

Overview



Making the Most of Natural Resources in Eurasia

Two decades ago, with the republics of the former Soviet Union still in turmoil, the World Bank published one of its most influential reports. *The East Asian Miracle* was written in 1993 to understand the reasons for rapid growth in Asia's eight most dynamic economies.¹

The debates it fueled—on what governments must do for countries to develop—carry on to this day. But its main conclusion remains largely unchallenged: East Asian countries have been successful because they integrated into the world economy, and they could do this because their own economies were efficient. With neither an abundance of natural resources nor a lot of capital, the instrument of East Asia's integration was labor, the one factor of production that it had in good supply. In 1997 a serious economic crisis led to skepticism about the durability of East Asia's success. But China's progress and the region's quick recovery in the 2000s has left few doubts about the main reason for the biggest reduction of poverty in recorded history: importing capital and know-how and exporting goods and services that require a great deal of labor (East Asia has a third of the world's supply).

Around the same time, with the collapse of communism, the economies of Central Europe rejoined the west, beginning with the association agreements the European Union (EU) signed with Hungary, Poland, and the Czech Republic.² The rewards for adopting the policies and institutions of their western neighbors included the largest inflows of foreign capital in history. A potent mix of Western European know-how and finance and Central Europe's capable workers fueled the integration of 100 million people into the global economy, helping them institute modern markets and attain high incomes. The European convergence machine in many ways rivals the East Asian miracle, and reflects the same fundamental forces: efficient integration into the international economy based on trade in goods and services that use Central Europe's relatively abundant asset—this time, though, it was capital. Western Europe had a third of the world's supply of capital, and their deep and comprehensive integration into the EU made capital suddenly abundant in Central European countries such as the Czech Republic, Estonia, and Poland.

What has been happening in the former Soviet Union during the past decade is essentially the same. Starting in the late 1990s, many countries in "Eurasia"—defined in this report as the dozen countries of the former Soviet Union less the three Baltic economies—rejoined the world economy after more than a half-century of communism.³ Their trajectory is different only in that whereas East

Asia was abundant in labor and emerging Europe in capital, Eurasia is abundant in natural resources. Natural resource supplies are more difficult to estimate than labor or capital, but estimates indicate that Eurasia has more than a third of the world's reserves of oil, gas, bauxite, and gold. Unsurprisingly, just as East Asian exports tended to be intensive in the use of labor and Central Europe's in capital, Eurasia's exports are intensive in the use of natural resources (figure O.1).

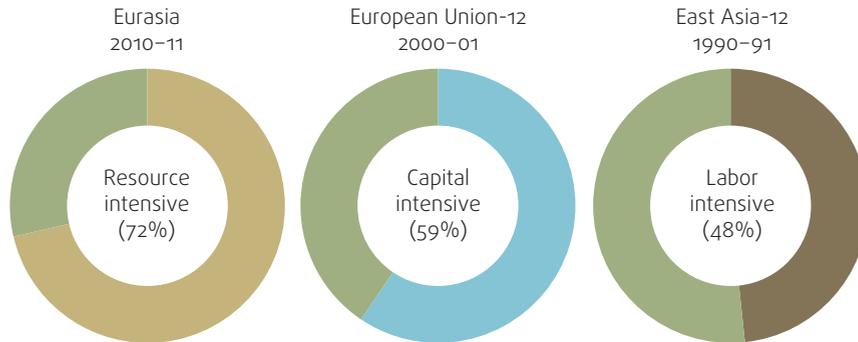


Figure O.1. Three dozen countries, three ways to integrate and grow

(Export product share, by factor intensity)

Source: World Bank staff calculations based on United Nations Comtrade; see chapter 1.

Note: Factor intensity is measured with the export data classified by Standard International Trade Classification (SITC) Revision 1. The modified version of commodity classification by Krause (1987) is used. Resource intensive includes products related to hydrocarbon and minerals only. Goods related to agriculture are contained in labor intensive (unskilled labor intensive). Here, capital intensive is represented by both technology intensive and human capital intensive. European Union-12 includes Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic, and Slovenia. East Asia-12 includes Cambodia, China, Indonesia, the Republic of Korea, the Lao People's Democratic Republic, Malaysia, Mongolia, Papua New Guinea, the Philippines, Singapore, Thailand, and Vietnam.

Almost every East Asian country is now a middle-income economy. Almost all Central European countries are high-income economies. Nearly every Eurasian economy has recovered from the deep slump and suffering of the 1990s, and natural resources have much to do with this. This report is about economic development in the twelve countries of Eurasia. Six of them are rich in resources: Azerbaijan, Kazakhstan, the Russian Federation, Turkmenistan, Ukraine, and Uzbekistan. Six are not: Armenia, Belarus, Georgia, the Kyrgyz Republic, Moldova, and Tajikistan. About 85 percent of the economic output of Eurasia is in its six resource-rich economies, and minerals and metals are about 85 percent of the exports of the region. Azerbaijan, Kazakhstan, and Russia—the three countries that both have abundant natural resources and have done a lot to increase commerce with the rest of the world—are now close to becoming high-income economies. Through trade, migration, investment, or aid, they have shared their prosperity with their poorer neighbors. Today, 85 percent of people in Eurasia are no longer poor.

But academics who study resource-based economies debate whether these countries should consider themselves cursed or blessed (van der Ploeg 2011). And Eurasian countries seem uneasy with living off the land. Their policy makers long for the day when their economies no longer depend so heavily on natural resources. They try to put away some of the earnings from oil and gas for future generations. And they have spent significant amounts of public money trying

to foster activities believed to be less extractive and more innovative. These observations prompt questions. Is Eurasia's resource wealth a blessing or a curse? If it is one of these things, what would make it into the other? How much should Eurasian governments try to diversify their exports and economies away from activities that depend on natural wealth? Are there ways to make Eurasian economies simultaneously extractive and innovative? In other words, are there better strategies to foster economic development than those they have tried?

These questions are answered in this report. Here are the main conclusions (see "20 questions, 20 answers . . ." at the end of this overview). The large majority of Eurasia's 280 million people who are not poor can consider themselves blessed by the region's natural abundance. To make sure that this blessing does not become a curse—as has sometimes happened in Africa and Latin America—Eurasian economies have to become more efficient—shorthand for becoming more productive, job-creating, and stable. But efficiency is not the same thing as diversification: there is not much evidence that less concentrated economies have greater productivity growth, more job creation, or systematically less economic volatility. Governments in the region need to worry less about the composition of exports and the profile of production and more about national asset portfolios—the blend of natural resources, built capital, and economic institutions. They have much to do. Eurasia's portfolios are heavy in tangible assets such as oil and gas, road and rail, and schools and hospitals. And they are light in intangibles such as the institutions for managing volatile resource earnings, providing high-quality social services, and evenhandedly regulating enterprise. Tangible investments are not what distinguish the successes from the failures—investments in intangibles, early in their development, have helped make successful resource-rich countries both extractive and innovative.

The people of Eurasia can be proud of what they have accomplished during the past two decades, and the world should recognize the progress they have made in so short a time. For some countries in the region, such as Georgia and Kazakhstan, the last decade may have been the best in their history. By recognizing the imperatives of resource-based development, Eurasia's policy makers can make the next decade better still, not just for this generation but for many more to come. This report was written to make their task a little easier.

A blessing, undisguised

The 1990s were a difficult time for every country in Eurasia. The move from communism to market-based economies had made obsolete much of the institutional capital of the republics of the Soviet Union. But their greatest asset, natural resources, was still not valued much by world markets. Their asset portfolios consisted mainly of built capital, decent infrastructure, and an educated workforce.

Then things changed. The prices of commodities—fuels, food, metals, and agricultural raw materials—tripled in the 2000s. The price of a barrel of crude oil illustrates the speed and extent to which Eurasia's fortunes improved. For 100 years before 1973, oil had stayed at around \$20 a barrel in today's prices. It then rose sharply to spike at more than \$100 in 1980. But when the Soviet Union collapsed in 1989, oil prices were below \$30, and by 1999 they had fallen to \$15.

After 2000 prices rose rapidly and by mid-2008 were \$130 a barrel. After falling during the financial crisis, oil prices rose again above \$100 a barrel. The prices of most commodities—fuels, metals, and farm products—behaved much like those of crude oil.

Poverty halved, prosperity shared

This price surge greatly improved the living standards of most of Eurasia's inhabitants, especially the nearly 250 million in its six resource-rich economies. In 1995 the region's gross output was about \$350 billion; by 2012 it surged to almost \$2 trillion. With populations constant, per capita incomes increased notably. The retired get paid their pensions. Social services have been restored. Educational attainment is up, and is now close to levels that the EU's new member states had in the mid-2000s. Longevity could be much higher, but life expectancy has been rising rapidly since 2000 (figure O.2). Inequality has been inching up in the past few years, but it is down from the tumultuous days that followed the collapse of the Soviet Union.

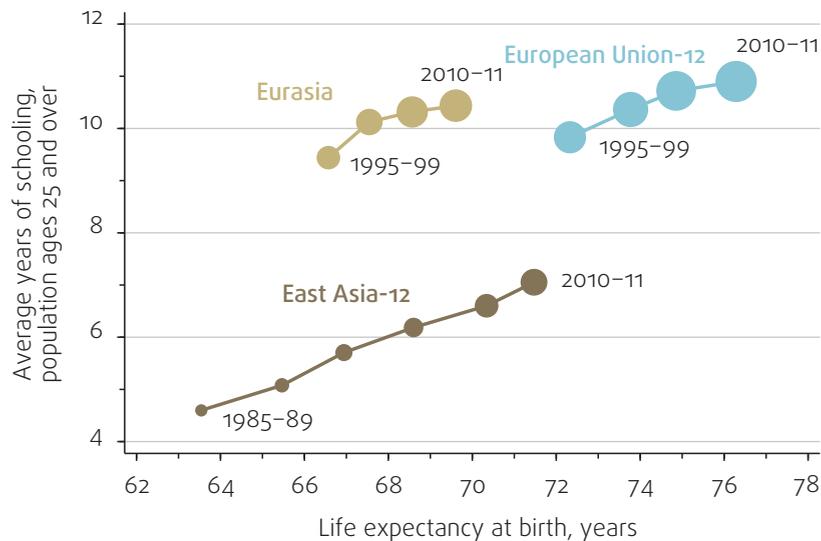


Figure O.2. Natural resources have served Eurasia well

(Development outcomes, 1985-2011)

Sources: World Bank staff calculations based on World Bank World Development Indicators; and Barro and Lee 2013; see chapter 1.

Note: Each data point shows a nonoverlapping five-year average value. The size of the bubble represents the relative level in per capita income. Countries in each category are listed in the Selected Indicators.

Most impressive perhaps is the reduction of poverty. High commodity prices have been associated with plummeting poverty rates in almost every country in Eurasia. A poverty line of \$5 a day is appropriate for the countries of Eurasia to take account of climatic conditions that increase the cost of living compared to other parts of the world, whereas a threshold of \$2.50 marks the extreme poverty line for the region. In 2000, one of every two Russians, Belarussians, and

Ukrainians lived on less than \$5 a day; by 2010 it was one of every 10. About 80 percent of people in Azerbaijan and Kazakhstan lived on less than \$5 a day in 2000; by 2010 fewer than 50 percent did. In 2000 more than 60 percent of the people in Armenia, Moldova, and Tajikistan lived on less than \$2.50 a day; by 2011 the figure was around 30 percent (figure O.3).

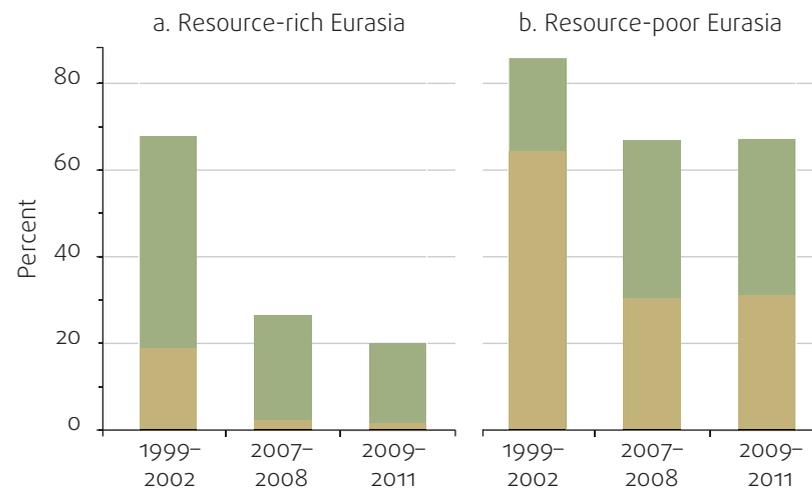
The better development outcomes in the region coincided with high commodity prices in the rest of the world. Natural resources are helping the economies of Eurasia, are giving people a helping hand, and have made its governments solvent.

Figure O.3. Poverty has fallen to half of what it was in the 1990s

(Headcount poverty rates in Eurasia at \$5 a day and \$2.50 a day, 1999–2011)

Poverty rates:

- \$5/day
- \$2.50/day



Source: World Bank staff calculations based on World Bank ECAPOV database; see chapter 1.

Note: Simple averages of countries belonging to respective groups are shown. Resource-rich countries are Azerbaijan, Kazakhstan, Russian Federation, Turkmenistan, Ukraine, and Uzbekistan. Resource-poor countries are Armenia, Belarus, Georgia, Kyrgyz Republic, Moldova, and Tajikistan.

A chafing dependency on nature

Of course, natural resources differ from labor and capital in an important aspect—they are exhaustible. Norway is considered fortunate that it discovered oil after it had developed the institutions to adeptly manage its windfall wealth from oil and gas. Similarly, though to lesser extent, Eurasia's resource-rich countries may have been fortunate in that the first decade of transition was a period of low commodity prices. Governments had little choice but to institute the mechanisms for collecting taxes, regulating labor, and providing social protection in ways that encouraged work, and to lay the foundations of governance that made the state more accountable to citizens. When the commodity boom came in 2000, Eurasian countries were perhaps more efficient and better prepared than they might have been had oil prices risen earlier.

An efficient economy produces in larger amounts and exports only the things that require the means of production—labor, capital, natural resources,

whatever—that it has in good supply. Using this as a yardstick for efficiency, Eurasian economies have grown ever more efficient since the fall of communism, and this has coincided with notable improvements in the lives of most people in the region.

But it is equally clear that greater dependence on natural resources disappoints those who make policy. President Vladimir Putin thinks that Russia “must diversify from oil, gas, and minerals toward high-tech products to ensure stability and sovereignty.”⁴ Oil and gas now account for around two-thirds of Russia’s exports, up from less than half in the late 1990s. Commodities are almost 90 percent of exports, with no signs that this will change any time soon. In early 2013 Azerbaijan President Ilham Aliyev noted with some satisfaction that because economic growth in the non-oil sector in the first four months of 2013 was close to 11 percent, “this shows that already we have largely achieved our objective, that is, the diversification of the economy.”⁵ Meanwhile, the share of mining in Azerbaijan’s gross domestic product (GDP) has quadrupled from less than 15 percent in 1991 to almost 60 percent today, and measures of economic diversification indicate that Azerbaijan may be less diversified today than it was in 1997 (box 0.1).

