel expansion in the United States has contributed to a decline in grain stocks to a low level and has put upward pressure on world cereal prices. Similar price increases have occurred for vegetable oils (palm, soybean, and rapeseed).

Cereal supply is likely to remain constrained in the short term and prices will be subject to upward pressure from further supply shocks. Provided there is not another major surge in energy prices, however, it is likely that feedstock prices will rise less in the long term as farmers respond to higher prices, and biofuels production will be moderated by lower profits because of higher feedstock prices.

Rising cereal prices will have an adverse impact on many food-importing countries. At the same time, many poor producers could benefit from higher prices.

Potential Benefits

- *Energy Security.* Current-technology biofuels can only marginally enhance energy security in individual countries because domestic harvests of feedstock crops meet a small part of the demand for transport fuels, with few exceptions (for example, ethanol in Brazil). In 2006/07, around one-fifth of the U.S. maize harvest was used for ethanol but displaced only about 3% of gasoline consumption. Second-generation technologies could potentially make a higher contribution to energy security.
- *Environmental impacts.* Global environmental benefits from using renewable fuels — reducing greenhouse gas emissions (GHGs) — are frequently cited as reasons for policy support to biofuels. Although possibly significant, those benefits cannot be assumed. The emissions from growing feedstocks (including emissions from fertilizer production), manufacturing biofuels, and transporting biofuels to consumption centers, as well as those from changes in land use, also have to be evaluated. According to the 2006 EU Biofuel Strategy, a change in land use, such as cutting forests or draining peat land to produce feedstocks such as oil palm, can cancel the GHG emission savings "for decades." Reducing potential environmental risks from large-scale biofuels production could be possible through certification schemes to measure and communicate the environmental performance of biofuels.
- *Benefits to smallholders.* Biofuel can benefit smallholder farmers through employment generation and higher rural incomes, but the scope of these impacts is likely to remain limited. Ethanol production with current technologies requires fairly large economies of scale and vertical integration and may do little to help small-scale farmers.

Defining Public Policies

Can developing countries, apart from Brazil, benefit from the production of biofuels? In some cases, such as landlocked countries that are importers of oil and potentially efficient producers of sugarcane, the high costs of transport could make biofuel production economically viable even with current technologies. The much higher potential benefits of second-generation technologies, including for small-scale biodiesel production, justify substantial privately and publicly financed investments in research.

The challenge for developing country governments is to avoid supporting biofuels through distortionary incentives that might displace alternative activities with higher returns and to implement regulations and devise certification systems to reduce environmental risks.

Source: World Development Report 2008, www.worldbank.org/wdr2008 **BT**

Brazil's Experience with Bioenergy

Brazil’s ethanol industry today is an efficient sector that brings substantial economic benefits

Jose Roberto Moreira

Brazil is the second largest world producer of ethanol, a biofuel used mainly in automobiles as an additive or alternative to gasoline. Although Brazil's program, started in the mid-1970s, was criticized as being uneconomic during periods of low oil prices, the ethanol industry today is recognized as an efficient sector that brings substantial benefits to the Brazilian economy.

All Brazilian ethanol is produced from sugarcane. About 330 privately owned sugar mills each process an average of 1.2 million tonnes of sugar cane per year.

Major Savings and Increased Employment

The government's reasons for supporting biofuels, at first purely economic and triggered by the oil price spikes of the 1970s, have expanded to include concerns about the country's energy security, greenhouse gas emissions and global climate change, rural employment and equity issues, and local air pollution.

Ethanol production has played an important role in guaranteeing fuel security. Since 1975 ethanol has displaced more than 280 billion liters of gasoline and saved more than US$65 billion in the cost of oil imports.

Moreover, the sugar/ethanol sector has become a major employer: in 2001 it accounted for roughly one million jobs, of which about 65% were permanent and the remainder seasonal. Another 300,000 jobs were created in manufacturing and other sectors. Sugarcane plantations also represent a major activity for small farmers, as around 30% of sugarcane production is in the hands of 60,000 independent producers.

The introduction of gasohol, a combination of gasoline and ethanol, had an immediate positive impact on the air quality of Brazil's large cities, reducing carbon monoxide by more than 25%.

Reasons for the Success

- *Synergies with the sugar market.* The coupled production of ethanol and sugar, which occurs in almost all sugar mills, allows mills to shift to ethanol production if sugar prices fall and vice-versa. Significant productivity improvements in the sugar industry have benefited ethanol production: the cost of producing ethanol declined by an annual average of 5.7% from 1985 to 2005.
- *Synergies with electricity and heat production.* Cogeneration of heat and electricity from the by-product, bagasse, supplies all the energy needs of the biofuel production process itself, and allows the surplus electricity to be exported to the grid. Presently more than 1,500 MW of this electricity is being supplied to the grid, mainly in the period of low rainfall, which is a very relevant contribution to energy security since more than 90% of electricity is produced from hydro sources. Programs designed for the supply of more than 3,000 MW are in their final stages, having been developed by the government and the private sector jointly.
- *Institutional support.* The Brazilian government has provided necessary incentives to buyers of cars powered by ethanol and service station owners, and has set up a clear institutional framework. The measures included setting technical standards, supporting ethanol production and consumption technologies, providing financial advantages, and ensuring appropriate market conditions.
- *Geographical aspects.* An abundant supply of agricultural land, an appropriate climate for growing sugarcane, a developed sugarcane industry, and the presence of more than half of the country's car fleet in Sao Paulo — the state with the dominant sugarcane industry — have all contributed to the success. In other regions, the government has subsidized the transport costs of ethanol to ensure a wide geographical coverage.

Positive Outlook

Although ethanol supply and demand have not always been properly balanced, since the launch of flex-fuel cars in early 2003, internal ethanol consumption has increased significantly in Brazil. By 2008, around 90% of new cars manufactured in Brazil are to be flex-fuel models. Export of ethanol has also increased since 2001.

The recent expansion of internal and external markets has triggered the interest of investors, resulting in the planned construction of about 90 new sugar mills between 2006 and 2010, expansion of sugarcane cultivation to new areas, and retrofitting old refineries.

Sugar/ethanol production does raise concerns about land use, as it competes with the production of food and export crops. Yet the six million hectares cultivated with sugarcane represent only 8.6% of the total area harvested with essential crops. Moreover, farmers are increasingly rotating between sugarcane and food crops like tomatoes, soy, peanuts, beans, rice, and maize. This has helped maintain the balance between energy and food and has improved land profitability.

Policy Lessons

For countries wishing to improve energy security while promoting rural development, Brazil's experience offers some relevant lessons. The following policies have been most important to Brazil's success:

- Requiring the auto industry to produce cars running on neat or blended biofuels;
- Subsidizing biofuels during market development until economies of scale allowed fair competition with oil products;
- Allowing renewable energy-based independent power producers to compete with traditional utilities in the large electricity market;
- Financing private ownership of sugar mills, which helps guarantee efficient operations;
- Stimulating rural activities based on biomass energy to increase employment in rural areas.

Jose Roberto Moreira is president of the Executive Council of the Brazilian Reference Center on Biomass, Institute of Electrotechnology and Energy, University of Sao Paulo, Brazil. *The article is based on the author's policy brief, which first appeared in "Bioenergy and Agriculture: Promises and Challenges", the International Food Policy Research Institute, http://www.ifpri.org/2020/focus/focus14.asp.* **BT**

Can China Continue Feeding Itself?

The Chinese agricultural sector is only mildly vulnerable to global warming

Jinxia Wang, Robert Mendelsohn, Ariel Dinar, Jikun Huang, Scott Rozelle and Lijuan Zhang

For quite some time, global food security issues have been in the center of policy debate. One of the major aspects of this debate has been the role of China, a giant economy with 20% of the world's population. China is also responsible for a significant share in the world's production and consumption of primary agricultural commodities — wheat, rice, maize, soybean, and cotton. With projected increases in both population and income in China, feeding larger numbers of more affluent people could become a challenge if not accompanied by increased supply.

However, will China be able to increase supply if the climate warms? Growing evidence on rising global temperatures and changes in precipitation patterns makes it ever more important to understand the impacts of global warming on China's agriculture.

We measure the sensitivity of Chinese agriculture to warming, employing farm level data and relying on the Ricardian method. The analysis is conducted on 8,405 farms sampled across 28 provinces.

Climate and Net Crop Revenue

In general, China's climate is best described as monsoonal, with clear temperature and precipitation differences that vary by region and season. From the south to the north, temperature declines steadily. In the dryer north, more than 70% of a year's precipitation is concentrated in the summer. In the wetter south, precipitation is mainly concentrated in the spring and the summer.

Not surprisingly, the net crop revenues also vary by region: they are higher in the south compared to the north and higher in the east compared to the west. Just as significantly, net crop revenues vary between villages that are irrigated and those that are rainfed. On average, the net crop revenue amounted to 10,150 yuan (US$1,353) per hectare across all farms in 2001, however net crop revenue was 12,180 yuan in irrigated villages compared to 7,610 yuan in rainfed villages.

Effect of Warming Negative on Average

The analyses, measuring the direct effects of temperature and precipitation on crop net revenues, show that the average impact of higher temperatures on net revenues is negative and the average impact of more precipitation is positive. However, marginal increases in temperature and rainfall have very different effects on different farm types in different regions:

- Rainfed farmers are more vulnerable to warming than irrigated farmers;
- Warming is likely to be helpful to rainfed farmers in very cold places but harmful to those in most of China and especially the far south;
- More rain is likely to be harmful to rainfed farmers in the wet southeast but to be beneficial to farmers in the remaining regions;
- All irrigated farms are likely to enjoy small benefits from increasing precipitation.

Quantitatively, the mid latitude region of China could gain up to US$127/ha/^{0}C from higher temperatures, while southern and northern latitudes could lose up to US$165/ha/^{0}C. Additional precipitation in the wet southwest would be harmful (up to -US$153/ha/mm/month). The rest of China would enjoy small gains (up to US$65/ha/mm/month).

Can China Continue Feeding Itself?

The agricultural sector as a whole is only mildly vulnerable to global warming. This is because, first, a very large fraction of farms in China are irrigated and, second, the rainfed land in China is largely in temperate or cool regions.

The results thus suggest that the answer to the question above is in the affirmative. The likely gains realized by some farmers will nearly offset the losses that will occur to other farmers. An important caveat, however, is that our analysis does not examine the potential harmful consequences of possible reductions in water supply from climate change.

Policy Implications

As is clear from the above, the effects of climate change are not going to be uniform across the country. Warming will assist areas that are currently highly productive and will further handicap areas that have below average productivity. Chinese policy makers need to be aware that warming is likely to impose additional costs on specific regions that already have below average incomes.

The ability of Chinese farmers to change and adapt to new conditions has allowed China to outperform other agricultural economies in the world and will continue to be important with respect to climate change. However, it is critical that policies allow China to get the most out of the available factors relating to production and natural resources.

An important message of our analysis is that irrigation is critical to China's agriculture system. As nearly 60% of cultivated land in China is irrigated, part of China's ability to cope with future climate change depends on its capacity to use water for irrigation. There could be much larger harmful effects if warming forces many irrigated farms to become rainfed farms. Climate change increases the pressure to develop institutions and infrastructure in water scarce regions to treat water as a valuable resource.

China may also consider developing better management practices; adopting new varieties (crops and livestock) suitable for a warmer climate; adapting new technologies in agriculture and educating farmers about them.

Jinxia Wang is an Associate Professor in the Center for Chinese Agricultural Policy (CCAP), Chinese Academy of Sciences, Beijing. Robert Mendelsohn is a Professor, Yale University, USA, and a consultant to the World Bank. Ariel Dinar is a Lead Economist in the Development Research Group, the World Bank. Jikun Huang is a Professor and Director in CCAP. Scott Rozelle is a Professor and Senior Fellow, Stanford University, USA. Lijuan Zhang is a Senior Research Assistant in CCAP. Full text of the paper is available at: http://go.worldbank.org/HRW0P2R1V0 (WB Policy Research Working Paper 4470). **BT**

Where to Sell? Market Facilities and Agricultural Marketing in India

Poor farmers will benefit most from adding extra facilities in the market place

Forhad Shilpi and Dina Umali-Deininger

Rural areas are home to the vast majority of the world's poor. As most of the rural poor are engaged in agriculture, diversification and commercialization of agriculture are often essential pre-conditions for rural income growth and poverty reduction. Transportation costs and the characteristics of the nearest market influence the transaction costs of taking products to the market. For instance, a highly congested market with few facilities can add substantially to waiting time, product deterioration and losses, and costs to farmers and traders. Investments in market infrastructure and facilities and in rural road networks now form a core of rural development strategies in many countries.

We utilize data from a 2005 survey of farmers, traders, markets and villages in the Indian state of Tamil Nadu to examine how facilities available at the market influence farmers' decision to sell at the market. By relating farmers' place of sales to their level of sales, we also estimate the distributional consequence of an improvement in market facilities.

Market Facilities (selected)

Market characteristics	Tamil Nadu	Surveyed States (4)
Market area (average), acre	14	26
Number of shops (average)	282	181
Shop area (average), sq. feet	704	1001
Storage capacity (avg), sq. feet	31	93
Facilities		
Parking (all vehicles), %	10	33
Bus station, %	89	77
Commercial banks, %	84	78
Post office, %	84	75
Police station, %	89	81
Factory/mills, %	47	57
Guard, %	40	53
Equipments		
Large scale weighing machine, %	10	29
Grading machine, %	5	17
Fumigation equipment, %	10	5
Cold storage, %	5	6
Warehouse, %	5	44

In our study the interaction of market facilities and distance to market from a farmer's village is captured by a market access index, which is a ratio of a number of facilities available at market to the square of the travel time from farmer's village to that market.

Wealthier Farmers Benefit More in Congested Markets

Trading in agricultural produce in India is governed by the State Acts, which prescribe the setting up of a network of state controlled "regulated markets", where commodities grown in the surrounding area are required to be taken to. Tamil Nadu has not completely enforced the Act, so in our sample only 10% of the wholesale markets are regulated. Thus, 53% of sales by the farmers in our sample were made at the unregulated wholesale markets, and about 45% at the farmgate (with the rest in the village markets).

The majority of the markets are not completely specialized, are quite small in size and heavily congested, with limited infrastructure and facilities (see Table). Apart from having bus stations, police stations, commercial banks, and post offices, most markets offer few other facilities. The average travel time from villages to relevant markets is about 41 minutes.

Our analysis of how market facilities influence farmers' decisions shows that:

- An improvement in the market access index increases the likelihood of sale at the market, either because of a reduction in transportation cost or because of an improvement in market facilities;
- The wealth level influences a farmer's decision to sell at the market, as wealth allows farmers to gain access to market facilities easily cutting waiting time in the congested market place.

Wealthy farmers are thus able to capture disproportionate benefits from the existing market facilities in a congested market place. They are perhaps able to avail of cheaper modes of transportation and to reduce waiting time and costs in utilizing the market facilities.

Pro–Poor Policy Change

What if the market access index improves by 20%? Given the average market access index of around five in our sample, this increase translates roughly into adding an extra facility in each market. The results of our simulation show that in percentage terms, such policy change will

- Benefit all farmers with land up to 20 acres;
- Benefit disproportionately the poorer farmers, especially those with less than 2,5 acres of land — these will experience the largest percentage increase in sales — about 1%. In contrast, farmers with land of more than seven acres will experience less than 0.5% increase in sales.

A seeming puzzling contradiction of the simulation to our regression analysis above is not actually so perplexing because wealthy farmers already have better access to markets, and an improvement in market access benefits them much less compared with poorer farmers, who face much more stringent marketing constraints.

Thus, investments in market facilities and infrastructure (including transportation) will be pro-poor.

Forhad Shilpi is a senior economist at Development Economics Research Group, and Dina Umali-Deininger is a lead economist at South Asia Sustainable Development unit, the World Bank, Washington, DC. Full text of the paper can be accessed at: http://go.worldbank.org/1Z71VSQQF0 (WB Policy Research Working Paper 4455) **BT**

The Economics of Farm Organization in Transition Countries

The farm structure determines which products the country will be internationally competitive in

Pavel Ciaian, Jan Pokrivcak, Dusan Drabik

The structure of agriculture in former communist countries was strongly biased towards extremely large farms directly controlled by the state. The average farm size ranged from 1,157 hectares in Poland to around 124,770 hectares in Turkmenistan. For comparison, the average farm size in the EU-15 was 20 ha, and in the USA 197 ha.

In the beginning of the 1990s farm restructuring followed after privatization and restoration of private property rights. New owners of farm assets and land were allowed to break away from cooperative farms and start family farming. At the same time, some old socialist cooperatives were turned into cooperatives of owners of agricultural assets, joint-stock or limited-liability companies or partnerships. Depending on the methods of privatization and state policies, different farm structures emerged in different countries. While in Albania and the Baltic States many small size family farms were created (see Table), agriculture in Slovakia, the Czech Republic and most former Soviet Union (FSU) countries are still dominated by large transformed corporate farms.

Comparative Advantages

Farms choose the production structure in which they have comparative advantage. The comparative advantage of large corporate farms is in capital intensive products for which monitoring of labor is relatively low and in which specialization in labor is possible. Small family farms have comparative advantage in products in which labor monitoring is important, measurement of labor effort is difficult and capital intensity is unimportant.

Significant transaction costs explain why corporate farms can keep their dominant position in Central and Eastern Europe (CEE) and the FSU. However, corporate farms compete with family farms for land resources and in domestic and international output markets. High transaction costs protect the existence of corporate farms, but they still have to choose the production structure that most strengthens their competitiveness on the land market relative to growing family farms, and on the output market relative to domestic family farms and international competitors. Thus, in transition countries the crucial choice is not between farm organization, but rather what production structure is chosen by corporate farms and family farms, respectively.

Our empirical investigation of agricultural commodities, in which family farms and corporate farms, have comparative advantage, takes into account labor monitoring requirements and capital intensity by farm types in ten transition countries in CEE and in the EU-15. We find that:

- Corporate farms have comparative advantage in cereals and oilseed production, which have low labor requirement and are capital intensive;
- Family farms have comparative advantage in permanent crops (such as fruits), which have high labor requirement and low capital intensity;

Farm Structures in Selected Transition Countries

	Family Farms		Transformed cooperative farms	
	Share of total agricultural land (%)	Average size (ha)	Share of total agricultural land (%)	Average size (ha)
Albania	96	-	4	-
Czech Rep.	28	20	72	937
Hungary	59	4	41	312
Kazakhstan	20	-	80	-
Latvia	90	12	10	297
Lithuania	89	4	11	483
Poland	87	8	13	-
Russia	11	-	89	6100
Ukraine	17	-	83	2100

Note: data from various years from 1997 to 2003 from national ministries of agriculture/statistical offices

Additional empirical tests confirm that the observed product specialization is indeed as stated above and is similar both in CEE and the EU-15. However, the evidence is mixed for animal sector and field crops (potatoes and sugar beet). In CEE small farms (which use more labor intensive technology) specialize in field crops, while the opposite is true for the EU-15 (where production is more capital intensive).

Consistent with the above, a test at the country level finds that in countries where the share of family farms on land use is higher, a smaller area is allocated to cereals and oilseeds and more to labor intensive crops. In these countries the number of livestock and pigs per ha is higher than in countries with a lower share of family farms on the land.

Conclusions

Thus, the farm structure determines which products the country will be competitive in on international markets. As high transaction costs hinder the change of farm organization in transition countries, the choice of product structure is more important than the choice of farm organization.

Moreover, when comparing efficiency of family and corporate farms, the transaction costs of using markets should also be taken into consideration. In many transition countries, output markets suit large corporate farms and prevent the development of family farms. Labor intensive products usually require different types of contracting and vertical integration than, for example, capital intensive products.

Pavel Ciaian is a researcher at Katholieke Universiteit, Belgium, and Slovak Agricultural University in Nitra, Slovakia, Jan Pokrivcak, Dusan Drabik are from Slovak Agricultural University in Nitra, Slovakia. The paper was presented at the joint IAAE-104th EAAE Seminar "Agricultural Economics and Transition" in Budapest in 2007. **BT**

Land Policy and Farm Efficiency: The Lessons of Moldova

Large farms of the same organizational form perform better

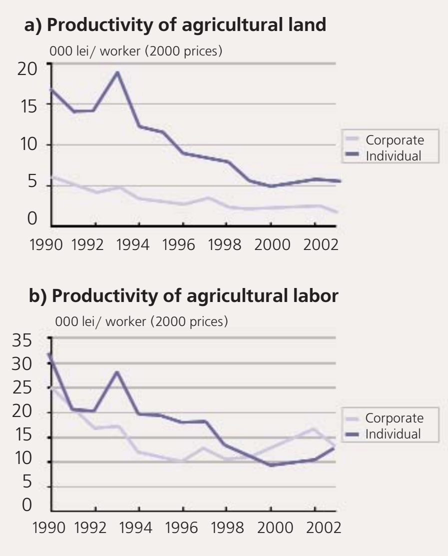
Dragos Cimpoies, Zvi Lerman

As a result of the agrarian reform in Moldova, which started in the early 1990s and was virtually completed by 2000, over one million residents became landowners. Many of them used their privately owned land to establish independent family farms, while others entrusted their land to managers of newly created corporate farms. As of today, 50% of agricultural land in Moldova is used by individual producers. This is in stark contrast to the pre-reform situation, when individuals cultivated only 2% of agricultural land.

The shift of agricultural land from corporate to individual farms has led to significant changes in the production structure of Moldovan agriculture. While at the beginning of the reforms, the individual sector was producing 20% of agricultural output on less than 10% of agricultural land, in 2003 individual farms produced three-quarters of agricultural output on half the agricultural land.

We analyze the efficiency and performance of Moldovan farms along two dimensions — organizational form and farm size.

Land and Labor Productivity for Corporate and Individual Farms



Individual Farms More Efficient

The partial productivities of land and labor estimated using national statistics decreased over time in both corporate and individual farms (see Figure). Yet, the land productivity of individual farms was significantly higher than that of corporate farms over the entire period of 1990-2003. This is similar to other transition countries. The difference in labor productivity (which is usually higher for corporate farms in other transition countries) was not statistically significant in Moldova during this period.

Our calculations of total factor productivity (TFP) using national statistics show that the TFP for individual farms was higher than for corporate farms over 1990-2003. The respective means for 1990-2003 were 11.5 for individual farms and 4.4 for corporate farms.

When comparing the efficiency of specific farms to the production frontier (constructed using survey data) we find that while all farms surveyed are relatively inefficient, individual farms achieve higher efficiency scores than corporate farms, implying that they utilize land and labor more efficiently than the corporate farms.

The partial productivity measures for small and large farms in four recent surveys in Moldova show a mixed picture. Small farms have a higher partial productivity of land (output per hectare) and a lower partial productivity of labor (output per worker); moreover, they employ a much higher number of workers per hectare than large farms.

We resolve the ambiguity in partial productivity measures by calculating TFP from survey data. This measure conclusively shows decreasing returns to scale: large farms produce less per unit of inputs in the margin than small farms.

Since large farms are typically corporate farms while small farms are family farms, we tried to disentangle the farm size effect and the organizational form effect by looking at two homogeneous samples: one of corporate farms and the other of family farms. Our analysis of corporate farms shows that the land productivity clearly increases with farm size, whereas labor productivity does not. Most importantly, TFP shows a definite increase with farm size.

In a sample of family farms, the standard of living of rural families (a proxy for farm performance) increased with farm size. Family farmers reporting a 'comfortable' standard of living had 11 hectares on average, compared with less than 5 hectares for farmers with 'subsistence' standard (sufficient to buy food and necessities) and those on a 'poverty' income (not sufficient to buy food). Thus, policy measures should facilitate augmentation of the small family farms.

Conclusions

Our results thus demonstrate that family farms are more productive than corporate farms. Farm performance improves with increasing size for farms of the same organizational form, but not across different organizational forms.

Higher efficiency of family farms does not necessarily imply that corporate farms should be eliminated. Market economies have achieved an equilibrium farm structure, which includes a mix of individual farms (the dominant majority) and corporate farms (a small minority) determined by resource availability, managerial capacity, and personal preferences of farmers and investors. A similar process can unfold in Moldova, but the development of corporate farms must be left to market forces, free from government intervention. At the same time the government should focus on improving the environment for small individual farms.

Dragos Cimpoies is associate professor at the State Agricultural University of Moldova, Chisinau. Zvi Lerman is professor and chair at the Department of Agricultural Economics and Management, the Hebrew University, Rehovot, Israel. The article is based on the authors' paper prepared for the 2007 IAAE—104th EAAE Seminar in Budapest. **BT**

Alternative Non–Agricultural Employment in Rural Russia

Policies supporting non-agricultural employment in two Russian regions have so far had little effect

Yevgenia Serova, Dmitry Zvyagintsev, Tatyana Tikhonova, Olga Shik

In comparison to developed countries Soviet agriculture was noted for its low labor productivity and an accordingly high rate of employment. Modernization of agriculture during transition was bound to reduce employment in agricultural production. In Russia employment has indeed shrunk at major agricultural enterprises, mainly due to a falling demand for farm produce. Simultaneously, employment on private subsidiary plots increased. As a result, the share of those employed in agriculture dropped by just 2.5 percentage points since 1990 to 10.4% today.