Box 0.1. Not so fast—measuring diversification is difficult

It is not easy to measure how diversified an economy is. Economists who study the subject generally look at the composition of exports—how many goods and services a country exports—or the profile of production—how important manufacturing is in a nation’s output—because they can be measured using widely available data. By making it easier to measure the aspects of diversification that matter less for the development of nations, science has played a trick on economists who, in turn, may have confused policy makers.

Exports. The most common way to measure diversification is to put a number on how concentrated a country’s exports are. It could be as simple as this. In 2011 just five products—using an arbitrary aggregation of production—accounted for 96 percent of Azerbaijan’s exports and 70 percent of the Russian Federation’s, but just 22 percent of Ukraine’s (figure BO.1.1). By this measure Ukraine is a lot better off than Russia, because it is not rich in oil and gas. But using the same measure resource-poor Tajikistan’s top five exports are 76 percent of its total, roughly the same as Kazakhstan, one of the world’s most resource-rich countries. Obviously, exports can be concentrated for many reasons: hydrocarbon wealth, underdevelopment, or an economy’s size. Another measure is the hydrocarbon content of exports. In 2011,

hydrocarbons were almost 70 percent of Kazakhstan’s and Russia’s exports, but more than 90 percent of Azerbaijan’s and Turkmenistan’s. What is not clear from this is whether a lower percentage is always better. For Turkmenistan this ratio dipped to 70 percent in 2009 and 2010 as a result of the global crisis. It is not obvious that this was a good thing.

Products. The most popular method for measuring the concentration of economic activities is the Herfindahl-Hirschman Index. The measure was originally developed to study the extent to which a small number of firms dominated an industry; it has since been applied to assess the extent to which a sector of production dominates an economy. It follows then that for any economy the index can be computed for different levels of aggregation. For example, if services are all treated as one sector, the only economies that experienced some diversification between 1997 and 2010 were Kazakhstan and Russia; all the others became more concentrated (chapter 3). But if services are disaggregated—into, say, public utilities, construction, trade, transport, finance, public administration, and other services—all Eurasian countries except Azerbaijan and Kazakhstan became more diversified. So the two versions of the same measure yield almost exactly opposite conclusions.

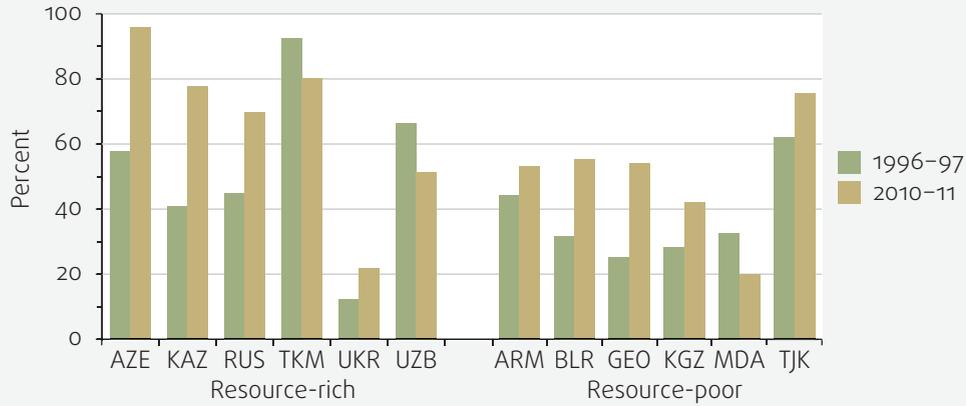
Assets. It gets even more complicated when we try to measure what really matters—a nation’s economic assets. World Bank (2011) provides the best available estimates of a nation’s wealth and its decomposition into three types of capital: natural, produced, and intangible. Among these three assets, natural resources are best estimated (see figure BO.1.2). It is harder to measure the others. Total wealth is the approximate value of consumption over the next 25 years, using a discount rate of 4 percent. Natural capital consists of subsoil assets, forests, and farmland, valued at world prices and local costs. Produced capital is derived from physical investment data, using the perpetual inventory method. Intangible capital is the residue, which puts a sum on the contribution of labor, human capital, social capital, institutions, and the rule of law. In Russia, the total wealth per capita in 2005 was \$73,000, of which \$31,000 was natural, \$18,000 produced, and \$24,000 intangible. In this report, human and physical capital are combined in a single category called “built capital,” mainly to isolate the contribution of institutions. The three types of assets are called natural resources, built capital, and national institutions. Government efforts to diversify exports or economic production are called *economic diversification* policies. In contrast, policies to diversify asset portfolios lead to *diversified development*.

(continued)

Box 0.1. (cont.)

Figure BO.1.1. Export product concentration has increased, especially in resource-rich countries

(Share of top five export products, 1996–97 vs. 2010–11, for resource-rich and resource-poor countries)

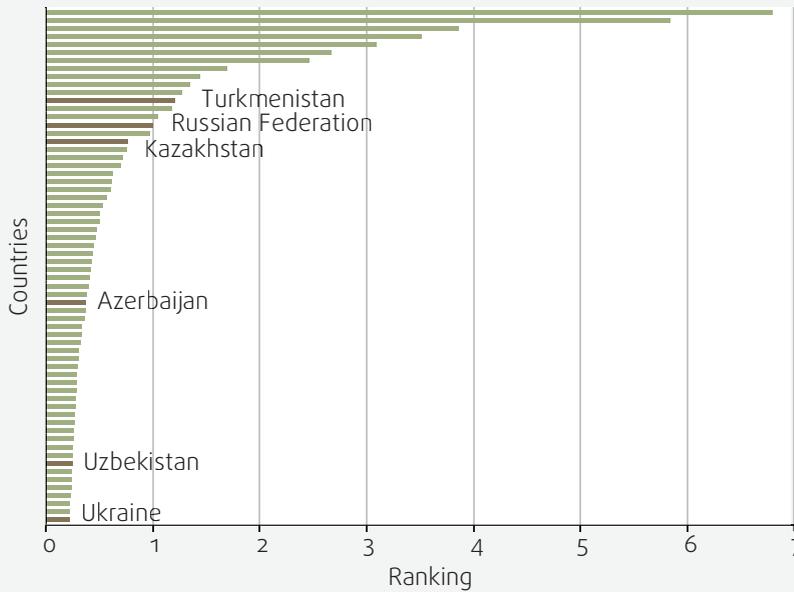


Source: World Bank staff calculations based on United Nations Comtrade; see chapter 2.

Note: Calculations are based on the six-digit export data classified by the Harmonized System 1988/92.

Figure BO.1.2. Eurasia’s six resource-rich economies are ranked in the top 60 worldwide

(Natural resources per capita, Russian Federation = 1, 2005)



Source: World Bank staff calculations based on World Bank 2011; see chapter 4.

Note: Relative figures: Russian Federation = 1.

The long-term experience of nations—such as the United Kingdom and the United States, Australia and Canada, and Argentina and Brazil—suggests that economic diversification is neither necessary nor sufficient for economic development (see figure 0.4 and spotlight one). Interventions to diversify economies appear to work only when they are supported by policies to diversify assets (spotlight two). The correlation between diversified asset portfolios and greater economic efficiency is stronger (spotlight three).

The United States and the United Kingdom increased their per capita incomes tenfold since 1870, and have diversified exports. Australia and Canada’s economies have also grown as quickly, but their exports remain specialized. Through import substitution and industrial policies, Argentina and Brazil have diversified more, but have struggled to sustain economic growth. In 1910 Canada and Argentina’s per capita incomes were about 80 percent of U.S. levels. By 2010 Canada’s per capita income was 85 percent that of the United States; Argentina’s had fallen to 35 percent. Brazil’s GDP has stagnated at about 20 percent relative to the United States for more than a century. The experience of these countries and others is instructive and provides enough evidence to question whether Eurasia’s policy makers should equate development with diversification.

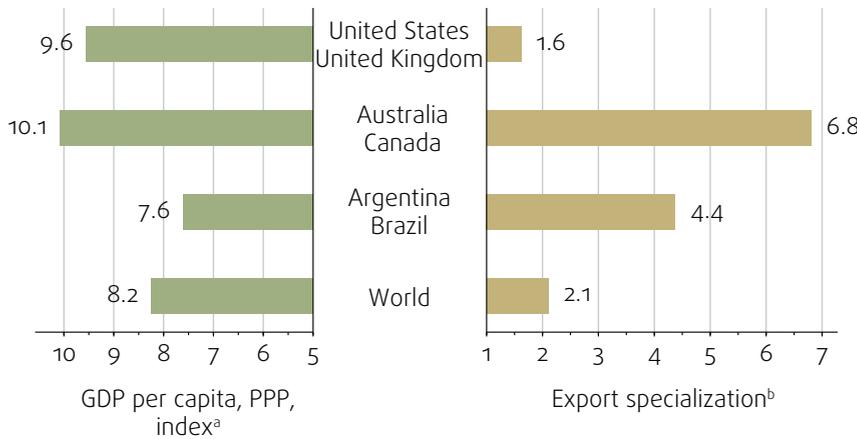


Figure 0.4. Diversification is neither necessary nor sufficient for development

(Economic growth, 1870–2010, and export specialization, 2009–10)

Sources: World Bank staff calculations based on Bolt and van Zanden 2013; and United Nations Comtrade; see spotlight one.

Note: GDP per capita is expressed in 1990 Geary-Khamis international dollars and converted to an index with a value of 1 in 1870. Export specialization is measured by the Herfindahl-Hirschman Index using four-digit export data classification in SITC (Standard International Trade Classification) Revision 1. For presentation purposes, it is multiplied by 100. PPP = purchasing power parity.

a. 1870 = 1.

b. Higher values indicate less diversification.

Complicated questions, simple answers

Eurasia's greater integration in the world economy since the 1990s has—at least in some countries—come with increasingly concentrated exports and economic activity. But it has also brought greatly improved development outcomes—higher incomes, far less poverty, and better education and health. The question that many policy makers are asking now is: How can Eurasia reverse the trend toward export specialization and sector concentration without jeopardizing the gains in living standards?

This is not the question that they should be asking. Better questions are:

- First, are the improvements since the late 1990s merely windfall gains from high commodity prices or the fruits of better economic performance?
- Second, have governments used the time to become genuinely more efficient in transforming Eurasia's natural wealth into better-built infrastructure and healthier and more skilled people?
- Third, are there signs that Eurasians have learned the lessons provided by the resource-rich countries in other parts of the world?

The short answer to the first question is that most economies in Eurasia have done surprisingly well—see chapters 2 (Foreign Trade) and 3 (Economic Structures) and spotlight two (Industrial Policy). But because they will continue to depend on natural resources for the foreseeable future, they will not be able to escape economic volatility. To borrow a term from corporate finance, Eurasian countries have “high-beta” economies which, when performing normally, will be characterized by high and volatile growth rates.

The answer to the second question is that Eurasian governments have become better at building capital over the years—see chapters 4 (Natural Resources) and 5 (Built Capital). This improvement notwithstanding, countries other than Russia have only recently begun adding more in renewable capital—roads, railways, airports, telecommunication facilities, schools, and hospitals—than the amounts of natural resources they have been extracting and selling. To borrow a term from environmental economics, “genuine savings” have only recently become positive.

The answer to the third question is that to develop using natural resources, Eurasia will have to pay more attention to its “intangible capital”—see chapter 6 (Economic Institutions) and spotlight three (Natural Development). Institutions are not always well defined in the economic literature but, at least for Eurasia, there is no escaping them. This report specifies clearly what the term means: the mechanisms to manage resource rents, administer social services, and regulate economic production. A survey of the experience of a dozen resource-rich countries—Australia, Botswana, Canada, Chile, Malaysia, the Netherlands, Nigeria, Norway, Saudi Arabia, the United Arab Emirates, the United States, and República Bolivariana de Venezuela—provides clues about what can be done to successfully institute such arrangements.⁶

The report's main message for policy makers in Eurasia is that the most important unfinished task may be the toughest: to strengthen structures that cannot be seen, but whose weakness may threaten the region's prosperity.

“High-beta” economies

Most Eurasian economies have integrated efficiently into world markets. They have restructured to become competitive abroad and productive at home. And they have generated jobs and coped reasonably well with volatility. The experience of the last decade and a half is encouraging and informative: looking back there has been progress, and looking ahead there are lessons to be applied.

Going global—with natural resources

In 1989 about 70 percent of Eurasia’s trade was within the region. By 1999, 70 percent of its trade was with outsiders. For the smaller countries the drops were precipitous. In Armenia, Georgia, Moldova, Tajikistan, and Turkmenistan, intra-Eurasian trade was greater than their GDPs in 1989. By 2011 it was less than 20 percent. Russia’s trade within the Soviet Union was 35 percent of its GDP in 1989; in 2011 it was 5 percent.

Today, almost half of Eurasia’s exports go to the EU, and almost a third of imports are from that bloc (figure 0.5). In the westernmost parts of the region, firms are becoming part of production networks centered on Western Europe. The value of exports to the EU is about \$350 billion, almost three times Eurasia’s intraregional exports. A fifth of Eurasian exports go to East Asia, and almost a quarter of Eurasia’s imports come from there. Trade, especially imports, with East Asia has been growing, and the shift from west to east has picked up speed since the crisis in the Euro Area. Before 2008 Eurasia’s exports to Europe were five times the value of its exports to East Asia; after 2009 just three times as much. To keep things in perspective, though, only 2 percent of East Asia’s imports come from Eurasia, and this ratio is closer to 1 percent for the EU. Economists use “gravity models” to predict how much countries should trade with each other based on their size, distance, and trade barriers. Eurasia’s patterns are much as expected.

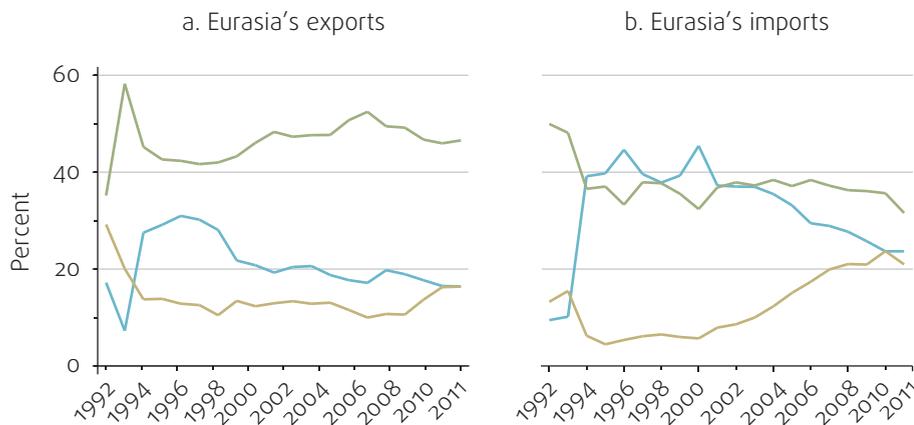


Figure 0.5. More trade with Europe, growing imports from East Asia

(Export and import shares, main trading partners, 1992–2011)

— European Union
— Intra-Eurasia
— East Asia

Source: World Bank staff calculations based on data from International Monetary Fund (IMF) Direction of Trade Statistics; see chapter 2.

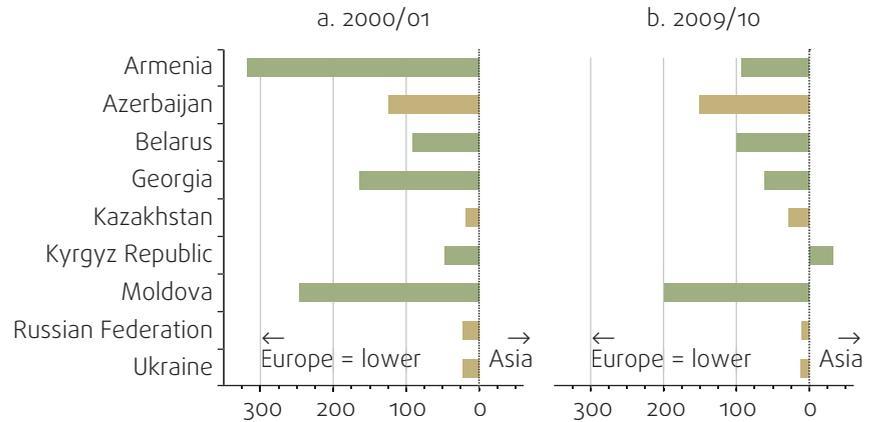
A quick look at a map of Europe and Asia leaves little doubt that physical distance cannot explain why Eurasia trades so much more with Europe than with Asia. Since the 1990s, Europe has reduced trade costs with Eurasia, incorporating the biggest economies such as Russia and Ukraine into the greater European trade corridor. A revealing exercise compares trade costs of countries in Eurasia and Europe with China and Germany, the two biggest trading nations in the world that border Eurasia (chapter 2). There are two surprises: First, the only country for which costs of trade with China are lower than with Germany is Kazakhstan; and second, the cost of trading with China for the average European economy is lower than the cost of trading with Germany for the average economy in Eurasia.

This is changing. Much as Kazakhstan has done, others in the region are investing in roads, railways, and pipelines with China. But trade restrictions continue to act as an important barrier to trade. Japan, China, and the Republic of Korea still levy the tariff equivalent of 1.5, 3.5, and 7.8 percent, respectively, on imports from Eurasia; the EU charges just 0.4 percent. If East Asian countries reduce their trade restrictiveness from the tariff-equivalent of 6 percent to close to the 2 percent for Europe, Eurasia’s trade with East Asia will soon exceed the trade with Europe. While nature can make trade easy or tough, for countries like Tajikistan whose apricots and other farm produce face high tariffs in neighboring China (compared with 6 percent in the distant EU), barriers thrown up by governments—not nature—make the difference. Fortunately, this is getting better. Trade costs have fallen, especially for resource-poor economies (figure 0.6).

Figure 0.6. Trade with East Asia is becoming less costly, but trade with Western Europe is still cheaper

(Difference in costs of trade with Europe and Asia, percentage points, ad valorem equivalent)

- Resource-rich
- Resource-poor



Source: World Bank staff calculations based on World Bank Trade Costs Dataset; see chapter 2.

Note: Europe and Asia are represented by the three largest economies in each region: France, Germany, and the United Kingdom, and China, Japan, and the Republic of Korea, respectively. Period averages of group median values are used.

How you export matters

One of the debates fueled by *The East Asian Miracle* was about how much success depended on activist industrial policies. Were East Asian governments better than others at picking industries such as electronics, automobiles, and apparel that—with some help from taxpayers—could compete and win in global markets? Understandably, the debate soon became one about the industries or activities that governments in other regions should favor. Top academics gave such questions respectability in treatises with titles like “What You Export Matters” (Hausmann, Hwang, and Rodrik 2007). Another wave of research conjectured that developing countries start off producing and exporting only a few things (such as wheat or crude oil), then become more diversified (in such areas as food processing or petroleum refining) as they develop, and then become specialized again (selling financial and transport services, for example) after they reach higher levels of income (Imbs and Wacziarg 2003). Think of the United States or the United Arab Emirates, or even of Chile, Finland, and Saudi Arabia (spotlight two). The policy implication is that countries have to diversify economic activity in order to reach high income levels.

Eurasia’s policy makers have taken this advice seriously. If what you export matters for economic development, then the first step is to figure out what exports will help the most. The next move would be to come up with ways to encourage them: protection from foreign competitors, big subsidies or tax holidays, well-chosen investments in infrastructure, and incentives to cluster economic activities in a few places. Eurasians have been doing all this and more. And as Eurasia’s trade ties with the rest of the world have grown, its exports have become less diversified, entirely because of the growth of trade in resource-based products with countries outside the region (figure 0.7).

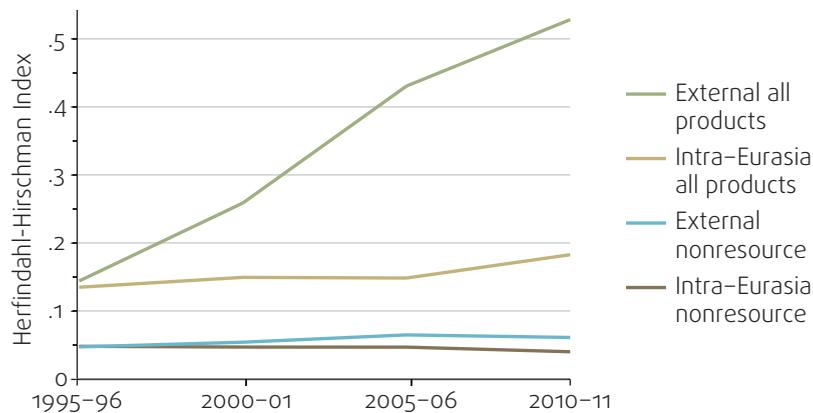


Figure 0.7. Resource-related trade outside Eurasia has made exports less diversified

(Normalized Herfindahl-Hirschman Indexes, 1995–2011)

Source: World Bank staff calculations based on United Nations Comtrade; see chapter 2.

Note: This index is measured as the sum of squared shares in a given trade flow. Higher index scores indicate greater concentration; nonresource exports here exclude energy, minerals, and metals (Harmonized Commodity Description and Coding System, or HS) 25–27 and HS 72–83; external refers to European Union-27 and East Asia-11; index calculated at the two-digit HS level (but the same trends appear at the six-digit level).

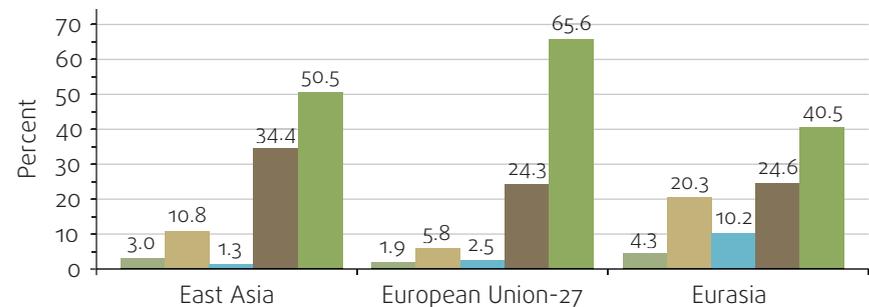
Eurasia’s policy makers could pay more attention to recent research, including by the World Bank, indicating that what matters for development is not so much what a country makes at home and sells abroad, but how it goes about making these goods and services. This does not mean a small role for government. “Market failures abound in the provision of infrastructure, the accumulation of human capital, the establishment of trade networks, and the creation and management of ideas” (Lederman and Maloney 2012, 107). What helps a lot more than identifying growth- or diversification-promoting sectors are policies that “raise the overall ability of a country to increase productivity and quality, and to move to more sophisticated tasks” (Lederman and Maloney 2012, 107).

There may be one quick way to increase the sophistication of Eurasian exports, and perhaps offset their growing concentration. That is to trade more with East Asia. Almost 15 percent of Eurasia’s exports to East Asia are fairly high-tech manufactures whereas less than 10 percent of trade with the EU does not directly involve natural resources (figure 0.8). More trade with East Asia and other parts of the world will diversify Eurasian exports beyond primary products. While it is true that intra-Eurasian trade is even more diversified than trade with East Asia, the size of resource-poor economies is small and the immediate prospects for rapid growth in regional trade are small.

Figure 0.8. Trade with East Asia has higher technology content

(Technology content of exports to main partners, 2010–11)

- High-tech manufacturing
- Medium-tech manufacturing
- Low-tech manufacturing
- Resource-based manufacturing
- Primary products



Source: World Bank staff calculations based on United Nations Comtrade; see chapter 2.

Note: Calculations for technology content are based on data from United Nations Comtrade using Lall 2000 categories.

Eurasia’s production structures—better today

Central planners in the Soviet Union relied on hard labor and big investments—especially in heavy industry—to make their economies grow. They did not seem to pay much attention to the fact that since the 1970s, their capitalist competitors had found a new engine of economic growth and higher living standards: services. Stunted services may have been the key factor that sapped the Soviet economy’s dynamism. Eurasia’s new market economies have experienced seismic structural shifts. In almost every country, there was a big increase in services. In Ukraine, for example, the share of services in value added grew from 37 percent in 1989 to 70 percent in 2009.⁷ Only a few countries, such as Azerbaijan, have seen declines in the share of services in value

added. Services have created most of the jobs in Eurasia during the last decade (figure 0.9). In the resource-rich economies, mining has grown in importance; in Azerbaijan for example, its share in value added rose from 16 percent in 1997 to 49 percent in 2010, and in Kazakhstan it doubled from 9 percent to 18 percent. There have also been big declines in the shares of agriculture in value added.

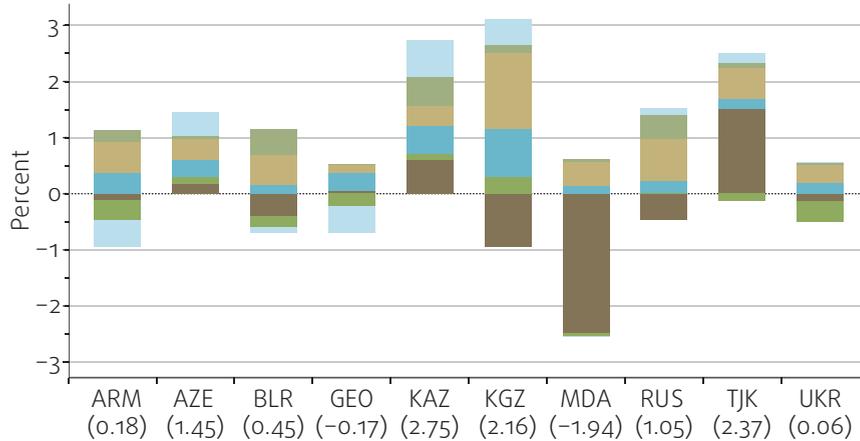


Figure 0.9. More jobs in services, fewer in industry

(Annual average employment growth, percent, 2000–10/11)

- Agriculture
- Construction trade
- Finance Real estate/business
- Hotels/restaurants Transport
- Industry
- Other services

Sources: World Bank staff calculations based on data from the United Nations Economic Commission for Europe; United Nations National Accounts Statistics; and International Labour Organization ILOSTAT Database; see chapter 3.

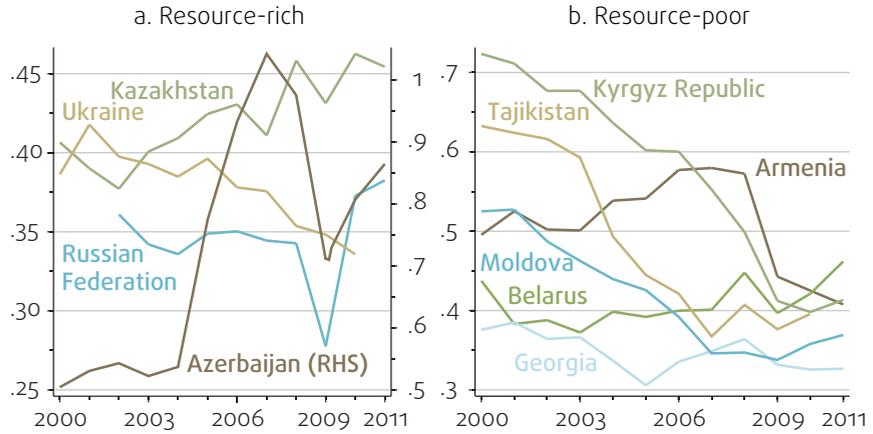
Note: The one-digit-level employment data classified by ISIC (International Standard Industrial Classification) Revision 3 are used. The period covered is 2000–10 (or 2011, if available), except for Armenia (ARM, 2002–08) and Georgia (GEO, 2000–07). The number in parentheses below the country code is the overall annual average employment growth.

What most troubles policy makers in the region is that industry has declined in importance. Entire subsectors in manufacturing have disappeared due to competitive pressures from global markets, so that every resource-rich economy now has a less diversified manufacturing sector than in 1993 (chapter 3). As a result of such changes brought about by market prices and greater openness, production has become more concentrated in resource-rich economies, and more diversified in their resource-poor neighbors (figure 0.10). The real question is whether Eurasia’s economies have become more efficient or less.

This question cannot be answered by looking at the sector composition of production or employment, at any level of disaggregation. The way to find out is by looking at measures of economic performance. We picked three: growth in productivity, job creation in private unsubsidized activities, and reduction in economic volatility. The reasons are straightforward: countries cannot become rich unless they become more productive, societies are not stable unless their economies create jobs, and public finances that are volatile are difficult to manage. Comparing the economic performance of Eurasia, East Asia, and Central Europe shows that Eurasians have increased productivity fastest and added jobs more quickly than Central Europe. Unsurprisingly, Eurasian economies are much more volatile, in terms of fluctuations in GDP (figure 0.11).