The official unemployment in rural areas is fairly low, but the actual rate is variously estimated at between 27 and 37%, and this does not take into account partial employment and low wages.

Further modernization would release still more labor in agriculture, but at the same time would set higher requirements for the quality of manpower. Yet the quality of the rural labor force has deteriorated during the reform period. The education level of agricultural workers is lower than of those in other sectors. For example, the share of people with higher education in agriculture is three times less than in the economy as a whole.

The rural population is ageing while its more productive and energetic representatives migrate to the cities. The possibilities of daily commuting to other labor markets are restricted by long distances and poor communications. Young people, as the potential workforce, are not overly eager to work in agriculture. Our survey of 1,385 students in several higher education institutions in Voronezh, Perm, Kostroma, Astrakhan and Ivanovo conducted in 2006 has shown that only 11% of students intended to work in rural areas, and most of them were rural dwellers who majored in agriculture.

Thus a paradoxical situation exists in the rural labor market: the excess of manpower coexists with a shortage of skilled labor. This situation is a consequence of rural underdevelopment, in the first place, and a lack of opportunities for rural people to be employed in the non-agricultural sector.

As experiences of other countries show, economic development will further reduce employment in agricultural production and only the growth of the non-agricultural sector will be able to cut unemployment, diversify the sources of income of the rural population and improve its living standards, which may in turn attract skilled workers to rural areas and enable rural communities to survive.

Alternative Employment: Definition

For the purposes of this study we define alternative employment as employment in non-agricultural economic activities, with the exception of the social services, and federal and municipal government. Thus, such non-agricultural activities include gathering and pre-processing of wild plants, rural tourism, commercial fishing and hunting, folk arts and crafts, etc.

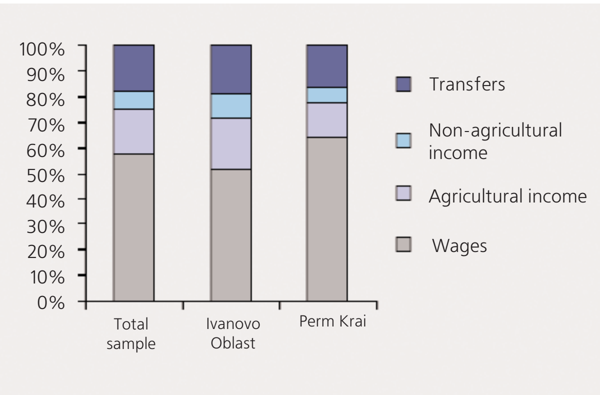
We look at alternative employment in rural areas and assess the efficiency of rural labor market policies in two Russian regions: Perm Krai and Ivanovo Oblast. The study draws on a survey of about 800 rural households conducted in 2006. In each of the two regions we have chosen two pairs of rural districts with matching characteristics. In one pair of the districts the authorities implemented special measures to create alternative jobs, and in the other pair no such measures were taken.

Perm Krai, more economically developed and prosperous (unemployment there is 1.5 times less and per capita monthly income is more than double that in Ivanovo Oblast) renders greater assistance to agriculture and rural development than Ivanovo Oblast. Perm Krai proclaims an alternative employment policy to be a priority, with special funding allocated for the purpose. The authorities in Ivanovo Oblast, by contrast, support agricultural production mainly at private farms and private subsidiary plots. It is important to bear in mind that the share of agriculture in the gross regional product in Ivanovo Oblast is twice that in Perm Krai (7.3% and 3.6% respectively).

Unstable Economic Sector

The survey revealed that an average rural family of 2.7 persons receives about 60% of family income in the form of wages, of which 40% is earned in non-agricultural activities, such as construction, industry, retail, services, etc. (see Figure). Non-wage incomes from non-farm activities (mainly wild plants gathering) account for a mere 2% of the total income; however, the 18% of the households that have this source of income have a higher overall income compared to other households (but lower average wage). Thus, it may be that the income from non-agricultural self-employment is used to compensate for low wages and not to augment the overall family income.

Family Income Structure



We found that the probability of deriving income from non-agricultural self-employment increases due to:

- The presence of unemployed household members;
- Ownership of farm machines (the possibility of providing services for members of the community);
- The community's remoteness from the district's center;
- The existence of a place of interest in the area;
- A lower level of economic development in the district (for Ivanovo Oblast).

To what extent does non-agricultural employment compete with other types of employment? In terms of workload, we found that alternative employment and working one's private subsidiary plot cannot be seen as mutually complementary because they involve comparable workloads with employment peaking in the same season. Indeed, households with both a core employment and a private plot hardly have any time left for alternative employment, except in the off season.

An absolute majority of respondents (88%) prefer to earn a living as hired workers and only 12% as entrepreneurs, with the share of potential entrepreneurs among those engaged in the non-agricultural sector standing a little higher, at 17%. Among those employed in the non-agricultural sector, a larger share than in the average sample plan to change jobs or are afraid to lose their job, which indicates a lower job satisfaction. This may be due to greater social vulnerability of the non-agricultural sector workers.

Considering the above, it is not surprising that in order to diversify incomes households will seek employment in a more stable sector of the economy and not in the non-agricultural sector. Self-employment is likely to develop towards increased activity working private subsidiary plots and not expanding non-agricultural employment.

Poor Regional Policies

Up until now government support of rural employment has been unduly biased in favor of promoting agricultural production (including in private subsidiary plots). A lack of a coherent policy in support of alternative employment limits the opportunities for such employment, as our detailed case studies in five districts have shown. Successes achieved in some districts can be attributed mainly to the efforts of individual enthusiasts.

A quantitative analysis of the efficiency of the policies in Perm Krai and Ivanovo Oblast (through a comparison of pairs of districts on various indicators) revealed that the existence of formal municipal policy to support alternative employment has yet to make a difference to the incomes of rural dwellers. Even so, unemployment was on average higher in the districts unaffected by policy. There are more car owners in the districts affected by policy but the same cannot be said of household appliances, mobile phones and computers. On the whole only the municipal policy of one district can be described as having a real impact on the well-being and employment of the local population.

The reason why policy has had no pronounced effect is firstly due to the fact that support for non-agricultural activities does not as yet figure prominently in rural development programs. Far more attention is paid to the informal employment in working subsidiary plots, which does not remove the problems of rural employment and is fraught with aggravated and persistent rural poverty. Unfortunately, there is also inertia in ways of thinking among the rural population. It is thought to be reprehensible not to cultivate land if you live in a rural area. Despite the fact that investments in private subsidiary plots are often not recouped by proceeds from the sale of produce, this activity takes so much time and effort as to leave no room for engaging in alternative activities.

The development of rural areas requires the development of rural infrastructure; coordinated policies in the field of education and healthcare; the financial support of small rural enterprises, including a cut of interest rates on entrepreneurial loans; information support and consultancy services to rural entrepreneurs; and educational campaigns among the rural population to change their attitude to non-agrarian activities.

Yevgenia Serova is the President, Tatyana Tikhonova and Olga Shik are researchers with the Analytical Center of Agricultural and Food Economy at the Institute of Economies in Transition (IET); and Dmitry Zvyagintsev is Senior Lecturer at the Higher School of Economics (Moscow). The full text of the paper is available at: www.iet.ru. **BT**

Health Shocks in Rural China

Households living in villages, which held elections, can avoid income reduction due to health shocks

Yang Yao

Major illnesses are the most unpredictable and devastating shocks for farm households in developing economies, few of whom have adequate health insurance. A family loses on two fronts when a major health shock comes: it has to spend a considerable amount of money to treat the sick member, and it loses part of its labor capabilities when the sick member is a major laborer in the household. In the short run, the family has to reduce its consumption due to imperfect insurance; in the long run, it may fail to accumulate enough productive assets including children's education. As a result, experiencing a major health shock may well send a family into both short-term poverty and a prolonged poverty trap.

Using household-level data over the period of 1986-2002 from 48 villages in eight Chinese provinces, we assess the impact of major health shocks on farm households' long-term income, children's school attainment and the role played by village elections in attaining more equal income distribution in the village and helping households to mitigate the negative impacts of health shocks.

Continued on p. 16

Long-term Negative Impact

In 2002, only 20% of Chinese rural residents had some form of health insurance. The most popular insurance system still was the traditional cooperative medical system, financed by the commune budget.

A 2003 survey asked households to recall health shocks — i.e. illnesses requiring treatment in hospital or a total medical expenditure of over 5,000 yuan (roughly twice of the average annual per-capita income) — happening to their family members in the period of 1987-2002. The 5,000 yuan cutoff was chosen in 2002. Among the 676 reported cases of health shocks, 28.0% were inpatient treatments with a cost of more than 5,000 yuan, and 5.9% were illnesses with a cost of more than 5,000 yuan but without inpatient treatment.

In the first 16 years after a major health shock a household's income drops below its normal trajectory by over 12%

What are the negative impacts of health shocks? Our estimations show that a major health shock has strong and persistent negative impacts on household income. In the first 16 years after the shock, the affected household's income drops below its normal trajectory by an average of 12.3%. Therefore, health shocks lead to a prolonged poverty trap.

Primary School-age Children Most Vulnerable

What is the effect of an adult family member's illness on children's school attainment?

In our sample, among the families with children of 13-19 years old (the middle school age range) in 2002, about 20% had experienced at least one shock during their prime-age as adults during1987-2002.

Our analysis shows that primary school-age children are the most vulnerable to health shocks. Experiencing a family health shock in his/her primary school age will reduce a child's chances to enter middle school (the final level of compulsory education) by 9.9%. At the same time, people of middle school age are not affected by family health shocks, possibly because the families have become more resilient to the damage brought about by these shocks.

Girls are more susceptible than boys to the damage of health shocks, and this adds to a 5.6% gender gap that exists without any shock happening. Having a seriously sick adult member forces a family to reduce its daughters' chances to attend middle school by 12.5%.

We have found that birth order matters, too. On average, the third or higher order child trails the first child by 13% in his/her chances to get into middle school. Interestingly, the misfortune is reversed when health shocks happen to a family. In this case, the family reduces the first and second child's chances to attend middle school, but leaves the third and higher order children intact.

Although China set a law for compulsory nine year education as early as 1986, the record shown in our sample has not been impressive. Among people who entered primary school in or after 1986, only 58.4% completed nine years of schooling. Therefore, while providing better school facilities and more qualified teachers is important, more attention should be paid to farm households' weak abilities to deal with unexpected risks, among which health shocks are the most important.

Elections Mitigate the Effect of Health Shocks

Village elections may help farm households to deal with health shocks and, more generally, to ensure better provision of public goods. They can also reduce income inequality. Democracy does this by enhancing the accountability of the village government; conducting pro-poor policies (e.g. income redistribution or more spending on public projects that enhance the income capability of the poor); and providing an institutionalized mechanism for villagers to take collective action, for example, a health care plan that benefits both the rich and the poor.

China began to experiment with village elections in 1987, and 12 of the villages in the sample were among the first in the nation to introduce elections. By 1990, more than half of the sample villages had held at least one election.

Our estimations show that the introduction of elections has indeed had the direct effect of reducing the village Gini coefficient on average by 14.3% during 1987-2002. This is despite the rising income inequality during the same period (from 0.29 in 1987 to 0.35 in 2000 in rural China). Moreover, elections tend to increase the income shares of poorer portions of population, so the reduction of the Gini coefficient has been a result of pro-poor policies. Moreover, elections significantly increase per-capita public expenditures. Since the level of public goods provision is generally low in rural China, it is reasonable to believe that poor households would benefit more from increased public investment because the rich can rely more on their own investment to generate income.

Have the elections specifically helped the villages mitigate the negative impacts of health shocks? We have found that this is the case. By our most conservative estimate, households living in villages, which have elections, are able to avoid the income reduction due to health shocks by 8.3 percentage points. In addition, villages are more likely to set up a health care plan after it has started elections.

Policy Recommendations

Since 2003, the Chinese government has begun to establish a new insurance-based rural cooperative medical scheme. By September 2006, about half of China's 2,600 counties had established the new system. Despite limited benefits provided by the system, this is a good start. The system should preferably be combined with provision of educational loans to shock-hit households to release temporary liquidity constraints. Because dropping out in primary school will most likely result in a permanent deficiency in a person's educational attainment, providing health insurance and shock-related educational loans will bring large benefits to the children and the society as a whole.

Yang Yao is Professor at the China Center for Economic Research, Peking University, China. The article is based on the author's working papers: "Health Shocks and Children's School Attainments in Rural China" (jointly with Ang Sun), "Health Shocks, Village Elections, and Long-term Income: Evidence from Rural China" (jointly with Li Gan and Lixin Colin Xu), and "Grassroots Democracy and Income Distribution: Evidence from Village Elections in China" (jointly with Yan Shen). The papers are available on request from the corresponding author, e-mail: yyao@ccer.pku.edu.cn. BT

"Ruralization" of Poverty in Russia

The rural-urban poverty "divide" may reflect rural-urban labor market differences and be primarily driven by the working age population

Christopher J Gerry, Eugene Nivorozhkin, John Rigg

Since the dark days of Russia's 1998 financial crisis, economic growth has been impressive in both its breadth and persistence and has prompted a dramatic decline in the incidence of poverty for all socioeconomic groups. Taking the post-1998 reduction in poverty as our point of departure, and focusing in particular on the growing rural-urban divide, we examine the changing relative distribution of poverty. Aside from its relevance for economic efficiency, the incidence of poverty is also important from a social justice perspective since, if not all population sub-groups benefit from economic growth, policy interventions may be justified.

Our study is based on 53,970 observations drawn from the 2000-2004 rounds of the Russian Longitudinal Monitoring Survey. Our principal measure of poverty is constructed on the basis of a representative regional subsistence food basket, for a number of distinct demographic groups, adjusted for regional price variations.

Our analysis establishes that a substantial aggregate fall in poverty incidence has occurred — from 31.1% in 2000 to 10.6% in 2004 — and that the effect of the fall has been felt broadly across socio-economic groups. Indeed, irrespective of whether we divide the population according to gender, age, human capital, labor market status or household type, we observe a decline in poverty.

Rural Population Accounts for over Half of the Poor

The decline though has been far from uniform. The improvements have been felt least strongly by the rural population, single adult households (with or without children), those without work or in low paid work and the less educated.

The most striking contrast is between those in urban areas, enjoying a 78.6% decline, and those in rural areas experiencing just a 47.3% fall. We find that, besides experiencing a higher poverty incidence, by 2004 the rural population accounted for over half (59%) of those in poverty (see Table). As a consequence, by 2004, Russian poverty had become a largely rural phenomenon.

Why might the rural population been unable to benefit equally from the rising tide of economic growth? Possible explanations abound. Rural dwellers have been faced with fewer economic opportunities, have faced restrictions in land use, have lost their brightest human capital to urban areas, have been neglected in relation to those in resource rich areas and remain surrounded by a decaying rural infrastructure.

A Growing "Divide" between Rural and Urban Areas

Our analysis establishes that the shallower decline in poverty in rural settlements does not stem from changing population characteristics or shares; it is not dependent on the use of a particular poverty line; nor is it driven by the rapid expansions that have occurred in Moscow, St. Petersburg or other booming urban areas.

The proportionate poverty reduction across all urban areas is found to be broadly similar and substantially higher than the aggregate rate. It is true that the sharpest decline was observed in Moscow and St. Petersburg but the overall impact of this on the growth in the urban-rural poverty differential is negligible, since poverty among individuals in Moscow and St. Petersburg accounts for less than 5% of total poverty.

Poverty Rates in 2000 and 2004

	Poverty rate		% change in poverty rate 2000/2004	% of all individuals in poverty by sub-group (total=100)	
	2000	2004		2000	2004
Rural	39.3	20.7	-47.3	40.8	59.0
Moscow and St. Petersburg	18.4	2.7	-85.4	2.9	3.6
Other cities > 500,000	24.3	5.6	-77.1	20.8	12.5
Cities < 500,000	28.9	7.2	-75.1	35.5	24.9

Divergence Driven by the Working Age Population

The labor market plays an important role in preserving and improving living standards. This being the case, the aggregate effect we observe may reflect urban-rural labor market differences. If so, then it is possible that elderly individuals in rural areas may not have fallen behind their urban counterparts. We do find that the decline in urban poverty among the elderly (85.9%) exceeds the corresponding rural decline (64.1%), and significantly so, though we also note that the difference in the extent of poverty reduction is closer than for working-age individuals. This is important since it indicates that the growing divergence we observe is primarily, though not exclusively, driven by the working age population.

Understanding the different dynamics of rural and urban poverty and their distinct relations with aggregate economic growth is crucial if Russia is to develop evenly and avoid those policies of "urban bias" associated with embedded pockets of poverty and social exclusion. In particular, such a comprehension is essential for the design of policy as well as for understanding the nature of Russia's economic development.

Christopher J Gerry and Eugene Nivorozhkin are Economists at the UCL School of Slavonic and East European Studies. John Rigg is affiliated to the LSE Centre for Analysis of Social Exclusion. Full text of the paper is available at: http://www.ssees.ac.uk/wp76sum.htm and a revised version is forthcoming in the Cambridge Journal of Economics (2008). BT

The Impact of International Migration on Albanian Family Farming

Migration and remittances are used by rural households as a way to move out of agriculture

Juna Miluka, Gero Carletto, Benjamin Davis, and Alberto Zezza

More than 15 years into transition, Albania remains predominantly rural: 54% of the population reside in rural areas and agriculture still employs approximately 50% of the workforce, providing an income source to more than 90% of the households in the more remote north-eastern part of the country. The agricultural reforms carried out in the post-communist period, and the resulting land redistribution, led to a highly fragmented sector.

Concurrently with conducting a rapid and intense land reform, Albania experienced extraordinary migration outflows

Albania's land reform was unique among transition countries for its rapidity and intensity: by the mid-1990s, 94% of farmland had been privatized, with 550 state and collective farms split into 460,000 privately owned farms, averaging only 1.1 hectares per farm. Albania has had the highest decollectivization index of all transition economies in Eastern and Central Europe, but as opposed to these other countries, redistribution was not based on restitution and benefited all rural households.

Migrant Household Profile

Concurrently, with this transformation of the agricultural sector, over the transition period Albania has experienced one of the most extraordinary migration outflows in recent history. Rural areas, from where the majority of these flows originate, have been particularly affected. In 2005, one household in three had at least one former member living abroad, mainly in Greece or Italy. About two-thirds of these migrants are reported to remit, with the highest prevalence towards rural households.

However, evidence suggests that despite the positive effect that migration and remittances have had on improving the living conditions of the migrant-sending households, only a small fraction of the remittances is invested in agriculture. The sector remains plagued by a plethora of problems, including low productivity and outdated technologies. The labor market for agricultural work is very thin, while formal rural credit and insurance markets remain virtually nonexistent. How can rural out-migration ameliorate some of these constraints? How has migration affected farming investment decisions?

Our empirical investigation, which is based on data from the 2005 Living Standards Measurement Study survey, aims at evaluating the impact of migration on farm's technical efficiency, resource allocation to, and income from, agricultural production of farm households.

Impact of Migration on Agriculture

The main channels through which the impact of migration on agriculture can materialize are via the re-allocation of labor and capital resources by households, i.e. the loss of the "resident" family workforce to migration and the gain in working capital or credit. Our results suggest that:

- Members of households with migrants abroad work significantly fewer hours in agricultural production, both in total and on a per capita basis. However, although the direction of the impact holds for both male and female members, the magnitude of the impact differs across gender lines. Women in migrant households work proportionately more than men, when compared with their counterparts in non-migrant households.
- Contrary to expectation, and despite sizable remittances, migration has no impact on the farm's technical efficiency. In the face of lower labor allocation to agriculture, migrant households actually appear to invest less in productivity-enhancing and time-saving farm technologies in crop production such as chemical fertilizers and farm equipment. Despite the overall low levels of investments in farm inputs, migrant households spend comparatively even less than their non-migrant counterparts. This quite troublesome finding is indicative of a generalized divestment in agriculture as a result of migration. On the contrary, migrant households appear to invest more in livestock production.
- Despite the reduced labor effort, however, agriculture income does not seem to decline as a result of migration, and total income (as expected) increases significantly. The latter result may be due to the direct effect of remittances, but also to increased income from other non-farm sources.

Thus, migration of one or more household members, and the remittances it generates, is being used by rural households in Albania as part of a strategy to move out of agriculture. Migration has no significant impact on a farm's technical efficiency, thus reinforcing the idea that migration is not being used to improve agricultural productivity.

While from a development perspective, it may be reasonable for policymakers to put a considerable amount of faith in the mending power of remittances to revive sluggish sectors of the economy, such as agriculture, the fact that rural households are not investing migrants' resources or their time in crop production indicates that agriculture continues to give little prospects for growth and individual betterment for rural Albanians.

This paper — a product of the Development Research Group — is part of a broader collaboration with the Food and Agriculture Organization of the United Nations to study the impact of migration on investments and rural development in source countries. Full text of the paper can be accessed at: http://go.worldbank.org/WO38MQ1E00 (Policy Research Working Paper 4367). The contacting author is Gero Carletto, gcarletto@worldbank.org. **BT**

Electricity Sector Reforms and the Poor in Europe and Central Asia

Contrary to perceptions, the poor benefited more than the non-poor from reform

Julian A. Lampietti, Sudeshna Ghosh Banerjee, and Amelia Branczik

The socialist legacy in Eastern Europe and Central Asia, where access to electricity had been extended to virtually all consumers at nominal cost, was an electricity sector dependent on a complicated system of fiscally unsustainable budget transfers, while simultaneously seeing dramatic deterioration of its infrastructure. In the worst affected countries, service was failing and electricity was unavailable for large parts of the day. The only option open in this situation was immediate implementation of a wide-reaching reform program. As with all utility reforms, policy makers were faced with the mismatch between the timing of costs and benefits associated with reform, exacerbated by expectations rooted in communist times that the state would take care of utility provision.

Three case studies below undertaken in Armenia, Georgia and Moldova analyze the reform patterns, the consequences for households, and the effectiveness of various mitigating strategies for the poor.

Raising Prices in Armenia — Burden for the Poor?

In the late 1980s and early 1990s, Armenia's economy suffered a catastrophic earthquake, the breakup of the Soviet Union, protracted conflict, and the closure of borders with Azerbaijan and Turkey. The landlocked geographical position and dependency on imported oil and gas compounded the effects of rising energy prices. At the same time, residential electricity prices remained very low. Unable to cover internal maintenance costs and crippled by weekly interruptions in gas supply, by 1992 electricity utilities were on the verge of collapse. From 1992 to 1995, most of the population received only two to four hours of electricity per day. With district heating also gone, residents of the capital Yerevan burned trees, telephone poles, and books to get through the winter.

In 1995-1996 the Armenian government embarked on reforms, which included restructuring and regulating the energy sector, improving payment discipline, and making the electricity supply more reliable. Armenia soon made progress, and by 1999, 98% of households reported having electricity.

A tariff increase in 1999 was a pivotal moment in the reform. Introduction of a single uniform tariff removed subsidies and led to a sizable increase in electricity prices. To soften the impact of the increase, the poorest households were compensated with a direct cash payment.

After the increase, the poor consumed 20-30% less of each energy type, yet they devoted close to 30% of their monthly expenditure to energy, compared with 18% for the non-poor (and with 3%-7% in western countries). The burden of tariff increases appeared to be highest among the urban poor, with 16% of their total monthly expenditures going to electricity alone.

In response to the price change poor households:

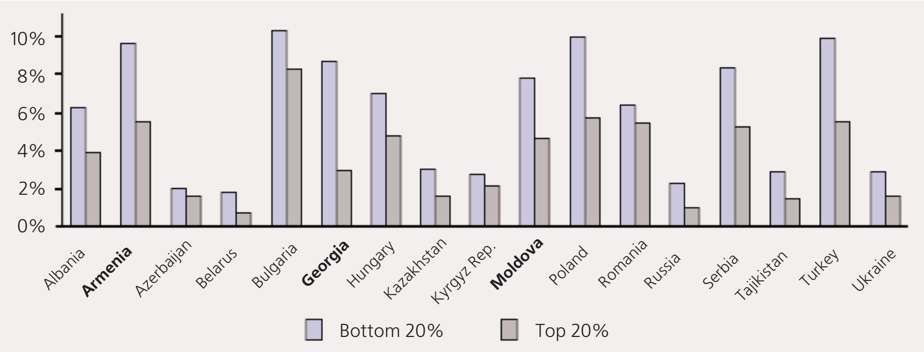
- Lowered consumption — by an average of 20%, especially among rural households, who apparently had greater access to substitutes;
- Paid only a fraction of the bill, maintaining service while accumulating arrears. The percentage of such households increased from 27% to 46% between 1998 and 1999;
- Substituted electricity in heating and cooking, with the effort highest among the rural poor (71%).

Despite reduced consumption by the poor, their average bills increased by 13%. Yet, only 55% of the poor households received cash transfers.

We conclude that the initial impact of reform was underestimated, as the tariff increase was in reality 50% greater than originally conceived. This highlights the need for careful calculation and accurate price response prediction in forecasting and mitigating the impact of reform. Although the tariff increase was aimed at creating a more sustainable sector, the utility revenue increase of about 6% was less than expected, thanks to falling consumption and a simultaneous increase in arrears. This suggests that the benefits of the reform program did not materialize as quickly or easily as intended, and that tariff increases must be accompanied by moves to encourage greater payment.