Figure 0.10. In hydrocarbon-heavy economies, production has become less diversified

(Theil's entropy index for inequality in production; higher numbers mean more concentration, 2000–11)



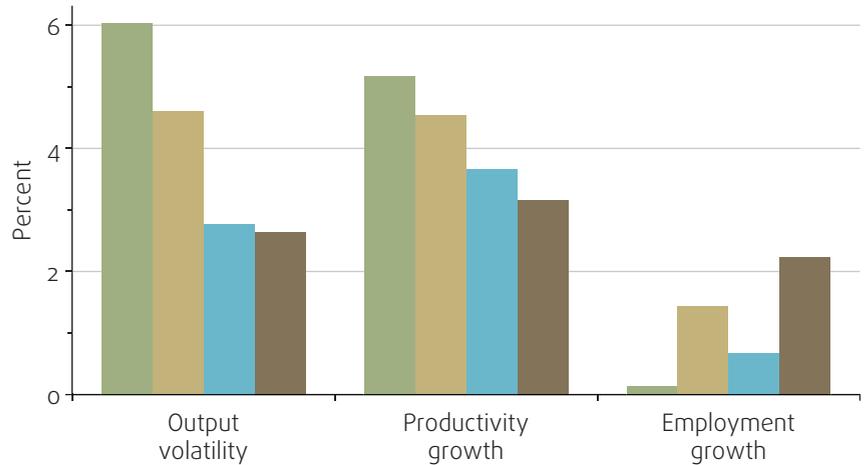
Source: World Bank staff calculations based on United Nations National Accounts Statistics; see chapter 3.

Note: Inequality in production is measured with the one-digit-level value-added data classified by ISIC (International Standard Industrial Classification) Revision 3. Therefore the number of production categories used is 15 or 16 (that is, from lines A to O or P), except for Tajikistan where the index is based on 11 groups. For Kazakhstan, the data for 2010 and 2011 are classified by ISIC Revision 4, which gives 20 production categories. The index scores for Azerbaijan in panel a are shown on the right-hand-side (RHS) axis due to the different scale.

Figure 0.11. Productivity growth is higher in Eurasia, but so is economic volatility

(Economic performance 1995–2008, annual average changes in employment, labor productivity, and volatility)

- Eurasia resource-poor
- Eurasia resource-rich
- European Union-12
- East Asia-12



Sources: World Bank staff calculations based on World Bank World Development Indicators; and IMF World Economic Outlook (April 2013).

Does diversification improve performance?

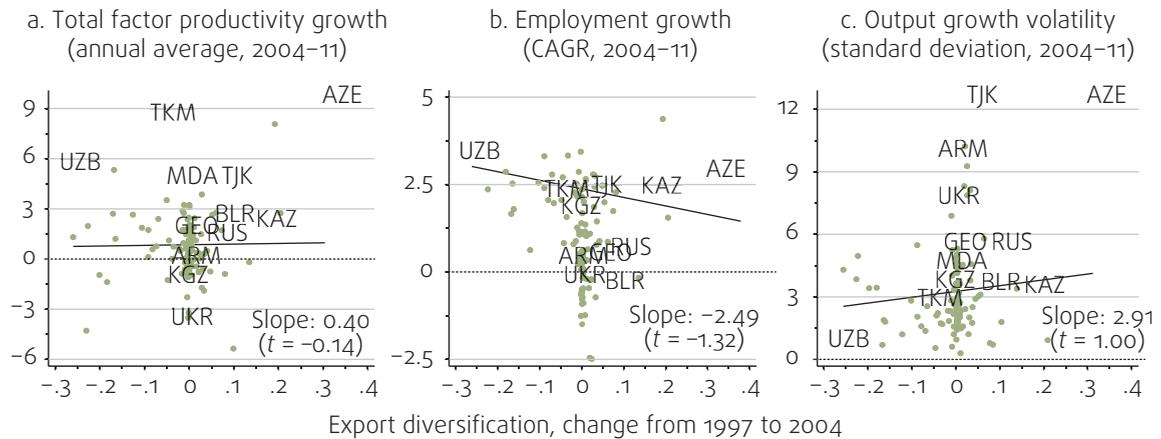
These numbers should reassure Eurasia's policy makers that the region's economies have made progress over the past two decades, a time of structural upheaval and economic crisis. A closer look shows that the performance does not seem to depend much on whether a country diversified its exports and production, or

whether it became less diversified. But the uniqueness of Eurasia’s experience—the collapse both of communism and the Soviet Union—does make it difficult to treat these trends as reliable. One has to check to see if these findings are exceptional, or whether Eurasia’s experience is similar to that of others around the world.

A quick way to tell is to look at the correlation between each measure of performance and success in diversifying exports, the most easily available measure of economic diversification. It is striking that for the world as a whole, there is no systematic relationship between changes in economic diversification in the seven years between 1997 and 2004, and economic performance during the subsequent seven years, 2004–11: total factor productivity (TFP) growth (panel a in figure 0.12), employment growth (panel b), and output growth volatility (panel c). Other formulations yield some support for the association between growth volatility and economic diversification (see chapter 3), and the associations are just strong enough to suggest that Eurasia’s governments need to be prepared to manage the consequences of volatile growth. But the relationships are not robust enough to imply that governments would do better to try to reduce or eliminate economic volatility by forcibly altering economic structures.

Figure 0.12. Economic diversification does not increase economic efficiency

(Change in export diversification and economic performance, 1997–2011)



Sources: World Bank staff calculations based on Conference Board 2013; United Nations Comtrade; and World Bank World Development Indicators; see chapter 1.

Note: Change in export diversification is defined by the difference in the Herfindahl-Hirschman Index between 1997 and 2004; positive (negative) changes reflect exports more concentrated (diversified) over the period. The index is calculated with the six-digit export data classified by the Harmonized System 1988/92. CAGR is a compound annual growth rate, and output growth volatility is the standard deviation of annual real GDP growth rates. Azerbaijan is excluded from the estimation of slope in the productivity and volatility panels.

The stock of a company whose value increases by more than that of the market in good times and falls more than the market when it is down is called a “high-beta” stock. It can be said that Eurasia has high-beta economies. They have yielded high rates of growth, but Eurasia’s growth has been highly volatile. Eurasia’s ups and downs coincide with those of the world economy, but they are more exaggerated. This is unlikely to change in the near future. Governments in the region would do better if they focused less on trying to reduce economic volatility, and more on ways to manage it instead.

“Genuine” savers

Governments in Eurasia’s oil-rich economies saved about \$350 billion of their oil earnings during the last decade. Kuwait, with a population of 2.8 million—exactly a hundredth of Eurasia’s—has a bigger oil fund (though it did have a 40-year head start). But modern national accountants ask a question that is more relevant for the wealth of nations: has Eurasia accumulated more in assets than the resources it has used up? Economists compute the “adjusted net savings” of a country by taking the sum of financial savings and the investments in education, and subtracting the market value of natural resources used up and the capital that has been depreciated through use. Environmentalists have a better name for the concept when the costs associated with pollution are also deducted: “genuine savings.” This report does not study pollution costs. But the question that environmentalists ask is a good one: Has the region genuinely been saving?

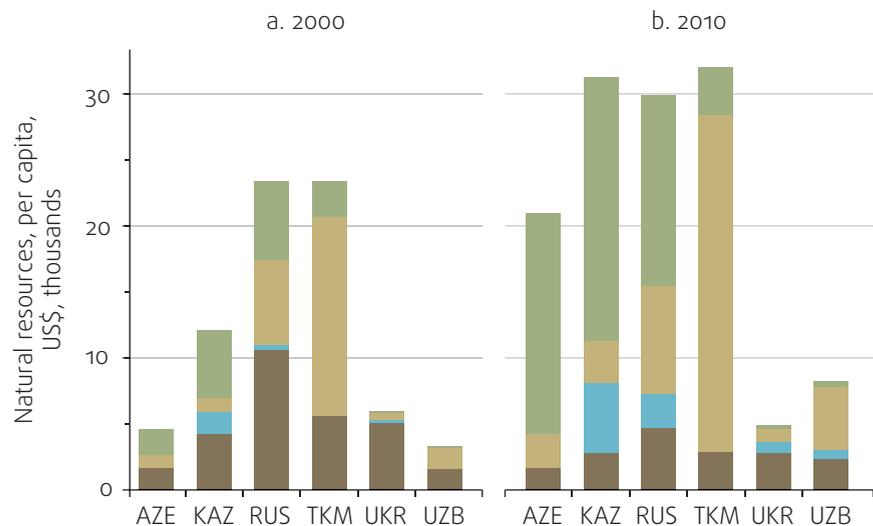
Where (natural) wealth accumulates

Most countries in the region are becoming prolific in exploring and extracting subsoil resources. Production has gone up sharply, the fruits of investments in oil, gas, and other minerals going back to the early days of the transition. A good example: Azerbaijan’s 1994 deal of the century with BP (according to President Aliyev), which led to a quadrupling of oil production, just in time to take advantage of the oil price boom. Kazakhstan has done as well to bring in foreign investors. Russia has done less well in this regard—even more in gas than in oil—but the production of both is up since the early 2000s. Where all Eurasian economies have done poorly, especially Russia and Ukraine, is in exploiting the great potential for agriculture. Overall, though, natural resources per capita nearly doubled, from \$15,000 to \$30,000, during the 2000s (figure 0.13).

Figure 0.13. The composition of natural resources varies by country

(Natural resources, per capita, thousands of 2005 U.S. dollars, 2000 and 2010)

- Oil
- Natural gas
- Coal and minerals
- Land



Source: World Bank staff calculations based on World Bank 2011; see chapter 4.

In Eurasia, natural wealth was about 45 percent of the measured total wealth of \$50,000 per capita in 2005, which also includes produced capital and intangibles as defined in World Bank (2011). Wealth in middle-income countries as a group was almost \$75,000—and less than a fifth was natural resources. In high-income economies, measured wealth in 2005 was close to \$700,000 per capita, with natural resources a negligible fraction (figure O.14). Eurasian asset portfolios are not the most tilted toward natural capital, though; that distinction belongs to Gulf economies such as Kuwait, Saudi Arabia, and the United Arab Emirates whose natural wealth per capita was about \$100,000 in 2005. But they are five times higher than those in high-income economies. In resource-rich Australia, Canada, Norway, and New Zealand, natural capital is 8–13 percent of overall wealth. The ratio is 43 percent in Russia, 64 percent in Kazakhstan, and 76 percent in Azerbaijan. In Turkmenistan it is even higher at about 85 percent.

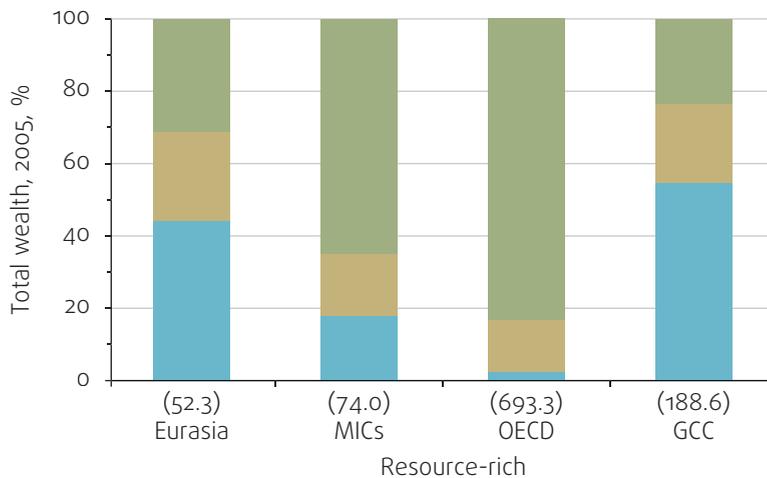


Figure O.14. The Gulf is the most resource-rich part of the world

(Distribution of total wealth, percent, 2005)

- Intangibles
- Produced capital
- Natural resources

Sources: World Bank staff calculations based on World Bank 2011; and Sugawara 2012; see chapter 4.

Note: The numbers in parentheses are total wealth per capita expressed in thousands of 2005 U.S. dollars. For countries where data on produced capital are unavailable in World Bank 2011 the numbers are from Sugawara 2012. GCC = Gulf Cooperation Council; MICs = middle-income countries; OECD = Organisation for Economic Co-operation and Development.

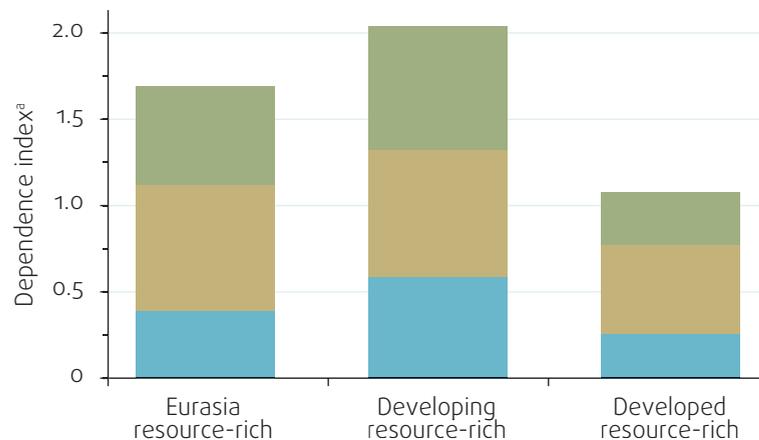
Russia is 15th when countries are ranked by natural capital per capita. But the combined population of the top 14 countries (topped by Kuwait, Brunei Darussalam, the United Arab Emirates, Norway, Saudi Arabia, Bahrain, and Oman, with Turkmenistan in 12th place between Australia and Canada) is just 110 million, 35 million fewer than Russia’s. While Eurasians are not the richest in natural assets per capita, Eurasia’s mass makes it the most richly endowed in the world. If Eurasians get better at exploring and extracting minerals and more productive in farming and forestry, they could soon become the wealthiest in natural resources.

Dependency on natural wealth has increased

North America is also well endowed in natural resources, but neither the United States nor Canada is considered resource dependent. That label comes not from an abundance of natural wealth, but from being excessively dependent on it. Dependency on natural resources is measured in at least three ways: the share of natural resources in a country's production, the extent to which it depends on exports of natural resources for foreign exchange, and the contribution of resource rents to government revenues. For most purposes, a reasonable measure of resource dependence might simply be a sum of these three ratios. Using this measure, Eurasia is more dependent than high-income resource-rich economies such as Australia and Canada but less dependent than resource-rich developing countries such as Saudi Arabia and República Bolivariana de Venezuela (figure O.15).

Figure O.15. Resource-rich Eurasia is more dependent on natural resources than advanced economies are

(Resource dependence in resource-rich countries, index, 2006–10)



Sources: World Bank staff calculations based on United Nations National Accounts Statistics; World Bank World Development Indicators; and IMF 2012.

Note: The values of the three subindicators in the bar chart are rescaled using the “min–max” method. They are calculated by first subtracting the minimum score and then dividing by the difference between the minimum and maximum score. The maximum rescaled score is equal to 1 and the minimum rescaled score is equal to 0. Index dependence is constructed as the sum of the three indicators: mining and quarrying value added as a share of GDP in 2008, commodity exports as a share of total merchandise exports in 2008, and resource revenue as a share of total fiscal revenue in 2006–10.

a. Index range is 0 to 3; higher values indicate more dependent.