In years after the study was conducted, Armenia continued to reorganize the electricity sector, transforming it into one of the region's success stories. By 2004, collections had reached almost 100%. The social protection system has become better targeted, and efforts to improve it have continued further.

The Poor Spend More (Percent of Income on Electricity, 2002)



Notes: Conditional on households reporting positive expenditures. Figures for Bulgaria and Tajikistan are for 2003. Source: Author's calculations based on household survey data from World Bank ECA database.

Nonpayment and Power in Georgia

Georgia's economic decline following independence was among the deepest in the former Soviet Union, with GDP falling by 70% from 1990 to 1994. The country's dependency on energy imports and high international prices for fuel were exacerbated by supply and generation disruptions from political turmoil. Utilities accumulated large payment arrears, and energy supplies contracted dramatically. Households were receiving only four to six hours a day of electricity in the capital, Tbilisi, and three to four hours a day elsewhere. Investment in electricity infrastructure was impeded by a lack of capital, as a combination of subsidized tariffs, nonpayment of bills, and thefts of electricity contributed to low cost recovery.

Starting from 1996, the government of Georgia undertook a seemingly model program of utility sector reform. The vertically integrated incumbent was split into several generation enterprises and separate transmission and dispatch companies. Distribution was divided into regional companies. And in 1998, in the first privatization of its kind in the former Soviet Union, an American distribution company, AES Corporation, purchased Telasi, the Tbilisi power distribution company.

To increase collections, AES Telasi invested US$60 million in installing electricity meters in Tbilisi and cutting off dangerous illegal connections. This helped the utility to increase receipts by 135% by 2002. While tariff increases accounted for some of the increase, better collections from customers and increases in the volume of government transfers to consumers also played a role. The quality of service also improved. In 2001, 94% of households in the capital received 24 hours of uninterrupted electricity.

Outside Tbilisi, energy consumption fell significantly after 1997, especially by the poorest 20% of households, who in 2001 consumed half as much as before. To mitigate the impact of rising prices on the poor, a range of programs had been adopted to provide energy transfers to households, including those of pensioners and refugees. However, our findings show that a significant share of transfers went to households in the high expenditure quintiles.

Despite successes, falling incomes and a prevailing practice of nonpayment — with high theft levels, routine sabotage or destruction of meters, and protests against increasing collections — proved to be major obstacles to improving cost recovery for AES Telasi. Since changes in collection rates increased uniformly across the lowest and highest 20% of households, we conclude that free-riding rather than affordability was behind the arrears. Increasing collections did not necessarily hurt the poor.

In 2002, reform stalled. Dissatisfaction with higher tariffs and greater enforcement was expressed through resentment at the presence of a western player in the electricity sector. In late 2003, AES sold Telasi to Russian utility RAO UES.

Georgia's experience highlights the difficulties encountered by utilities in pushing for cost recovery in a hostile environment. The main lessons include:

- Remetering, in conjunction with tariff increases, should be a high priority, to generate the maximum amount of revenue;
- An aggressive approach to reducing nonpayment, such as in Georgia, does not necessarily have a disproportionate adverse impact on low-income households, particularly if suitable subsidy and transfer mechanisms are in place;
- An ambitious reform agenda cannot work without a strong regulator and a high-level political commitment, which were lacking in Georgia.

In later years such problems as continuing nonpayment, accumulated debts, theft, and possibly corruption remained, as evidenced in the 2005 World Bank report, and Georgia's energy sector remained financially bankrupt.

Privatization and the Poor in Moldova

Moldova's post-independence decline left it one of the poorest countries in the region. Moldova imports more than 95% of its energy from Russia and Ukraine. Increasing gas and oil prices contributed to the rapid accumulation of debts by the state energy company, Moldenergo. Until 1998, residential energy tariffs remained low, and sector revenues could not cover the cost of imports. This resulted in regular power interruptions and lower quality, especially outside the capital, Chisinau.

In 1997, Moldova launched a reform program, and in 1999 tariffs were increased by 84%, followed by smaller increases. In 2000, the government adopted a law on energy compensation for vulnerable groups, and sold three of five regional electricity distribution companies to the Spanish utility Union Fenosa (two others remained in state hands).

Although reform produced substantial improvements in supply to consumers, particularly in rural areas, reform and privatization elicited acrimonious debate on their costs and benefits. The Communist government, elected in 2001, openly announced its intention to reverse privatization in the energy sector.

Did reform really affect the poor and the non-poor differently, as was charged by its opponents? Were household electricity consumption patterns different in private and public distribution networks? Our findings suggest that:

- On electricity consumption, the poor were catching up with the non-poor. On average, the poor consumed 26% less electricity than the non-poor. But since 2000, they were increasing monthly electricity consumption by 14.6%, while the non-poor were increasing consumption by only 3.2%.
- Availability of electricity greatly improved. The poor, disproportionately affected by blackouts, benefited the most from the return to a 24-hour service.
- Consumption and expenditure patterns of households served by Union Fenosa and those served by the public companies were found to be roughly similar, as was the quality of service.

Thus, contrary to perceptions, the poor benefited more than the non-poor from reform, having increased their consumption more than the non-poor despite rising costs. The private company had a significant positive impact on the government budget, while service quality improved, and collection rates have risen to almost 100%. Moreover, the presence of a private operator in a chronically underperforming sector may have had a significant positive spillover effect, putting pressure on the public utilities to improve their performance.

The article is based on the World Bank publication "People and Power: Electricity Sector Reforms and the Poor in Europe and Central Asia" by Julian A. Lampietti, Sudeshna Ghosh Banerjee, and Amelia Branczik. The volume brings together a series of studies conducted between 1999 and 2004. The full text of the volume is available at: www.worldbank.org/eca/publications. **BT**

Fiscal Policy and Economic Growth in Europe and Central Asia

Even with substantial progress in fiscal adjustment, governments are still quite large

Cheryl Gray, Tracey Lane and Aristomene Varoudakis (eds.)

Economic growth in most transition countries in Europe and Central Asia (ECA) since the late 1990s has been accompanied by significant reforms in public finances. Government spending has fallen in line with the changing role of the state, and tax revenues have picked up from low levels as tax policies have been restructured and tax administrations strengthened. Fiscal deficits have narrowed as a result of increasing revenues and controls on spending, and public debt ratios have fallen.

Even with this progress in fiscal adjustment however, ECA governments are still relatively large on average (see Figure 1) compared with those in non-ECA countries at similar levels of per capita income. Governments are particularly large in Central and Southeast Europe (SEE), where total public spending averages close to 45% of GDP. Generous social protection schemes, which mirror those in higher-income countries, account for most of this size difference.

Does Government Size Matter for Economic Growth?

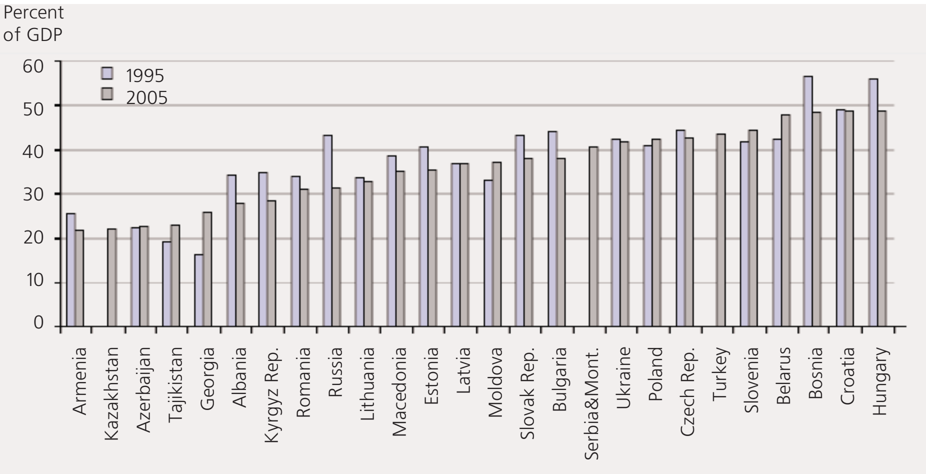
Our detailed analysis finds that the overall size of government influences economic growth rates in ECA, but that this effect depends on the state of governance. Bigger governments can hinder growth in countries with weak governance, but this effect is nonlinear: below about one-third of GDP, the size of government is not correlated with growth, but once public spending exceeds 35% or so of GDP, increasing government size can have a negative impact on growth. Strong governance mitigates this negative effect, which is one reason that big governments do not necessarily reduce economic growth in some higher-income OECD countries.

Multiple reasons explain why large governments can impede growth in countries with weak governance:

- Large governments are more likely to run fiscal deficits during economic downturns, particularly where public spending is inflexible because of weak budgeting systems, reliance on earmarks, and high public employment;
- The high rates of taxation needed to fund big governments can distort private activity, particularly if tax administrations are weak;
- A large government presence in particular sectors may be accompanied by anticompetitive regulations on private sector participation;
- Government spending may be misallocated as a result of corruption or poor capacity, sapping productive resources from the economy.

While strong and capable governments may be able to avoid many of these problems through tight budget planning and efficient tax administration, countries with weaker governance should keep public spending and taxation to more modest levels if they want to spur economic growth.

Figure 1. Total Public Sector Spending, by Country in ECA, 1995 and 2005



How to Improve the Efficiency of Public Spending?

Patterns of public spending affect economic growth in at least two ways. First, some categories of activities appear to spur growth more than others. High levels of spending in "unproductive" areas (e.g. public consumption and transfers) can have a negative impact on growth, while spending in "productive" areas (e.g. investment and social sectors) can promote growth. Second, within each broad category of spending it is possible to allocate resources more or less efficiently.

Here again the state of governance matters a lot. Higher spending in productive areas can lead to higher growth in countries with strong governance, and in such countries higher spending in unproductive areas may not necessarily be harmful to growth. In contrast, growth in countries with weak governance tends to be slowed by higher levels of unproductive spending and the higher taxes that are required to fund it, and such countries do not necessarily benefit from spending in productive areas.

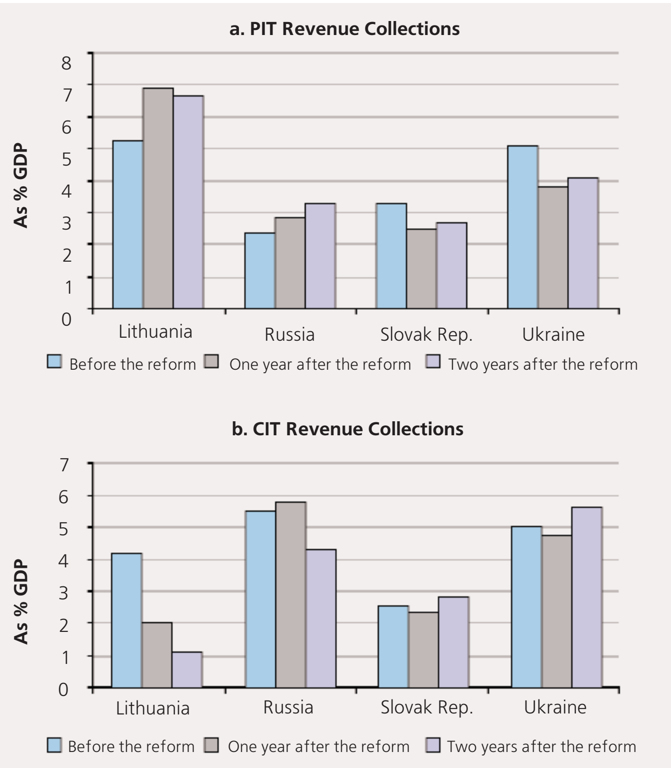
While ECA countries should try to shift spending toward productive areas to any extent possible, it is even more important that they enhance the efficiency of spending in such areas as infrastructure, education, health, and pensions.

- *In infrastructure*, further investments, a stronger focus on operations and maintenance, and better management of public investments are necessary.

But the primary emphasis still needs to be on promoting efficiency and strengthening governance, particularly in the SEE and CIS regions. There is also scope for more private sector participation, whether through divestiture or management contracts. Yet, the role of government will continue to be critical, especially in ensuring financial viability and promoting fair competition.