For governments the dependency that probably matters the most is resource-related revenues. Azerbaijan's government is now the most dependent, followed by Turkmenistan, though they are less dependent than governments in the Gulf (figure O.16). During the last decade, Kazakhstan and Russia have also become more dependent on oil and gas, but their governments still depend less on natural resources than most resource-rich economies: resources contribute less than half of total government revenues.

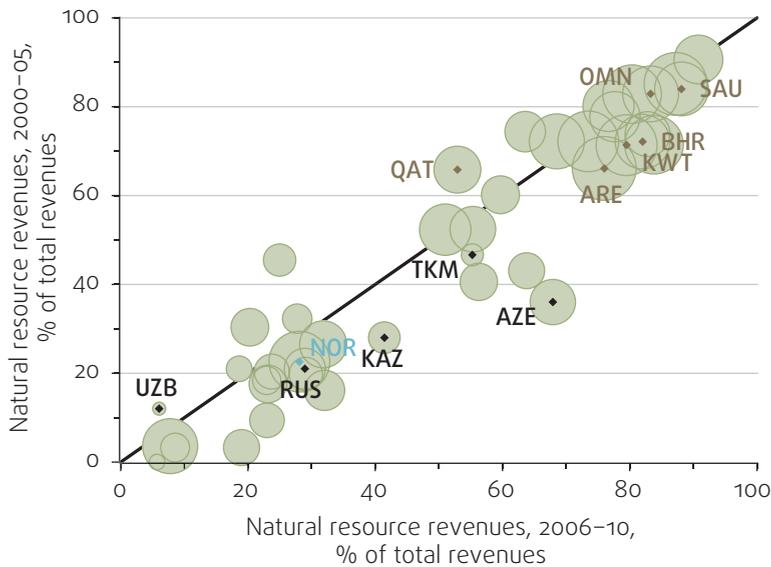


Figure O.16. Governments in Eurasia have become more dependent on resources

(Natural resource revenues, percentage of total revenues, 2000-05 and 2006-10)

Sources: World Bank staff calculations based on IMF World Economic Outlook April 2013; IMF 2007 and 2012; and World Bank World Development Indicators; see chapter 4.

Note: The size of the bubble represents the relative transformation rate from resource rents to revenues over 2006-10. The rate is computed by dividing revenues from natural resource by rents from natural resources.

Dependency is important, but that is just part of the story. What also matters is how efficient governments are at collecting a reasonable fraction of “resource rents”—the extra-normal profits that are common in the business. That efficiency is represented by the size of the bubbles in figure O.16. Russia’s bubble is much smaller than Norway’s, and Kazakhstan’s is much smaller than Qatar’s. Turkmenistan does not do well at all, and Uzbekistan does especially poorly. What is going on?

Azerbaijan and Kazakhstan have been relatively proficient both in increasing oil production and transforming more of these earnings into revenues. Between 2005 and 2010 the share of government revenues in resource rents rose from 24 percent to 50 percent in Kazakhstan and from 24 percent to 62 percent in Azerbaijan. They have done this by making investment attractive for foreign oil companies. A measure that helped was to decree that production-sharing agreements between foreign companies and the government would be respected even if there were conflicts with existing laws. Russia took a lot longer to do this, and after 2004 the Russian government has increased taxes and intervened more frequently in the oil industry. The growth in Russia’s oil production dropped from 7 percent in 2001-05 to about 1.5 percent in 2006-11. The gas industry has remained a national monopoly (chapter 4). Relying mainly on state-owned enterprises, Turkmenistan and Uzbekistan have done least well in this regard .

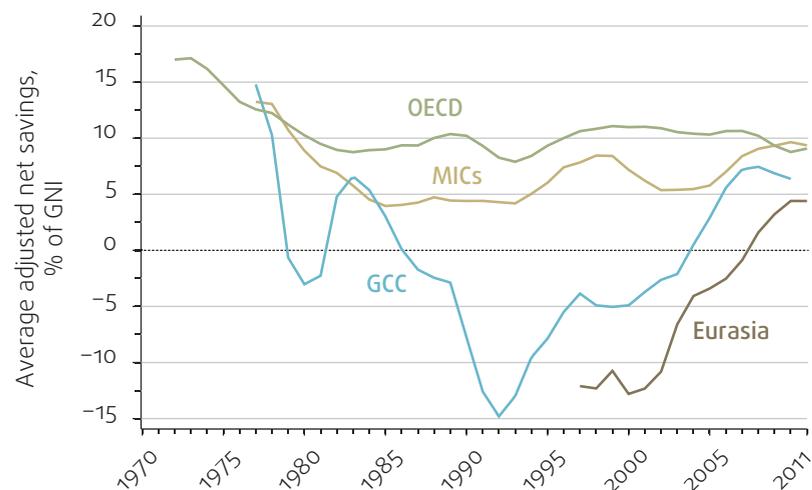
Norway also uses a state-owned company to produce and process oil, but it is obvious that Eurasians have not yet been able to achieve Norwegian efficiency in natural resource management. In Eurasia increasing oil and gas production has required sensible laws to attract foreign investors. Countries that have done this have seen production grow, and they have managed to convert more of the profits into government revenues that can be invested in infrastructure and education.

A region of genuine savers—but just barely

Eurasian governments have done least well in converting revenues into built capital. Between 1997 and 2002 the adjusted net savings rate in Eurasia's six resource-rich economies was a negative 12 percent, lower even than the 5 percent dissaving in the Gulf countries, and much lower than the 10 percent saving rate in the resource-rich Organisation for Economic Co-operation and Development (OECD) economies (figure O.17).⁸ Put another way, until a few years ago Eurasian countries were consuming more of the earnings from natural resources than they invested.

Figure O.17. Eurasia has only recently become efficient in converting resources into capital

(Average adjusted net savings, percentage of gross national income, 1970–2011)



Source: World Bank staff calculations based on World Bank World Development Indicators; see chapter 4.

Note: The figure covers resource-rich countries only. Particulate emission damage is excluded. The series is presented as three-year moving-average values. For GCC (Gulf Cooperation Council), the value for Kuwait in 1991 is dropped due to the huge negative share (-163 percent). Average numbers are computed only if data are available in more than 25 percent of countries in respective groups in a given year (for Eurasia, containing six resource-rich countries, at least two countries need to have data). GNI = gross national income; MICs = middle-income countries; OECD = Organisation for Economic Co-operation and Development.

One reason is high energy subsidies. In 2011 these subsidies were 3–5 percent of GDP in Azerbaijan, Kazakhstan, and Russia, 8 percent in Ukraine, and more than 25 percent in Turkmenistan and Uzbekistan. Another reason is that while ever bigger amounts are being saved in the oil funds, a sizable fraction is invested abroad. Azerbaijan, Kazakhstan, and Russia have long-term funds to transfer wealth to future generations, mainly through foreign investments. While this helps keep currencies from appreciating too much, it does not build capital at home. Capital formation rates in resource-rich countries have been 20–25 percent—lower than even their resource-poor neighbors and much lower than East Asia's emerging economies such as China.

Eurasian countries have to invest more in infrastructure

In the Soviet Union, planners were obsessed with building capital. "Communism is Soviet power plus the electrification of the whole country" was not just

a slogan on a billboard facing the Kremlin to remind its occupants of one of Vladimir Lenin’s most memorable lines. The 500-page plan presented by the State Electrification Commission to the Eighth Congress of Soviets in 1920 was the precursor to the many five-year plans that followed. Communism is believed to have left Eurasia formidable physical infrastructure.

It is not so formidable now. Russia has a rail network that is just a third the length of that in the United States. France’s territory is just a twentieth of Russia’s, but its roads are as long. Kazakhstan covers 10 times the land area of Malaysia, but its roads are barely as long as Malaysia’s. Eurasia, a region of almost 22 million square kilometers, has a road network only as big as Brazil’s, with just a third of the area and two-thirds of the population. A quarter of Eurasia’s rural population lives more than 2 kilometers from an all-weather road, lower than in Indonesia. Only 12 percent of Russians have access to broadband communications, far behind the 30 percent in the United States and 36 percent in the Republic of Korea. There are big differences in infrastructure quality between, say, Ukraine and Uzbekistan, but it is not an exaggeration to conclude that Eurasia has lost its edge in infrastructure, if it ever had it (figure 0.18). Even resource-rich Eurasia trails East Asia in electricity supply.

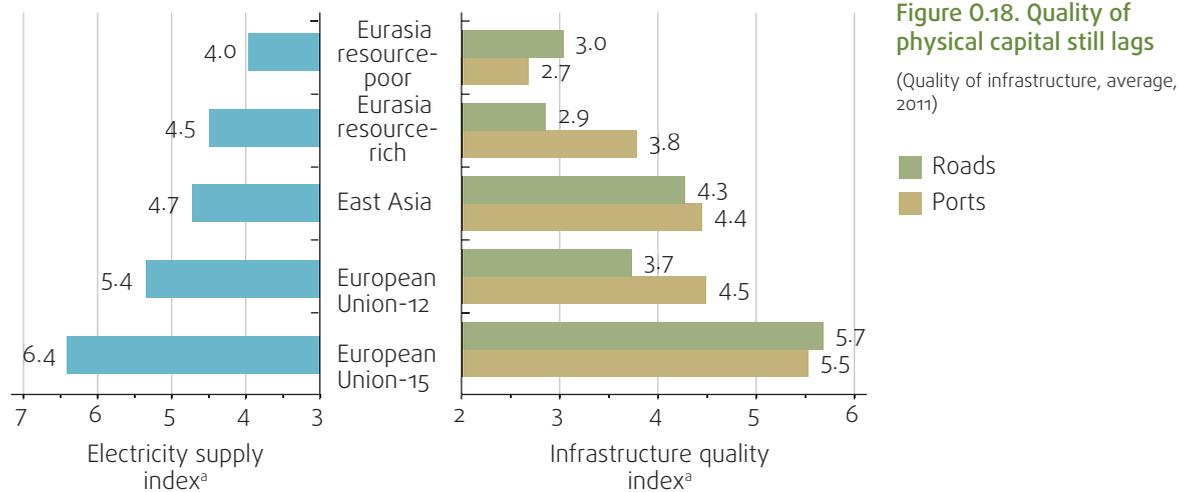


Figure 0.18. Quality of physical capital still lags

(Quality of infrastructure, average, 2011)

■ Roads
■ Ports

Source: World Bank staff calculations based on World Economic Forum 2012; see chapter 5.

Note: Average scores by group are shown.

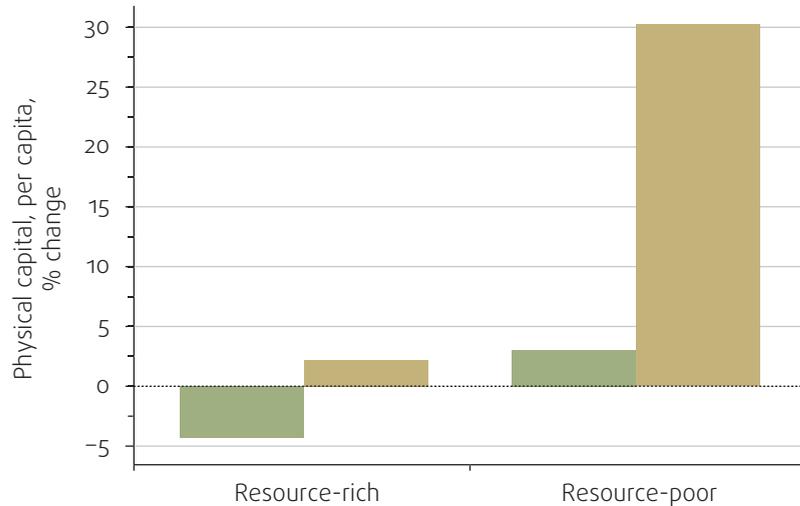
a. Index range is 1 to 7 (best).

Resource-poor countries in Eurasia lag behind their richer neighbors in infrastructure. But of late they have been trying harder. They boosted per capita physical capital by almost a third in 2010 relative to 2005 (figure 0.19). They did so by steadily increasing public investment to levels above 6 percent of GDP, rivaling those of East Asia. In contrast, Russia’s public investment has stagnated at about 4 percent since 2005 (figure 0.20). Oil-rich Eurasian economies now have to make a big push to improve their infrastructure.

Figure 0.19. Resource-poor Eurasia has effected a huge increase in physical capital

(Physical capital, per capita, percentage change, 2000-05 and 2005-10)

- 2000-05
- 2005-10

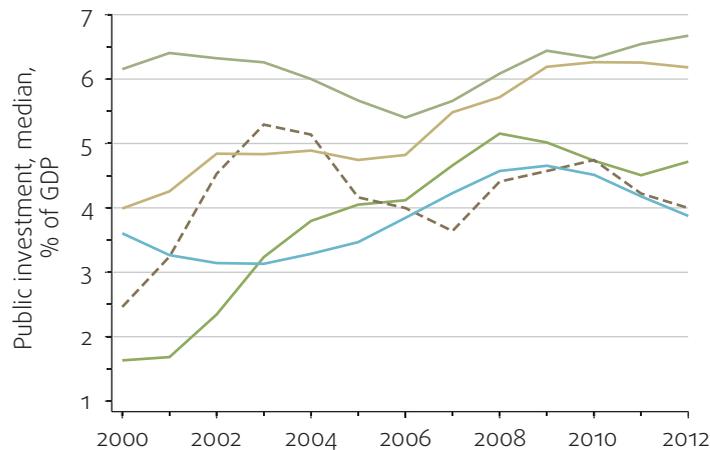


Source: World Bank staff calculations based on World Bank 2011; see chapter 5.

Figure 0.20. Resource-rich Eurasia invests half as much as East Asia

(Public investment, as a percentage of GDP, median, 2000-12)

- East Asia
- Eurasia resource-poor
- European Union-12
- - Russian Federation
- Eurasia resource-rich (excl. Russian Federation)



Source: World Bank staff calculations based on IMF World Economic Outlook April 2013; see chapter 5.

Note: Three-year moving-average values. Public investment is defined as gross public fixed capital formation.

Eurasia’s spending on capital formation has been about 20 percent, 10 percentage points short of the levels in Japan and the Republic of Korea during their takeoff. But Russia and resource-rich economies do not have to increase spending by much: increasing gross fixed capital formation to about 25 percent of GDP, as recommended by the Growth Commission, may be enough. No more than a third of this 5–6 percentage point increase needs to be public investment. The rest could be private, brought about by improving the investment climate.

All should make a bigger push for better education

The countries that need to invest most urgently in physical capital—transport, communications, and pipelines—are Russia and Ukraine. For every other country in the region, the more urgent investment need is in human capital—especially education. Secondary school enrollment rates are high in Eurasia, and even tertiary education levels are on a par with or higher than other countries with similar levels of development. In Ukraine and Russia a quarter of all adults have completed tertiary education, a higher share than in Australia and Ireland. But all assessments of the quality of schooling point to a crisis of worrying proportions in almost every country, and even in a few parts of Russia. The most reliable evidence comes from the OECD’s Programme for International Student Assessment (PISA) tests, which indicate that in 2009 two of every three 15-year-olds in Georgia, the Kyrgyz Republic, and Moldova were functionally illiterate. More disconcerting, resource-rich Azerbaijan and Kazakhstan had similar scores (figure 0.21).

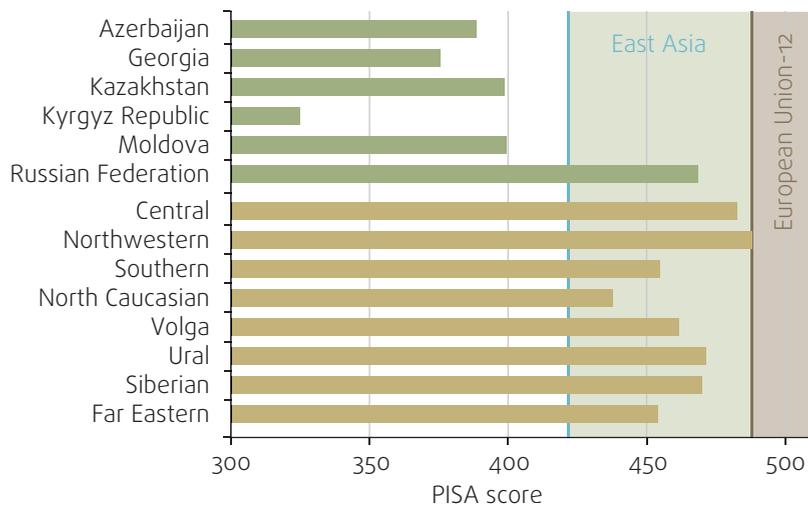


Figure 0.21. The Russian Federation’s education outcomes are the exception

(Programme for International Student Assessment [PISA] score, 2009, in Eurasian countries and Russia’s regions)

Source: Ajwad et al. 2013 based on PISA dataset; see chapter 5.

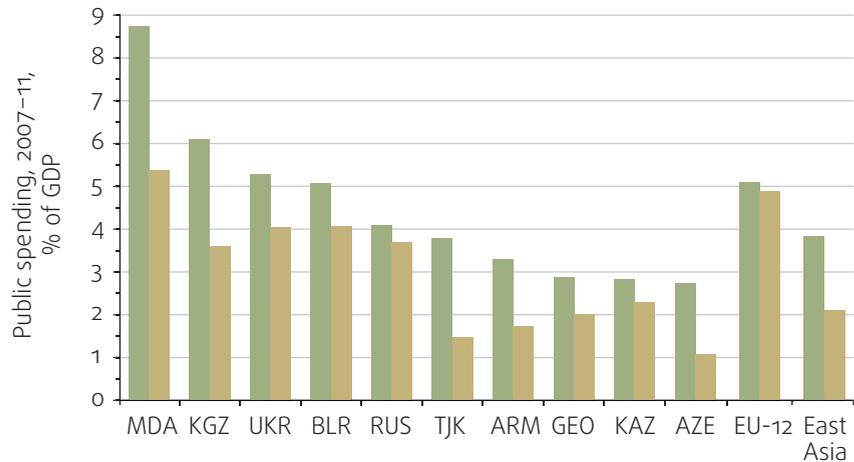
Note: The score is an average of math, science, and reading. The median values of East Asian (excluding Shanghai) and European Union-12 countries are presented.

Development institutions like the World Bank tend to advise governments that greater public spending will not guarantee better education quality. After all, Singapore’s public spending on education is less than 4 percent of GDP, and it has excellent outcomes. But it is difficult to advise governments in Azerbaijan and Kazakhstan, which spend less than 3 percent of GDP on education and have poor education outcomes, not to spend more, while striving to get more value for money for their spending. Armenia, Georgia, and Tajikistan could also spend more on education (figure 0.22). The public spending on health in many countries is also low—lower than even East Asia as a share of GDP. The standard advice to spend better in both education and public health (and perhaps spend less) applies only to a few countries like the Kyrgyz Republic and Moldova.

Figure O.22. Public spending on education in many Eurasian countries is less than in East Asia

(Public expenditures, percentage of GDP, average, 2007–11)

■ Education
■ Health care



Source: Ajwad et al. 2013 based on World Bank World Development Indicators; see chapter 5.

Just as the case is clear for increasing resource allocations to education in most countries in Eurasia, some reforms are clearly needed. One is to end the problem of poor access to early childhood development (ECD). Interventions before schooling starts generally produce students who are more successful in subsequent education and better adjusted socially. A growing body of evidence suggests that the costs of these programs are dwarfed by the benefits. Another important policy is to improve access to high-quality college and university education. Of course, improving educational outcomes will require complementary measures to increase efficiency of public spending throughout Eurasia. The efficiency enhancements will vary by country, but in most the measures would include increasing student-teacher ratios in secondary schools and restructuring education finance to create stronger incentives to improve learning outcomes.

On being told that the Soviet Union had more of almost everything than the United States, former president Ronald Reagan reportedly asked: “What do we have more of?” The answer was: “Money, Mr. President.” “Good. Let’s use that,” he replied.⁹ Eurasia’s resource-rich economies can use money from natural resource exports to invest more in education, health, and infrastructure. Some of them—especially Turkmenistan and Uzbekistan, but also Russia and some others—can free up funds by spending less on energy subsidies. Recent research shows that this is possible; there is no reason why Russia wastes more gas each year than France consumes. And there are ways to reduce energy subsidies without risking the welfare of the poor.¹⁰

Eurasia’s governments have not become bloated with unneeded workers as some of the oil-rich economies in the Middle East have, avoiding what this report calls the “Gulf Syndrome.” This is good, but it is not enough. Now they have to get better at delivering services. The time has come for Eurasia to make the government efficient, not just by keeping its cost low by keeping public spending down, but by making the benefits of government greater. To genuinely increase their savings, Eurasian economies will have to invest more in both physical and human capital.

“Intangible” capitalism

Since the 1930s Chile and República Bolivariana de Venezuela both have relied on natural resources—copper in Chile and crude oil in RB Venezuela. But their development trajectories have diverged. In 1983, Chile’s per capita income was about three-quarters that of Venezuela. Three decades later, Chileans had incomes at least one and a half times that of Venezuelans. When asked why Chile has done so much better than RB Venezuela, development experts might reply with a single word: institutions.

But “institutions” is a word both overused and underspecified. This report makes matters more specific. Chile has done better than República Bolivariana de Venezuela in formalizing the rules for managing volatile resource revenues, in providing essential social services, and in regulating private enterprise in ways that favor neither incumbents nor newcomers. This has resulted in diverging economic performance—in volatility, productivity, and employment. Government spending is much more volatile in RB Venezuela; Chile’s governments, by contrast, appear to have assembled a consensus for stable public finances by adhering to fiscal rules. RB Venezuela’s public debt is almost 50 percent of its GDP, while Chile’s is less than 10 percent. RB Venezuela has been using oil revenues to create government jobs, while Chile has kept public employment modest and has instead promoted public-private partnerships in education and essential infrastructure. Public enterprises dominate the landscape in RB Venezuela today, while Chile had privatized 94 percent of financial institutions and enterprises by the mid-1990s. RB Venezuela is ranked 180th of 185 countries in the World Bank’s ease of doing business assessment in 2013—the sixth worst in the world—while Chile is ranked 37th, the best in Latin America (World Bank 2013).

The quality of institutions in Eurasia today resembles neither that in Chile nor that in RB Venezuela. Azerbaijan, Kazakhstan, and Russia have improved the arrangements for managing resource revenues, providing social services, and regulating enterprises. But they have not yet attained the institutional standards of Chile. The other resource-rich economies—Turkmenistan, Ukraine, and Uzbekistan—are even further behind. While the six countries in Eurasia that have fewer natural resources—Armenia, Belarus, Georgia, the Kyrgyz Republic, Moldova, and Tajikistan—have all improved their capacities to deliver public services and regulate business activity, they can still do much more.

Resource-based development is intensive in institutions

To better understand success and failure of resource-based development, this report commissioned case studies for Chile and RB Venezuela, and 10 other resource-rich countries: Canada and the United States, Australia and Malaysia, Botswana and Nigeria, Saudi Arabia and the United Arab Emirates, and the Netherlands and Norway. The main lesson: all countries have to make governance fair and balanced and governments reasonably efficient, but resource-rich economies have to do this earlier in their development.

The many tangible investments that Eurasian societies have made during the last two decades are obvious. During the past few years, Eurasia has become a region of genuine savers. Now it has to become one of sophisticated investors.

Investments in “intangibles” will make the difference between productive economies and those that stagnate, fully participatory societies and those that exclude many, and stable governments and those that are fragile.

In all Eurasian countries—even those where education, infrastructure, and other forms of built capital are deficient—the asset portfolios are weighted toward “hard” endowments: natural resources, physical infrastructure, hospitals and clinics, and primary and secondary schools. This is especially true of the most resource-rich countries—Azerbaijan, Kazakhstan, Russia, and Turkmenistan. As their softer assets are examined—the robustness of the rules to manage resource rents, the quality of public services, and the ability of governments to create a level playing field for entrepreneurs and innovators—the portfolios start to look lopsided.

It is instructive to contrast the quality of institutions in Eurasia with its neighbors: the East Asian emerging economies that have become middle- and high-income economies during the last generation and the Central European countries (figure 0.11) that have joined the EU in the last decade. But these comparisons are useful only up to a point.¹¹ Resource-led development is more demanding of national institutions than are development strategies in labor-abundant economies such as China in East Asia, or those that are part of a union that includes the most advanced economies in the world, such as Poland in Central Europe. Unassisted by the anchor of the EU and facing the additional internal pressures of managing the volatile revenues associated with the exploitation of natural resources, Eurasia’s development is more institutionally challenging. So the most reliable comparators for resource-rich emerging economies are other resource-rich countries at various stages of development.

Given the specific needs of resource-rich economies, the extent and depth of these weaknesses are especially damaging for Eurasia. If sensibly designed rules for managing the revenues from natural resources over booms and busts have reduced the volatility of government spending to acceptable levels, then both the design and implementation of the fiscal rules and oil funds can be reassessed. If more than half of all ninth grade students are functionally illiterate, the quality of education is unacceptably low. If the rules for private enterprise have been made better but public institutions do not enforce them consistently and impartially—then a new round of institutional improvements is necessary.

Every Eurasian country needs better economic institutions to ensure stable public finances and dampen volatility, improved education, and infrastructure to make workers more productive, and stronger competition regimes to encourage private enterprise and entrepreneurship. Stabilization, education, and competition—these are the priorities for the next decade.

Stabilization funds are just one part of a macroeconomic policy package

As hydrocarbons have flowed out of Eurasia, wealth has flowed in. By making their currencies stronger, such riches can give policy makers a headache (figure 0.23). “Dutch disease” is an expression heard often in policy discussions in Eurasia. The term refers to the unexpected predicament in the Netherlands

after it discovered gas in the 1970s.¹² The windfall profits from gas led to an appreciation of the guilder, which made Dutch exports uncompetitive. Easy money from gas revenues also led to high rates of unemployment, exacerbated by generous social benefits that undermined incentives to work. The disease has been dreaded ever since. But the lesson that others can learn from the Netherlands is that regulations that help private enterprise flourish and sensible stewardship of public finances have proved to be effective antidotes to the disease.

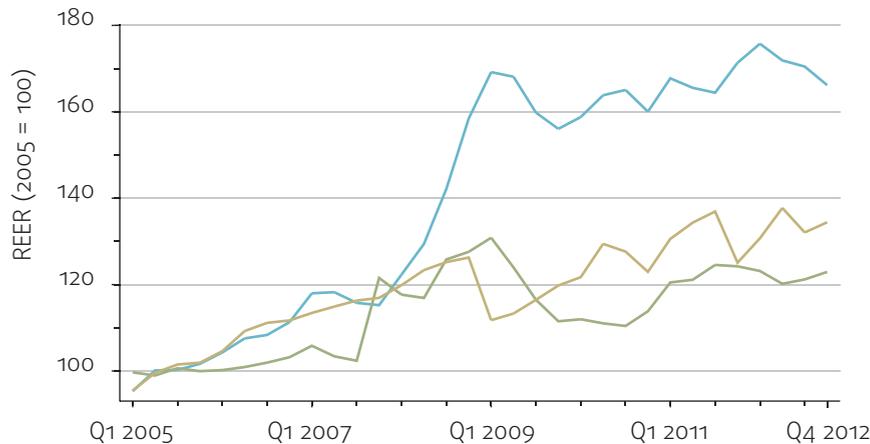


Figure 0.23. Risking the “Dutch disease” in Azerbaijan

(Real effective exchange rate, 2005 = 100, Q1 2005–Q4 2012)

— Azerbaijan
— Russian Federation
— Kazakhstan

Source: IMF International Financial Statistics; see chapter 6.

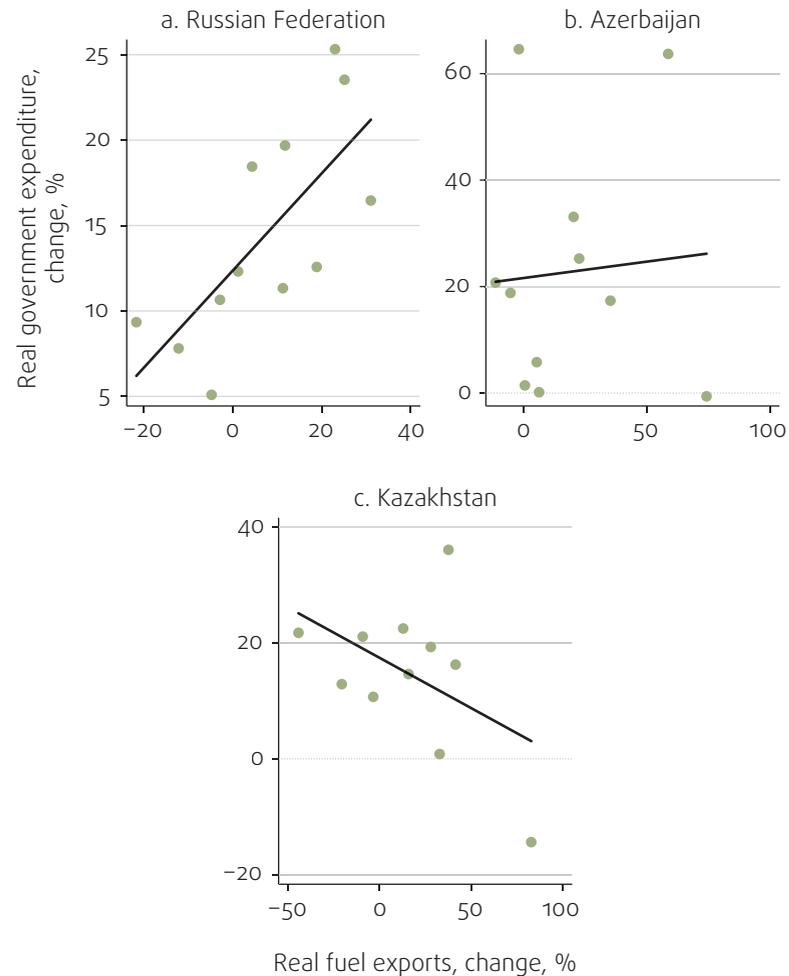
Much like staving off other diseases, the way to avoid Dutch disease is that economies must stay healthy. The most important part of this regimen is for governments to avoid spending more when times are good, which feeds the glut in private markets caused by high oil prices. Russia has often deviated from this rule, and Azerbaijan actually increased government spending by more than 50 percent in a year. The only country in Eurasia that has carried out systematic countercyclical fiscal policies is Kazakhstan, except in 2007 (figure 0.24).