- *In education*, public spending is achieving reasonably good results in many ECA high-growth countries, which have above-average school enrollment and learning outcomes given their share of public education spending in GDP. Yet the countries could benefit from moving to financing on a per capita basis; integrating relatively expensive technical and vocational with general education schools; decentralizing school financing and management; and relying to a larger extent on private sources of financing for tertiary education to free up public resources for primary and secondary education.
- *In health*, the ECA countries tend to spend more than countries elsewhere for comparable outcomes, a sign of inefficiency and poor governance. The primary emphasis in ECA needs to be on enhancing the quality and efficiency of spending, e.g. through consolidating hospitals, moving toward standard basic benefits packages, containing the growth of pharmaceutical costs; putting in place adequate mechanisms for financing and risk sharing with a reasonably modest level of copayments (not to limit access for the poor).
- *In pensions*, ECA countries have a higher level of spending than fast-growing countries at similar income levels elsewhere. This is due to low retirement ages, broad coverage for disability, and the falling share of the population paying into public pension systems, aggravated by declining birth rates and the overall aging of the population. For middle-income countries, the best option would be to make the public contributory pension system fully self-financing and complement it with means-tested social assistance for those who are not covered. For lower-income countries, a universal or means-tested low-rate pension financed out of general revenues may be the best option.

Figure 2. Changes in Personal (PIT) and Corporate Income Tax (CIT) Revenue Collection after Flat Tax Reform



Reducing Distortions in the Tax System

ECA countries are pioneers in adopting flat income taxes, motivated primarily by a desire to simplify the tax system and to lower income tax rates to spur investment and growth. The revenue impact of flat tax reforms has varied (see Figure 2), largely reflecting different policy goals. In some countries, such as Slovakia, rate reductions have been tempered by an expansion of the tax base and by better compliance. In other countries, such as Ukraine, the benefits of simplicity are clearly visible but the lack of reforms in other areas (e.g. labor taxes and tax administration) has undermined potential improvements in compliance. The experience in ECA suggests that flat tax reform is less likely to have a negative impact on revenue collection if it is adopted during a period of strong economic growth and is complemented by improvements in tax administration.

However, even though income tax rates have been lowered dramatically in many ECA countries, payroll taxes remain high, discouraging compliance and imposing a tax wedge of 30-50% on employment. High labor taxes have a negative effect on rates of formal employment, on the return to capital and on growth.

The best way to reduce the labor tax burden and its effect on employment is to reform the social security system (most notably pensions and health care). In some countries relief from payroll taxes should be provided to those with the highest "elasticity" of labor demand, including low-skilled workers and new labor market entrants. ECA countries can also move towards replacing some social insurance benefits financed by employer and employee contributions with universal benefits financed out of general taxation, as some Western European countries have done.

Conclusions

World-wide experience offers some lessons that ECA countries can use as they try to formulate public finance policies that will promote economic growth while meeting the need for fundamental public goods:

- Macroeconomic stability is essential, because large budget deficits retard growth;
- Moderate levels of public spending — about one-third of GDP or less — are preferable when governance and public administration are not strong;
- Lower income and payroll tax rates can spur investment and employment.

Cheryl Gray is Sector Director, Poverty Reduction and Economic Management Department, ECA Region; Aristomene Varoudakis is Country Director for Armenia, and Tracey Lane is Senior Economist, at the World Bank, Washington, DC. Full text of the report "Fiscal Policy and economic Growth: Lessons for Eastern Europe and Central Asia" can be viewed at www.worldbank.org/eca/fiscal. **BT**

Who Wants to Revise Privatization?

People with negative personal experiences during the transition favor re-privatization

DIrina Denisova, Markus Eller, Timothy Frye, and Ekaterina Zhuravskaya

For the last 20 years, the privatization of state enterprises has been a central element of economic reform. By most accounts, the beneficial effects of privatization have outweighed the costs in most settings. Yet privatization seems to be unpopular with the mass public in many reforming countries.

We analyze the attitudes towards privatization, relying on a dataset from the 2006 survey by the World Bank and EBRD entitled "Life in Transition", which covers 28,000 individuals in 28 transition countries.

We find strong support for revision of privatization in all post-communist countries, with more than one half of the population in each country supporting some form of revision, from levying additional taxes on current owners of privatized assets to their full expropriation. Re-nationalization and keeping companies in state hands is strongly preferred in Central Asia and the South Caucasus (see Table). The highest support for re-nationalization followed by re-privatization using a more transparent process is observed in the South Caucasus and in Croatia. In contrast, respondents in Albania, Bulgaria, the Czech Republic, Hungary, and Romania have a strong preference for leaving property with current owners, provided that they pay what the privatized assets are worth. Leaving most privatized companies in the hands of current owners without any change is especially pronounced in Belarus and Estonia.

Institutions are Important

We examine how individual characteristics shape attitudes towards privatization and find that the following groups of people are in favor of revising privatization:

- Respondents with less human capital and/or human capital specific to an economy dominated by state ownership — older respondents, those in less skilled jobs, in poorer health, and with only vocational educations;
- People who have experienced significant and sustained economic hardships during transition, such as food cuts, forced asset sales, and wage cuts;
- People who have worked in the public sector during transition, presumably because the person believes that s/he missed out on gains from the initial round of privatization. If a respondent moved from wage work to self-employment, or worked for longer periods in the private sector, his/her preference for private over state property was stronger, but attitudes towards revising privatization were not affected.

On the other hand, respondents reporting a movement up the income ladder relative to 1989 oppose re-nationalization/revising privatization. To this group also belong owners of private assets (house or apartment), because their personal holdings may be adversely affected by such a change in policy.

We also find that institutions do affect the link between transition-related histories and support for the revision of privatization. In particular, in countries with better governance, stronger democracy, and more extensive private ownership respondents moving from work for wages to self-employment are significantly more likely to oppose revising privatization than their counterparts in countries with weaker institutions.

Inequality does not directly affect the link between individual transition histories and attitudes towards revising privatization, but it does decrease the differences in the belief of the superiority of state over private property between those with relatively successful and unsuccessful transition histories.

Finally, in countries where privatization has been extensive, those who moved from wage work to self-employment during transition are more likely to oppose revising privatization.

Policy Implications

Understanding who supports the revision of privatization and the reasons for this support has different implications for policy. If public support is rooted in relative losses from declining returns to human capital, then retraining programs may prove to be an effective tool. However, if public support for the revision of privatization is driven by concerns of fairness, governments may have to turn to redistributive policies. An optimistic lesson from our results is that most of the support for the revision of privatization due to unfairness comes from negative personal experiences during the transition, which are likely to play a smaller role in shaping attitudes over time.

Irina Denisova is a Lead Economist, and Markus Eller is an economist at CEFIR; Timothy Frye is Professor at Columbia University and member of the Harriman Institute at Columbia University, US; Ekaterina Zhuravskaya is Academic Director at CEFIR and a professor at NES. Full text of the paper is available at www.cefir.ru (WP 105). **BT**

"In your opinion, privatized companies should be... " (selected countries)

	Re-nationalized and kept in state hands	Re-nationalized and then re-privatized in a more transparent way	Left with their current owners provided they pay privatized assets' worth	Left with their current owners with no change
Armenia	40.5	22.6	26.8	10.1
Belarus	20.4	7.1	25.8	46.7
Bulgaria	28.8	15.8	48.3	7.2
The Czech Rep.	13.0	11.8	20.6	24.6
Estonia	22.4	10.7	22.6	44.4
Georgia	30.9	31.9	14.0	23.2
Hungary	24.6	10.2	51.9	13.3
Romania	19.9	14.4	53.0	12.8
Russia	36.7	13.3	31.5	18.5
Ukraine	43.0	12.5	31.9	12.6

The Resource Curse and Corporate Transparency

Companies respond to government predation with lower corporate transparency

Art Durnev and Sergei Guriev

High oil prices have rekindled interest in the negative effect of resource abundance on economic growth. Known as the "resource curse", it has recently been linked to the deterioration of economic and political institutions. In particular, economists have hypothesized that if resources are discovered in an economy with immature institutions, the resulting rent-seeking slows down or even reverses institutional development, which in turn, negatively affects growth. In contrast, countries with mature institutions (such as Norway or Australia) may benefit from their resource wealth and channel newly discovered resources to the development of other sectors.

Testing this hypothesis empirically is not easy. As most institutions change slowly, one has to rely on cross-sectional evidence which is vulnerable to reverse causality and omitted variable bias. In order to understand the mechanisms of the resource curse we need to use micro-economic data. In our recent research we have studied the effect of resource abundance on growth through its effect on corporate transparency and property rights, using data on 72 industries in 51 countries over the period 1990-2005.

We argue that during periods of high commodity prices, corporate profits in the natural resource industries represent rents that are relatively easy for governments to capture. Firms in such industries face a trade-off. On the one hand, to attract external capital, they desire transparency. On the other hand, higher transparency involves a risk of expropriation by the government or rival companies. Various forms of government expropriation include the extortion of bribes, overregulation, disregard for property rights, confiscatory taxation, and the outright seizure of firm assets. Transparency would therefore be lower in industries that are more vulnerable to expropriation, particularly in countries that have poor protection of property rights.

Timeless Relevance — Regrettably

The argument is not new. In the "Wealth of Nations", Adam Smith wrote: "In those unfortunate countries, indeed, where men are continually afraid of the violence of their superiors, they frequently bury and conceal a great part of their [capital] stock".

The quintessential example is the story of Yukos, once Russia's largest and most transparent oil company, and its founder Mikhail Khodorkovsky. Khodorkovsky and his partners acquired a stake in a notorious loans-for-shares auction and then diluted the stakes of other shareholders, including foreign investors and the government. Once they assumed control over the majority of voting and cash flow rights, the firm's transparency and corporate governance improved substantially. Khodorkovsky was the first of the Russian oligarchs to disclose his personal stake in a major company and to invite reputable foreigners to join the corporate board. This raised Yukos market capitalization fifteen-fold in less than four years but also eventually resulted in the full expropriation of the company by the government and imprisonment and exile of the key owners and managers. While the official charges against Khodorkovsky were related to tax fraud, there is a widespread belief that the government's assault was driven by a combination of Khodorkovsky's political ambitions and the firm's openness about its high value.

The Yukos affair was certainly not an isolated case and its relevance goes well beyond Russia, extending to *Expropiacion Petrolera* in Mexico in 1935 and recent nationalizations in Venezuela, Bolivia, and Ecuador.

Negative Effect on Growth

In testing the within-country variation in firm transparency levels induced by government rent-seeking we construct several indices, including the opacity index, which reflects the degree of manipulation and withholding of information, and the predation index, which encompasses information on countries' rule of law, risk of government expropriation, corruption, quality of bureaucracy, regulation of competition, etc. We find that:

- Companies around the world respond to government predation with lower corporate transparency. This is especially true for oil and gas industries, and more so when the price of oil is high and property rights are poorly protected;
- Opacity increases when a government is more autocratic or when it favors redistributive policies, i.e. has a left-leaning political orientation. The opacity also increases during election years reflecting the increased uncertainty about future government policies;
- Lower transparency in oil price-sensitive industries results in less efficient capital allocation and eventually lower corporate growth.

The difference in corporate growth between an expropriation-sensitive industry (e.g. oil and gas) and an industry with little expropriation risk (e.g. agriculture) is not trivial in a predatory country. For example, in Venezuela the oil and gas industry would grow slower by 1.8% compared to agriculture. This can be compared to Norway — the country with high-quality institutions, where the differential growth rate between oil and gas extraction and agriculture would only reach 0.1%.

Thus, it turns out that the resource curse is indeed a corporeal phenomenon. It affects — in a very tangible way — corporate transparency in actual firms. This results in material consequences for capital allocation and the growth of these firms.

Art Durnev is Assistant Professor of Finance at McGill University, Canada. Sergei Guriev is Associate Professor of Economics and Rector of New Economic School, Moscow. Full text of the paper is available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1020476. **BT**

The World Bank Outlines Cooperation with Serbia

The World Bank Board of Executive Directors discussed a Country Partnership Strategy for Serbia for the period until 2011 on December 13, 2007. Executive Directors welcomed Serbia's recent initialing of a Stabilization and Association Agreement with the European Union, and acknowledged Serbia's significant development since the country's succession to World Bank Group membership in 2001. Over the last six years, average incomes have almost doubled and poverty has declined by more than one third. These gains have been underpinned by major structural economic reform, although Serbia still faces considerable issues to complete its economic transition. It was noted that regional stability would be especially important at this time to ensure that Serbia and the region can build on economic gains and move as quickly as possible towards European accession.

World Bank Approves Support for Kosovo in Education and Financial Sector

On December 13, 2007, the World Bank's Board of Executive Directors approved US$12 million support for Kosovo through two new education and finance sector projects, which will support the Bank's ongoing support strategy for Kosovo. The strategy was prepared in partnership with the Provisional Institutions of Self Government and the United Nations Interim Administration Mission in Kosovo. The strategy will be financed by an IDA grant allocation of US$12 million for both projects.

The Institutional Development for Education Project, financed by a US$10 million IDA grant, will support the government in its implementation of the strategies for the Development of Pre-University and Higher Education in Kosovo. The Financial Sector Technical Assistance Project, financed by a US$2 million IDA grant, will contribute towards greater financial sector stability and development by supporting stronger prudential regulation and supervision by the Central Banking Authority of Kosovo (CBAK) for bank and non-bank financial institutions; the institutional strengthening of CBAK; and the strengthening of the banking and microfinance industry through capacity building.

World Bank Launches a New Partnership Strategy for Bosnia–Herzegovina

The World Bank Board of Executive Directors endorsed a new Country Partnership Strategy on December 13, 2007 for Bosnia and Herzegovina outlining its cooperation with the country over the next four years. The World Bank Board also approved an IDA credit for the Road Infrastructure and Safety Project of US$25 million.

The new Strategy outlines a lending program of about US$ 200 million in support of the country's priorities, including integration with the European Union. This program will be further supported by about US$200 million available under projects that have already been approved.

Croatia Scales Up Use of Environmentally Friendly Agricultural Practices

On December 6, 2007 the World Bank approved a US$5 million Global Environment Facility Grant for the Agricultural Pollution Control Project for Croatia. The Project will assist the government in increasing the use of environmentally friendly agricultural practices by farmers in Croatia's Pannonian plain in order to reduce nutrient discharge from agricultural sources to surface and ground waters. The project will also help Croatia on its path towards EU accession, as project activities will help the country comply with European Union Nitrates Directives while assisting the government in establishing a competitive agricultural sector. The Agricultural Pollution Control Project will be implemented as a pilot activity in three selected counties: Osijecko-Baranjska, Vukovarsko-Srijemska and Varazdinska. These counties have been selected because of the high density of livestock, concentration of medium scale livestock farms as well as war related damages to manure storage and water monitoring infrastructure in some areas.

World Bank Launches New Partnership Strategy for Ukraine

The World Bank's Board of Executive Directors endorsed a new Country Partnership Strategy for Ukraine covering the period 2008-2011 on December 6, 2007. The Strategy outlines the priorities for the World Bank Group's engagement through lending and investments, analytical and advisory services, and technical assistance. The strategy proposes a lending range of US$2-6 billion over four years, with annual lending levels modulated by a series of performance benchmarks, including progress in structural reforms, macroeconomic stability and improvements in the implementation of existing World Bank loans. In addition, the International Finance Corporation will continue to invest significant resources to support the private sector in Ukraine. The Bank also approved the Second Development Policy Loan for Ukraine amounting to US$300 million on December 20, 2007.

Belarus: World Bank Announces New Country Assistance Strategy and Additional Support to Social Infrastructure Retrofitting

The World Bank's Board of Executive Directors discussed the new Country Assistance Strategy for Belarus for the period 2008-2011 on December 4, 2007. The new Strategy supporting the country's development agenda was prepared in consultations with the government of Belarus and representatives of civil society organizations, the private sector, and international organizations.

The World Bank expects to provide about US$100 million a year in long-term loans to support Belarus in addressing global environment and energy challenges, enhancing the competitiveness of its economy to assure rising incomes, and protecting the welfare of the most vulnerable over the next four years.

In the past, the World Bank loan funds have been used to retrofit 600 schools, kindergartens, community homes for the elderly, hospitals, and outpatient clinics in Minsk as well as other regions in Belarus. Accordung to estimates, retrofitting of each facility leads to 20-25% reduction in energy consumption — it is sufficient for heating an additional small block of twelve 70-apartment buildings or 10-15 schools for a year.

World Bank Continues Supporting Implementation of Poverty Reduction Strategy in Armenia

On November 27, 2007, the World Bank approved a US$18.5 million Fourth Poverty Reduction Support Credit for Armenia. The project will support the implementation of the government's Poverty Reduction Strategy Program by helping to sustain economic growth, providing resources for the budget, bolstering the fight against illegal logging and facilitating priority reforms of the government. This fourth installment will bring total budget support from the Bank to over US$85 million since 2004.

World Bank Supports Customs Development in Kazakhstan

The World Bank's Board of Executive Directors approved a US$18.5 million loan for the Kazakhstan Customs Development Project. The project, approved November 27, 2007 will help reform and modernize customs administration in Kazakhstan by increasing revenue collection, and improving transparency of customs operations promoting the use of internationally accepted practices.

World Bank Opens New Centre for Financial Reporting Reform in Vienna

The World Bank opened the Vienna Centre for Financial Reporting Reform November 30, 2007 in an effort to bring its services closer to European clients and better target the emerging needs of middle income countries in the region. The new office will aid countries in Europe and Central Asia in meeting the financial reporting standards necessary for EU accession, provide advice and analysis on targeted accounting policy reforms, build capacity with civil servants from governments in the region, and provide support for the Bank's other operations in the region.

The Centre’s activities are both fee-for-service based and funded by donors. It is currently supported by the European Commission, SECO, Austrian Development Agency and Austrian Government, USAID, and the Foreign Ministries of the Netherlands, Japan and Norway.

World Bank and Global Environment Facility Support Integrated Nutrient Pollution Control Project in Romania

The World Bank's Board of Executive Directors approved a new IBRD loan (50 million Euro) and a Global Environmental Facility Grant (US$5.5 million) to Romania for the Integrated Nutrient Pollution Control project on October 30, 2007. Total project costs have been estimated at US$81.6 million. The project supports Romania's commitments to meet EU environment standards through an integrated program demonstrating links with other environmental investments, especially sanitation and waste management, and will help reduce nutrient discharges to water bodies; (ii) promote behavioral change at community level; and (iii) strengthen institutional and regulatory capacity.

This part has been provided courtesy of Merrell Tuck and Dorota Kowalska, Europe and Central Asia External Affairs

Integrating Environment into Key Economic Sectors: A Prerequisite for Sustainable Development

The transition to a market economy presents both a challenge and an opportunity to put in place policies and incentives that would minimize the environmental impact of increased development while ensuring the sustainable management of natural resources and the environment. Integrating environment in key sectors — energy, agriculture, forestry, extractive industries and transportation — is central to the long-term sustainability of economic development in Eastern Europe and Central Asia. These are the main messages coming out of two World Bank reports — “Integrating Environment in Key Economic Sectors in Europe and Central Asia”, and “Integrating Environment into Agriculture and Forestry: Progress and Prospects in Eastern Europe and Central Asia” — prepared as part of its contribution to the “Environment for Europe” conference, held in Belgrade, October 10-12, 2007. To access the two World Bank reports, please visit: *http://www.worldbank.org/eca/environmentintegration*.

Russia Contributes US$20 Million to Malaria Control in Africa

The Government of Russia signed an agreement with the World Bank Group and the World Health Organization (WHO) that will see the country commit US$20 million for malaria control in Africa. The contribution marks Russia’s growing role as a donor and active partner in international development efforts. The Russia-World Bank-WHO initiative includes: a US$15 million trust fund under the World Bank Booster Program for Malaria Control in Africa for Zambia and Mozambique which will co-finance projects in the two countries with the International Development Association, US$4 million in support of training programs and capacity building programs for malaria control in Africa to be administered by the WHO Global Malaria Program, and US$1 million for a staff development program related to the initiative. “Russia is expanding its contributions to development aid, particularly in infectious disease control, education and access to energy,” said Russian Finance Minister and Deputy Prime Minister Alexei Kudrin, who signed the Memorandum of Understanding on behalf of the Russian Federation. BT

World Bank Publications

Information and orders: the World Bank, P.O. Box 960, Herndon, VA 20172, U.S.; tel.: +1-703-661-1580, fax: 703-661-1501, http://www.worldbank.org/publications, email: books@worldbank.org, or visit the World Bank InfoShop at 701 18th Street, N.W., Washington, D.C., tel.: +1-202-458-5454

Doing Business 2008

Doing Business 2008 — the fifth in an annual report series issued by the World Bank and IFC — finds that countries in Eastern Europe and the former Soviet Union reformed the most in 2006/07 — along with a large group of emerging markets, including China and India. Croatia is the region's top reformer. Along with three other countries in the region, it also ranks among the top 10 reformers worldwide. Those top 10 are, in order, Egypt, Croatia, Ghana, FYR Macedonia, Georgia, Colombia, Saudi Arabia, Kenya, China, and Bulgaria. Reformers made it simpler to start a business, strengthened property rights, enhanced investor protections, increased access to credit, eased tax burdens, and expedited trade while reducing costs. Eastern Europe and Central Asia, as a region, surpassed East Asia this year in the ease of doing business. Several of the region's countries have even passed many economies of Western Europe on this score.

Doing Business 2008 ranks 178 economies on the ease of doing business based on 10 indicators of the time and cost to meet government requirements in business startup, operation, trade, taxation, and closure. Singapore, for the second year, tops the aggregate rankings. The most business-friendly country in Eastern Europe and Central Asia is Estonia (ranked 17), followed by Georgia (18), Latvia (22), Lithuania (26), Slovakia (32), and Armenia (39). For more information on Doing Business 2008 and detailed country reports, please visit: *http://www.doingbusiness.org*.

Development Results in Middle-Income Countries: An Evaluation of World Bank Support

The 86 middle-income countries (MICs), including powerhouses such as Brazil, China and Russia, form a diverse group of considerable global importance. As a group, these countries have raised average real incomes by 4% a year since the mid-1990s, and now account for one-fifth of world output, yet they are home to one-third of the world's poor. The World Bank has lent US$163 billion to MICs since 1995 — nearly two-thirds of its total lending to all developing countries — and allocates about half of its administrative budget to work with this group. The new report released by the Independent Evaluation Group (an independent unit within the World Bank Group charged with evaluating its activities) makes a clear, two-fold recommendation: that the Bank should continue to engage with the important group of MICs, but depart from business as usual for a greater impact. The Bank must become more effective on issues where its work has not yielded pronounced advancements, notably dealing with inequality, combating corruption, and protecting the environment. To produce greater development benefits the Bank has to become more agile in response to rapidly changing client needs; draw upon MICs' own capacity more systematically; and more clearly demonstrate best practice to deliver impact beyond the Bank's limited direct role. To download the report or order hardcopies, please visit: *http://www.worldbank.org/ieg/mic*

World Bank Working Papers

http://econ.worldbank.org/

Ana M. Fernandes
Structure and Performance of the Service Sector in Transition Economies
WPS4357, September 2007

The paper examines the structure and performance of the service sector in Eastern Europe and Central Asia during 1997-2004. Services represent an increasing share of total value added and employment, with the major sub-sectors being wholesale trade, retail trade, inland transport, telecommunications, and real estate activities. A clear divide separates EU-5 countries from South Eastern European countries and Ukraine in terms of service labor productivity. Although a large gap in productivity also separates EU-8 countries from EU-15 countries, that gap was reduced from 1997 to 2004 as most services sub-sectors experienced fast productivity growth. High skill intensive sub-sectors and information and communications technology producers and users have exhibited higher productivity levels and growth rates relative to other sub-sectors since 2000. The author finds a positive effect of service liberalization on the productivity growth of service sub-sectors and downstream manufacturing.

Shahid Yusuf and Kaoru Nabeshima
Strengthening China's Technological Capability
WPS4309, August 2007

China's spending on R&D rose from 1.1% of GDP in 2000 to 1.3% of GDP in 2005. On a purchasing power parity basis, China's research outlay was among the world's highest, far greater than that of Brazil, India, or Mexico. The paper considers two questions that are especially important for China. First, how might China go about accelerating technological development? Second, what measures could most cost-effectively deliver the desired outcomes? It concludes that although the level of financing for R&D is certainly important, technological advancement is closely connected to absorptive capacity, which is a function of the volume and quality of talent and the depth and the heterogeneity of research experience. It is also a function of how companies maximize the commercial benefits of research and development, and coordinate research with production and marketing.

Betina Dimaranan, Elena Ianchovichina, and William J. Martin
China, India, and the Future of the World Economy: Fierce Competition or Shared Growth?
WPS4304, August 2007

Although both China and India are labor-abundant and dependant on manufactures, their export mixes are very different. Only one product — refined petroleum — appears in the top 25 products for both countries, and services exports are roughly twice as important for India as for China, which is much better integrated into global production networks. Even assuming India also begins to integrate into global production chains and expands exports of manufactures, there seems to be an opportunity for rapid growth in both countries. Accelerated growth through efficiency improvements in China and India, especially in their high-tech industries, will intensify competition in global markets leading to a contraction of the manufacturing sectors in many countries. Improvement in the range and quality of exports from China and India has the potential to create substantial welfare benefits for the world, and for China and India, and to act as a powerful offset to the terms-of-trade losses otherwise associated with rapid export growth. However, without efforts to keep up with China and India, some countries may see further erosion of their export shares and high-tech manufacturing sectors.