Many governments—such as those of Azerbaijan, Chile, Kazakhstan, Russia, Saudi Arabia, Turkmenistan, and the United Arab Emirates—have used stabilization funds to help them offset cyclical fluctuations. It is clear that the size of rainy-day funds that is necessary for smoothing the cycle need not be all that large—it can be much smaller than the funds currently accumulated by Azerbaijan and Kazakhstan, and a mere fraction of those amassed by Kuwait, Norway, and the United Arab Emirates. Across the world, stabilization funds have helped to smooth out government spending, but it is less clear that they can offset the fluctuations in economic output. Research also shows that stabilization funds only help when the overall quality of fiscal governance is good. And even this is not enough: poor regulation of private finance can be as dangerous as poor oversight of public finance (box 0.2).

This experience notwithstanding, sovereign wealth funds (SWFs) have become big players in financial markets. About 70 SWFs across the world hold nearly

Figure 0.24. Kazakhstan's economic management is better

(Changes in real government expenditure and real fuel exports, 2000–11)



Sources: World Bank staff calculations based on World Bank World Development Indicators; and IMF World Economic Outlook April 2013; see chapter 6.

Note: Dots represent years. A value for year 2000 is unavailable for Azerbaijan and Kazakhstan.

\$6 trillion in assets, more than twice as much as all hedge funds and nearly as much as the entire Japanese economy. SWFs are diverse in many ways, including the main source of funds—commodity revenues (for example, Azerbaijan), fiscal surpluses (for example, Singapore), and noncommodity current account surpluses (for example, China)—investment strategies, and size. Their most common objectives are saving and stabilization, though many funds try to do both at the same time. About three-quarters of all SWFs have saving as one of their objectives; the biggest and best known of these is Norway's Government Pension Fund. These funds tend to invest more in equities and target long-term returns. Stabilization is an objective for a quarter of all SWFs. Not surprisingly, most of these funds are held by resource-rich countries. Typically, stabilization funds invest in short-term fixed income securities to ensure liquidity.

Box O.2. Eurasia’s financial sector—banks too big to fail and too stingy for smaller enterprises

In the 2000s, even as Kazakhstan’s government was managing inflationary pressures caused by the oil and gas exports, its banks were bringing in money from Western Europe and flooding the market with loans. Financiers were too aggressive, regulators too lax. The external debt of the banking sector rose to more than 25 percent of GDP. By 2007, even with oil prices at an all-time high, many borrowers were finding it difficult to service their loans. In 2008, when oil prices crashed, a quarter of them went bankrupt. Kazakhstan’s financial system froze.

The government stepped in, spending more than \$10 billion of its savings. The sovereign wealth fund, Samruk-Kazyna, bought the third-largest bank and propped up two others. This has not helped much. In mid-2013, non-performing loans—

with repayments overdue more than 90 days—were still close to \$25 billion. But people probably trust Kazakhstan’s banks less today than they did in 2008.

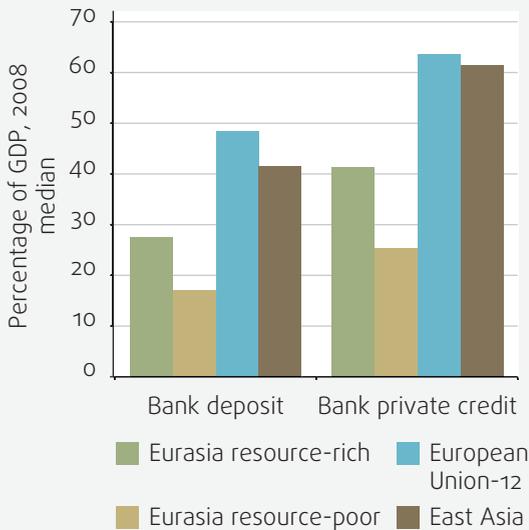
Kazakhstan is no exception. Eurasian countries have yet to develop solid financial systems for three reasons. First, the public’s mistrust of banks means that many do not deposit their savings. The median deposit-to-GDP ratio in Eurasia was 22 percent in 2008, less than half the EU-12’s (49 percent) and East Asia’s (42 percent) (figure B0.2.1). Deposit penetration is especially low in Azerbaijan, the Kyrgyz Republic, and Tajikistan; in Turkmenistan, less than 1 percent of households had a bank account in 2011. The mistrust can only be reduced through better governance.

Second, the private sector is crowded out by state-owned enterprises and

government-directed lending. In Belarus the banking system is dominated by state-owned banks, which play mainly a quasi-fiscal function by providing directed lending and on-lending to state-owned enterprises. Directed credit through state-related banks is common in Azerbaijan and Kazakhstan. Banks are inefficient as well, mainly due to a lack of competition. This keeps interest margins high—5.2 percent in Eurasia versus 2.6 percent in EU-12 and 3.6 percent in developing Asia in 2008. This can only be fixed by better governance.

Third, inefficiencies in resolving insolvency discourage banks from taking risks, particularly with potential new investors and small enterprises (figure B0.2.2). Shortcomings in the collateral regime have also discouraged lending to small enterprises. This can be remedied only by better governance.

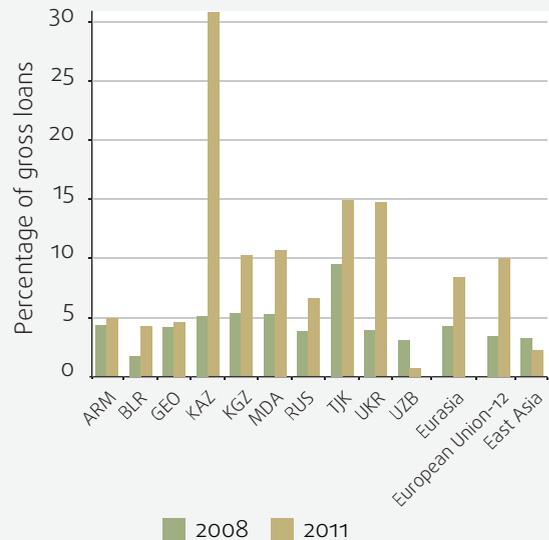
Figure B0.2.1. Low deposits



Source: World Bank staff calculations based on World Bank Global Financial Development Database; see chapter 6.

Note: Turkmenistan and Uzbekistan, and Kyrgyz Republic and Tajikistan, are excluded from resource-rich and resource-poor groups, respectively.

Figure B0.2.2. Lousy loans



Source: World Bank staff calculations based on World Bank Global Financial Development Database.

Note: For country groups, median values are shown.

Though SWFs are typically set up with good intentions, no government can expect that having one of these funds will automatically improve its fiscal situation. Stabilization funds did prove to be useful during the last financial crisis. In Russia, for example, the stabilization fund played a key role in smoothing out public spending. The financial sector was stabilized too when the National Welfare Fund injected about \$30 billion into three state-owned banks.

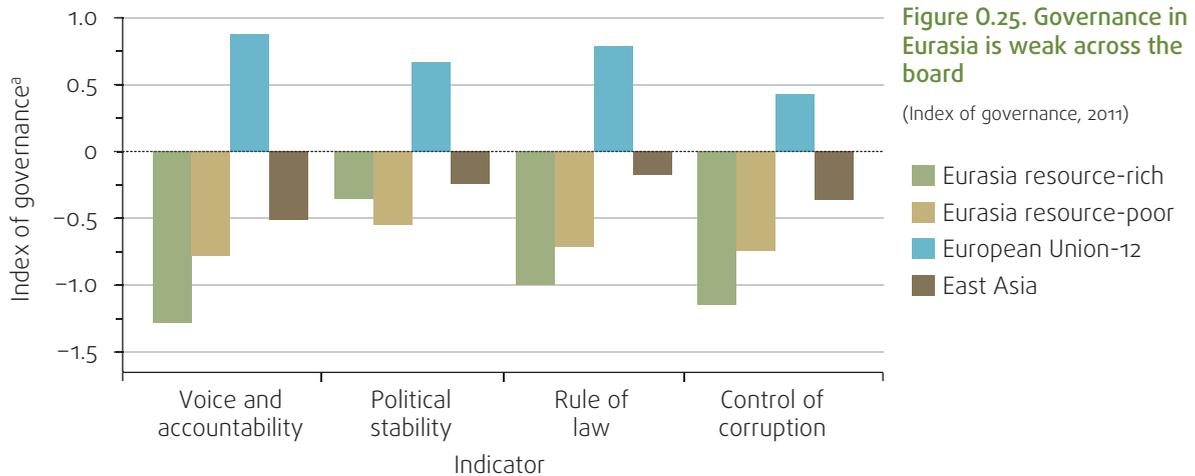
What should governments do? First, with institutions to discipline government spending untested and banks still prudentially weak, Eurasian governments could consider keeping the size of oil funds small. With appreciating currencies, it may be difficult to get high rates of return on investments abroad, so these funds are not ideal for transferring wealth across generations. And there may be better ways to transfer wealth across generations, such as well-chosen investments in human capital and in infrastructure at home. Without the institutions to safeguard these ever larger pools of money, they could be vulnerable to suboptimal investment or even potential misappropriation. If there is any doubt about the reliability of these arrangements, and if additional spending on education and infrastructure will be wasteful, leaving natural resources unexploited is a better way to transfer wealth to future generations.

The second step is to keep the government's books balanced: keep the long-term fiscal deficit close to zero. Economists distinguish between structural and cyclical fiscal deficits by making informed guesses about how much aggregate output is above or below trend levels. As figure O.24 shows, Russia has found it hard to reduce its structural deficit. In 2012, with oil prices at an unusually high \$100 a barrel, the Russian government ran a non-oil fiscal deficit of almost 10 percent of GDP.

The third step is to create the conditions for enterprises to become more productive, so that the real exchange rate is kept low even when the nominal value of the currency is high. If Azerbaijani or Russian enterprises increase their productivity in step with the appreciation of the manat or the ruble, foreigners can buy as much of what they produce as they could before. This keeps them competitive in world markets. For this, Azerbaijani and Russian producers should specialize in goods and services that their countries are well equipped to produce.

Better government needs more accountable providers

A good way to transfer wealth to future generations would be to invest in the education and health of the young, and to build durable infrastructure in the right places. Governments are responsible for much of this, so governance has to be made better. But compared both with the formerly communist countries of Central Europe and the developing economies in East Asia, Eurasia has governments that are less accountable, less stable, less just, and more corrupt. The resource-rich countries in Eurasia do especially poorly in accountability and control of corruption (figure O.25).



Source: World Bank staff calculations based on Kaufmann et al. 2010; see chapter 6.

a. Index range is approximately -2.5 to 2.5 (best).

There is also evidence that governance and building economic institutions are hurt by resource abundance. This leads to what economists call the “voracity effect” where even increases in commodity prices can result in fiscal deterioration and slower growth (Tornell and Lane 1999).

Recent research by the World Bank recommends that recipes for improving Eurasia’s health care will need five ingredients, in differing doses depending on the country: activity-based reimbursement where the payment follows the patient; autonomy for service providers; the use of performance information for decision making; adequate risk-pooling; and committed and credible leadership. Eurasia lags Central and Western Europe in each of these (Smith and Nguyen 2013).

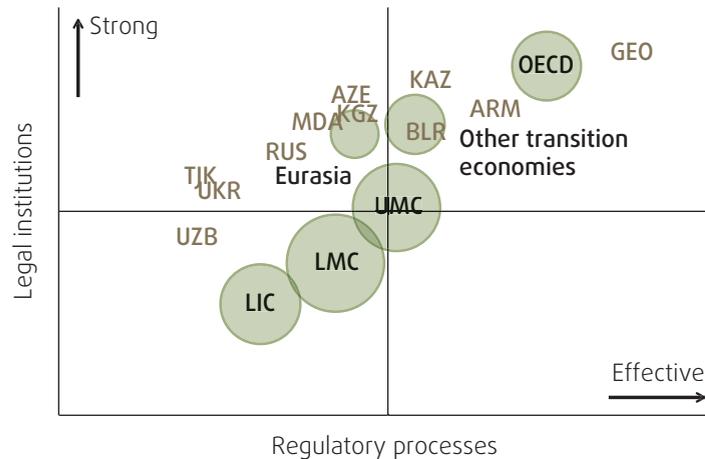
Improving education outcomes will be more difficult, but it is certainly possible. A study at the World Bank has identified the three steps to better education in the region: measure learning outcomes through international and national assessments; increase autonomy and introduce accountability based on these results; and improve efficiency by using performance-based financing (Sondergaard and Murthi 2011). A good way to begin is for all countries in Eurasia to participate in international tests such as PISA, the Progress in International Reading Literacy Study, and Trends in International Mathematics and Science Study. The next step is to supplement these tests with national testing. The final step is to use this information to improve teaching and reward the better schools. The countries that have made the most progress are Russia, Georgia, Ukraine, and Moldova. The others will need to do much better.

Competition regimes are Eurasia’s big blind spot

Enterprise surveys find that 40 percent of all enterprises identify electricity as a major constraint. The World Bank’s *Doing Business 2013* report identifies some of the reasons. In Russia it takes 10 procedures and 281 days to get electricity, compared with just 5 procedures and 89 days in East Asia. In Ukraine there are 11 procedures and a wait of 285 days. The quality of power supplies is about the same in resource-rich countries as it is in the resource-poor. Getting a permit to construct takes even longer—42 procedures and 344 days in Russia. Closing a business can take more than three years in the Kyrgyz Republic and Ukraine. The median Eurasian country is ranked 112th in the World Bank’s *Doing Business* surveys. Contrast this with other resource-rich economies: New Zealand 3rd, United States 4th, Norway 6th, Australia 10th, Malaysia 12th, and Canada 17th. Every stable, high-income resource-rich country is a good place to do business (figure 0.26).