Neeltje Van Horen
Customer Market Power and the Provision of Trade Credit: Evidence from Eastern Europe and Central Asia
WPS4284, July 2007

Statistics show that the sale of goods on credit is widespread among firms even when they are capital constrained and thus face relatively high costs in providing trade credit. This study provides an explanation for this by arguing that customers who possess strong market power are able to increase their customer surplus by demanding to purchase the goods on credit. This gain in customer surplus increases with the degree of asymmetric information between buyer and seller with respect to product quality. Therefore, firms that are perceived as risky are especially subject to the market power of the customer and have to sell their goods on credit. Using detailed firm-level data from a large number of firms in Eastern Europe and Central Asia, the study finds a strong positive correlation between customer market power and trade credit provision. Furthermore, this relationship is especially strong in countries with limited financial sector development or a weak legal system.

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http://www.ssees.ac.uk/economic.htm

Andrei Vernikov
Corporate Governance and Control in Russian Banks
WP 78, July 2007

The paper examines peculiarities of the Russian model of corporate governance and control in the banking sector. The authors focus on real interests of all stakeholders, namely bank and stock market regulators, Russian commercial bank owners, investors, top managers and other insiders. The Anglo-American concept of corporate governance, which implies outside investors' control over banks through the stock market, has a limited relevance in Russia. Instead, Russia's strategy regarding banks resembles China's in that core banks will firmly remain in the public sector, with the state exerting decisive influence. The current ownership structure is likely to lead to the crowding out of domestic private banks and their replacement by foreign and state-controlled ones. If the authorities prefer to see a substantial portion of financial assets in domestic ownership, they have to implement far-reaching measures to convert Russian banks into genuine corporations, including introducing a cap on the size of any stake held by one beneficiary.

Ruta Aidis, Saul Estrin, and Tomasz Mickiewicz
Institutions and Entrepreneurship Development in Russia
WP 79, August 2007

The authors use a comparative perspective to explore the ways in which institutions and networks have influenced entrepreneurial development in Russia. They utilize Global Entrepreneurship Monitor (GEM) data to study the effects of the weak institutional environment in Russia on entrepreneurship, comparing it with all available GEM country samples and, in more detail, with Brazil and Poland. The results suggest that Russia's institutional environment is important in explaining its relatively low levels of entrepreneurship development, where the latter is measured as both the number of startups and existing business owners. In addition, Russia's business environment contributes to the relative advantage of entrepreneurial insiders (those already in business) to entrepreneurial outsiders (newcomers) in terms of new start-ups.

Tullio Buccellato and Tomasz Mickiewicz
Oil and Within-Region Inequality in Russia
WP 80, September 2007

Building on earlier work on regional inequality in Russia the authors investigate whether regional oil and gas abundance is associated with high within-region inequality. They argue that this phenomenon is amplified by the monopsonistic position of the extracting companies on the local labor markets coupled with geographical relocation of rents via transfer pricing from the extracting regions to the companies' headquarters and central government bureaucracy. At the same time, within-region inequality is intensified by reduction in financial support for local communities offered by the extracting companies and by inadequate and ill-targeted transfers by the government.

Other Publications

Christopher Gerry and Carmen Li
Consumption Smoothing and Vulnerability in Russia
July 2007, the William Davidson Institute WP No. 885
http://www.wdi.umich.edu/Publications/WorkingPapers/

The authors examine the channels through which individuals experience and seek to cope with changes in consumption. They find that married individuals living in small households, with educated heads in urban areas are better equipped to smooth consumption. Furthermore, the labor market is an important transmission mechanism allowing households to smooth their consumption but also exposing them to risk, mainly through job loss. Outside of pension payments the formal social safety net does not facilitate consumption smoothing, thus heightening the importance of informal coping institutions. It transpires that both support from relatives/friends and home production act as important insurance mechanisms for the most vulnerable.

Simeon Djankov, Yingyi Qian, Gerard Roland, Ekaterina Zhuravskaya
What Makes a Successful Entrepreneur? Evidence from Brazil
CEFIR/NES WP 104, July 2007, www.cefir.org

The authors report the results of a new survey on entrepreneurship in Brazil. In September 2006, they interviewed 400 entrepreneurs and 550 non-entrepreneurs in 7 Brazilian cities, who were matched with regard to age, gender, education and location. The authors test three competing hypotheses on entrepreneurship: the role of economic and legal institutions (security of property rights; access to credit); the role of sociological characteristics (family background, social networks); and the role of individual features (attitude towards risk, I.Q., self-confidence) in becoming an entrepreneur. In line with the previous research in China and Russia, they find that sociological characteristics have the strongest influence on becoming an entrepreneur. In contrast, success as an entrepreneur is primarily determined by the individual's smartness and higher education in the family. Entrepreneurs are not more self-confident than non-entrepreneurs; and overconfidence is bad for business success.

Robert Poppe
The Matching Approach on Expenditure Patterns of Migrant Households: Evidence from Moldova
Kiel Advanced Studies Working Paper No. 444, July 2007
http://www.ifw-kiel.de/asp/aspwp/2007/aspwp444.pdf

Today workers' remittances are recognized as an important and stable source of development finance. The paper examines the effect of temporary and permanent migration on household expenditures and on asset/durables ownership. Using household survey data from Moldova, the paper compares expenditure patterns of non-migrant and migrant households, distinguishing between temporary migrant and permanent migrant households. The remittance behavior of temporary and permanent migrants is likely to be different, with permanent migrants remitting less as community and family ties become weaker. The paper finds that temporary migrant households have additional expenditures for food compared to non-migrant households. Further, non-migrant and temporary migrant households have higher expenditures for the repayment of loans than permanent migrant households. Concerning the ownership of goods or assets in 2006 compared to the regional crisis in 1998, temporary migrant households are more likely to own more assets or goods than non-migrant households.

Jan Hoem, Aiva Jasilioniene, Dora Kostova, Cornelia Muresan
The Second Demographic Transition in Selected Countries in Central and Eastern Europe: Union Formation as a Demographic Manifestation
Max Planck Institute for Demographic Research WP 2007-026, August 2007
www.demogr.mpg.de/papers/working/wp-2007-026.pdf

Using data from the first round of the national Gender and Generations Surveys in Russia, Romania, and Bulgaria, and from a similar survey for Hungary, the authors study the growth of nonmarital cohabitation as a competitor to conventional marriage in the first union formed. The issue is considered within the framework of the so-called Second Demographic Transition theory of value change in the direction of increasing tolerance in family matters and of women's autonomy. Among the findings is a strong drop in most marriage-formation risks from 1980 to 2001-2005 (depending on the sample) in all four countries and an increase in risks of entry into nonmarital unions in Russia, Romania, and Hungary, but surprisingly not in Bulgaria. It is also evident that this demographic change did not start simultaneously in all countries, and above all it began well before the fall of communism.

William Pyle
Organized Business, Political Regimes and Property Rights across the Russian Federation
BOFIT Discussion Paper No. 18, August 2007
http://www.bof.fi/bofit

The paper explores the inter-relationship of collective action within the business community, the nature of the political regime and the security of firms' property rights. Drawing on a pair of surveys recently administered in Russia, the author presents evidence that post-communist business associations have begun to coordinate business influence over state actors in a manner that is sensitive to regional politics. A firm's ability to defend itself from government predation and to shape its institutional environment as well as its propensity to invest in physical capital is strongly related to both its membership in a business association and the level of democratization in its region. Of particular note, the positive effect of association membership on securing property rights increases in less democratic regions. The evidence, that is, suggests that collective action in the business community substitutes for democratic pressure in constraining public officials.

Balazs Egert and Dubravko Mihaljek
Determinants of House Prices in Central and Eastern Europe
The Bank of International Settlements Working Paper No. 236, September 2007
http://www.bis.org/publ/work236.pdf

The paper studies the determinants of house prices in eight transition economies of Central and Eastern Europe and 19 OECD countries. Although house prices in the CEE countries remain on average far below western European levels, they have been catching up rapidly, with sustained real annual increases into double-digits not uncommon. The main question addressed is whether the conventional fundamental determinants of house prices, such as GDP per capita, real interest rates, housing credit and demographic factors, have driven observed house prices in CEE. The authors show that house prices in CEE are indeed determined to a large extent by these fundamentals, as well as some transition-specific factors, in particular institutional development of housing markets and housing finance. Countries that have implemented greater and faster improvements in housing market and housing finance institutions have also experienced faster growth of house prices. **BT**

Labor Market Outcomes: A Transatlantic Perspective

January 11-12, 2008, Paris, France

The conference is organized by the EDHEC business school and the University of Le Mans, France. The aim of the conference is to show the role played by institutions and the consequences of macroeconomic shocks in explaining labor market differences between European countries and the US. It is particularly concerned with modeling and assessing the main mechanisms at work behind these heterogeneous labor market outcomes. Key note speakers include O. Blanchard, MIT, E. Prescott, Nobel Laureate 2004, Arizona State University, and J.O. Hairault, University of Paris I.

More information: http://professoral.edhec.com/87294683/0/fiche___pagelibre/#contact

Third Annual Workshop on Global Interdependence

March 28, 2007, Barcelona, Spain

CEPR and the Centre de Recerca en Economia Internacional are jointly organizing a one and a half day workshop focusing on global integration and economic interdependence. Papers and presentations will focus on the following topics from the perspective of global integration:

- Global imbalances and sustainability of current account deficits
- Macroeconomics of exchange rates
- Capital flows, international trade and outsourcing
- International transmission of shocks
- Financial linkages within and across regions
- Capital markets in emerging markets
- Multilateral institutions for an interdependent world.

More information:
http://www.cepr.org/Meets/Diary/listyear.asp?year=2008

Economic Modernization and Globalization

April 1-3, 2008, Moscow, Russia

The IX International Academic Conference is organized by the State University—Higher School of Economics, with participation of the World Bank and the International Monetary Fund. Speakers at the plenary session include high-level Russian officials, senior representatives of the World Bank, the IMF, the OECD, and the largest Russian and international companies. Sessions and roundtables of the conference will be devoted to the following priority issues:

- Macroeconomics and economic growth
- Competition and competitiveness
- Education, science and innovations in Russia
- Globalization and regional development
- Modernization of institutional systems
- National legal systems and globalization
- Transformation of public and municipal administration
- Social policy, inequality, and poverty
- Labor markets and demography
- Social capital and value systems
- Civil society institutions
- Political processes in a globalizing economy.

More information and registration:
http://d1.hse.ru/org/hse/apr_conf_eng/index.html

Education for Development and Competitiveness

April 14-25, 2008, Washington, DC, USA

The course organized by the World Bank is primarily targeted at senior government officials from developing countries. It will address challenges facing secondary, vocational, tertiary education within the lifelong learning framework. It will have a strong focus on policy strategies, concrete case studies, and analytical tools by which governments could reform their post-basic education system in such a way that would create a flexible, demand-driven learning system responding to labor market needs with a wider range of partnerships with the private sector and civil society. The course will provide in-depth analysis on cases from several developing and developed countries.

More information and registration:
http://go.worldbank.org/SZST17YQV0

Third IZA/World Bank Conference on Employment and Development

May 5-6, 2008, Rabat, Morocco

The Institute for the Study of Labor (IZA) and the World Bank will organize a two-day conference which will be hosted by the Government of Morocco. Papers dealing with developed countries and transition economies are welcome. The focus of the submitted papers should be on one of the seven topics as described below:

- Diagnosis of labor market conditions and vulnerability in middle and low income countries
- Links between the business environment, labor demand and poverty reduction
- Benefits/costs of structural reforms and globalization for workers
- Causes and consequences of formality and informality
- Effects of labor market policy and institutions.
- Best practices in skills development and skills upgrading
- International migration and labor markets in origin and host countries.

More information: www.iza.org

Second Emerging Markets Group Conference on Emerging Markets Finance

May 15-16, 2008, London, UK

The conference is organized by the Emerging Markets Group at Cass Business School. The Journal of International Money and Finance will publish a Special Issue on Emerging Markets Finance that will include selected papers from the conference. List of topics includes:

- Financial regulation
- International investments
- Financial crises and contagion
- Banking
- Corporate governance and corporate finance
- Asset pricing
- Foreign exchange markets
- Financial markets and market microstructure
- International monetary arrangements and institutions
- Finance and economic growth.

More information:
http://www.cass.city.ac.uk/emg2008/index.html BT

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The World Bank
1818 H Street, N. W.
Mail Stop: MC3-302
Washington D.C. 20433, USA
http://www.worldbank.org

CEFIR at NES
Centre for Economic and Financial Research at New Economic School
Nakhimovsky prospekt, 47, office 720
117418 Moscow, Russia
Tel. +7 495-105 5002
http://www.cefir.ru

CERGE-EI
P.O. Box 882, Politickych veznu 7
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