Figure 0.26. Eurasia needs to make regulatory processes better

(Average ranking on sets of *Doing Business* Indicators, 2012)



Source: World Bank staff calculations based on World Bank 2013.

Note: Strength of legal institutions refers to the average ranking on getting credit, protecting investors, enforcing contracts, and resolving insolvency, whereas complexity and cost of regulatory processes does the average ranking on starting a business, dealing with construction permits, getting electricity, registering property, paying taxes, and trading across borders. LIC = low-income countries; LMC/UMC = lower- and upper-middle-income countries; other transition economies are countries in Europe and Central Asia excluding Eurasia and Turkey; OECD (Organisation for Economic Co-operation and Development) includes only advanced economies.

Eurasian governments have also been trying to improve regulations; the World Bank’s *Doing Business* surveys have shown a steady improvement in the last 10 years. But enterprise surveys suggest that compliance with regulations has become more cumbersome, especially in resource-rich economies. In 2009 more than a third of all enterprises reported having to make informal payments to government officials to get an operating license.

Even when the general laws are not onerous, other policies can make life difficult for entrepreneurs. Azerbaijan requires multinationals to certify that

foreign workers are free of ailments such as HIV and hepatitis, but only from licensed facilities in Azerbaijan. Kazakhstan requires medium and large firms to hire 90 percent of its workers locally, sometimes making it difficult to bring in expatriate workers with technical skills not available in the country. Turkmenistan levies higher tax rates on foreign investors. Uzbekistan makes it difficult for foreign firms to repatriate profits.

Georgia has shown that Eurasian countries can quickly improve economic institutions, and the benefits are palpable. It is ranked ninth in the world on the ease of doing business, and it is among the few countries where managers spent less time dealing with regulation in 2009 than they did in 2005 (World Bank 2013). Between 2008 and 2011, new business creation went up from three newly registered corporations per 1,000 working people to five; in Russia it fell from four to one. Enterprise surveys in 2009 showed that almost no one in Georgia has to bribe officials to get electricity or a license to operate. Obtaining customs clearances and licenses for imports and exports in Georgia is easier than in the new member states of the EU. Armenia and Kazakhstan have also been making laws simpler and easier to comply with.

But there are no bright spots in competition regimes—especially in judicial independence, integrity of the legal system, and protection of property rights. The biggest economies—Russia and Ukraine—do especially poorly. And unlike the Doing Business measures, there has been scant progress in improving competition regimes in resource-poor economies, and actual deteriorations in the resource-rich countries since 1998 (figure O.27). In contrast to the new member states of the EU, government promises to improve competition regimes have so far not been matched by results.

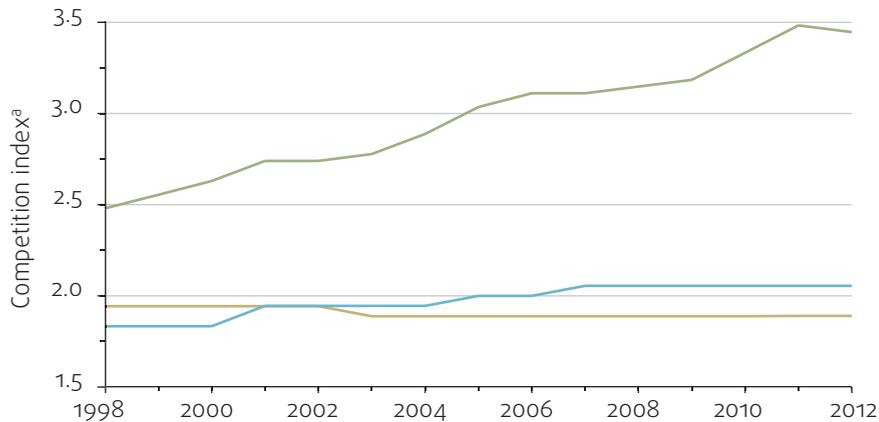


Figure O.27. Domestic competition is muted

(Competition index, 1998–2012)

— European Union-12
 — Eurasia resource-rich
 — Eurasia resource-poor

Source: European Bank for Reconstruction and Development Transition Indicators; see chapter 6.

a. Higher values indicate more competition.

The source of these problems is the capture of lawmakers and the judiciary by powerful interests. Corporations that are less productive can dominate sectors of the economy, sometimes because they are state owned and sometimes because they are well connected. In Ukraine, state-owned enterprises often

circumvent procurement law. In Russia, state corporations are altogether exempt from competition law and they often dominate product markets. Many also get energy at subsidized rates while their competitors often struggle to just get power. In Belarus and Turkmenistan, state-owned banks channel funds to favored enterprises, keeping more productive newcomers small or sidelined.

A poor investment climate may be compounded by an interventionist mind-set that seems to permeate governments in the region. Abetted by proponents of selective interventions to encourage this activity or that, governments have launched initiatives like Skolkovo, an innovation city near Moscow (chapter 3). The results so far have not lived up to expectations.

Poorly implemented laws, favoritism in financing, arbitrary court decisions, and other such violations of competition laws present perhaps the greatest threat to Eurasian prosperity. Government efforts to encourage enterprise have become piecemeal and interventionist, and could be making things worse. It may be too soon to assess the impact of such government interventions. But it is possible that they could be exacerbating two worrying developments: job creation has become tepid, and productivity growth has been falling since the early 2000s.¹³

A natural way to diversify

If the goal of government policy is sustained progress in incomes and living standards, and the ways and means to this goal require high-performing economies and efficient governments, there is little evidence to recommend policies to diversify exports and economic production. But there is more convincing evidence to support policies to diversify national asset portfolios. National asset portfolios consist of natural resources, built capital, and public institutions. These can be estimated to provide approximate but useful estimates of the extent of diversification of a country's asset portfolio. The portfolios of successful resource-rich Eurasian countries can be juxtaposed with the experience of countries such as Australia, Canada, Chile, Norway, and the United Arab Emirates. This can help to identify the priorities for change. Plotting the degree of diversification of assets against a composite measure of economic performance—productivity growth, job creation, and output stability—yields a different result. Countries with more diversified asset portfolios have economies that are more productive, inclusive, and stable (figure 0.28).

Over the last decade, Eurasian economies have improved the efficiency of public investments so that (at least) Azerbaijan, Kazakhstan, and Russia now add more to their tangible nonresource assets than they deplete through extracting natural resources. But they have not commensurately improved the quality of institutions to manage public saving, even less the delivery of essential services such as education, and less still the implementation of the rules for private enterprise. These are the intangibles needed for development. If this is the case, Eurasian economies may be weakening their asset portfolios even as they add to the endowments that they can obviously see and easily measure. Even as they keep growing their incomes, their development may be becoming less diversified.

Why should this be a problem when poverty rates in the region are down, incomes are up, and the quality of life gets better every year? It is commonly

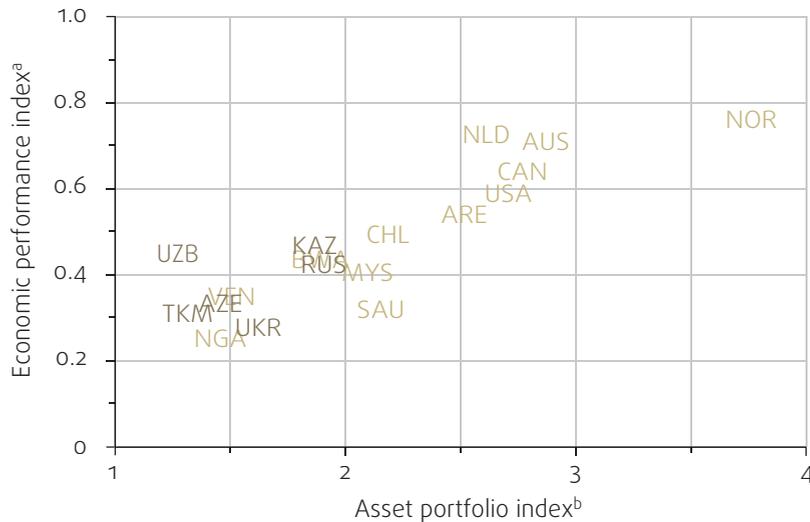


Figure 0.28. What really matters: built capital and economic institutions

(Economic performance index vs. asset portfolio index)

Source: World Bank staff calculations; see spotlight three.

Note: The asset portfolio index is a multiplicative index constructed as the product of two types of assets: capital (natural resources and built capital averaged) and institutions. The economic performance index is a composite index constructed as the unweighted average of the three measures of economic performance: output volatility, employment, and productivity.

a. Higher values indicate better performance.

b. Higher values indicate more diversified portfolio.

proposed that the weaknesses are apparent in the composition of exports and economic activities, which have become more concentrated since the days of the Soviet Union. Actually, the reasons are related to economic efficiency, proxied by the recent trends in productivity, employment, and volatility. While it is difficult to prove, the evidence appears to point toward a systematic slowdown in productivity growth in the region during the past decade. While it may be too soon to say with certainty, Eurasian economies have exhibited an excess volatility that may discourage long-term investment and employment creation. While their circumstances have been unique, Eurasia's policy makers need to be aware that the experience of others indicates that resource-intensive development paths are especially demanding of institutions.

Eurasians can learn from the experience of others, and this report was written to help. But Eurasians will have to develop these institutions on their own. Outsiders from successful countries will be tempted to recommend designs and details. They should resist the urge. As Luiz Carlos Bresser-Pereira, a former minister in Brazil, once put it: "Institutions can be at most imported, never exported."

Making more miracles

In March 1993, six months before *The East Asian Miracle* was published, the scholarly journal *Econometrica* carried an article by Robert E. Lucas, Jr., an American professor and future winner of the 1995 Nobel Prize for economics. “Making a Miracle” analyzed how the Republic of Korea had engineered one of the greatest economic transformations in history.

Lucas began by pointing out that in 1960, Korea had the same per capita income as the Philippines and similar economic structures (about a quarter of secondary school-age children were in school and about 90 percent of merchandise exports were primary commodities). Over the next three decades Philippine per capita income grew annually at about 1.3 percent and Korea’s at an annual rate of 6.2 percent. By 2000 Korea’s per capita income was about \$11,000, the Philippines’s \$1,100. Today, their per capita incomes—in current prices—are about \$23,000 and \$2,600. For a Korean to become nine times as rich as a Filipino within a lifetime is nothing short of a miracle.

To succeed, resource-based economies will have to do what successful developers in East Asia and central Europe have done: integrate with the rest of the world through foreign trade and investment. This is the sine qua non for economic development. But just as the Republic of Korea needed to do more than increase exports, success in Eurasia will require more than openness to commerce. The most important thing may be to develop their institutions at an unusually early stage of growth, an especially tough task if there is a “voracity effect” of resource abundance.

This is not because of subtle differences. Depending on a few commodities makes their economies more volatile, so resource-rich countries will be unstable unless they make government spending smoother over the economic cycle—and perhaps even institute savings and spending rules that enable countercyclical fiscal policies. By reducing the need to tax citizens, natural wealth also tends to make governments less accountable and compromises the quality of public services—unless other mechanisms are instituted. Because mining and minerals contribute a big share of economic output but generate few jobs, governments need to regulate these sectors especially well so that private enterprise flourishes—even when resource wealth can make it tough for them to compete in foreign markets.

These insights are consistent with the experience of 18 resource-rich economies—six in Eurasia and a dozen in other regions—that together account for more than two-thirds of the world’s natural resources. What distinguishes the countries that succeeded from those that have struggled is that they have made improvements in these institutions before they became high-income economies, and before their built capital showed a big improvement (figure 0.29).

It is not possible to draw specific policy conclusions from a finding based on such rough calculations, but some general implications are clear. While the details will differ among countries in the region, it is not difficult to conclude that what Eurasia’s resource-rich economies need most is what East Asians had identified as a priority for themselves more than a decade ago—a shift in governance from the “rule of man” to the “rule of law.” Eurasia’s most urgent task now is to strengthen its soft structures.

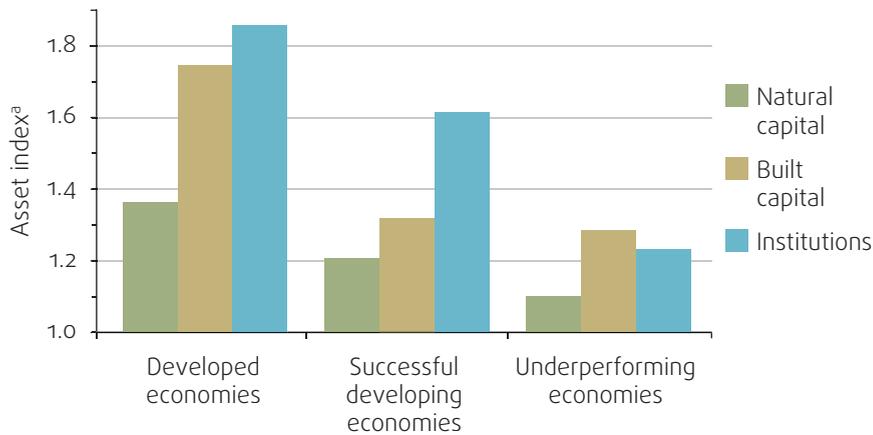


Figure 0.29. To succeed, resource-rich emerging economies have to build institutions sooner

(Economic assets, developed and developing countries)

Source: World Bank staff calculations; see spotlight three.

a. Index range is 1 to 2; higher = better.

Policy makers in Eurasia will find this advice difficult to put into practice. If history is any guide, governments in Eurasia will be tempted to look for quicker ways to develop. It seems easier to provide a few places where investors and entrepreneurs can cluster untargeted by corrupt officials and create goods and services that can be exported unhampered by frayed facilities. It may sound more sensible to use oil money to subsidize some non-extractive activities than to invest the surpluses in better education and infrastructure that might take years to bear fruit. In other words, governments will be tempted to spend their energies intervening to diversify exports and economic activities. Some of these initiatives might succeed, but most are likely to leave Eurasia's governments frustrated.

With a strategy to diversify assets, Eurasia's economies and exports might first become more concentrated. But Eurasia's development will become diversified, with ever more efficient economies and higher living standards. While diversified asset portfolios take time to build, they will facilitate unforced structural transformations. If the experience of resource-rich countries in other parts of the world is a reliable guide, diversified assets will bring about a more sustainable dynamism in Eurasia's economies, generate fewer stresses in its societies, and make governments more appreciated by their citizens. They might even help Eurasian countries make a few miracles of their own.

20 questions, 20 answers . . .

Chapter 1: Diversifying Naturally

Have natural resources served Eurasia well?

- Yes. Since 2000, poverty has been halved, incomes increased fivefold, and education and health outcomes have improved. These improvements coincided with high commodity prices.

Did countries that diversified their economic activities and exports do better?

- No. The resource-rich countries that integrated more into the global economy have increased incomes and improved development outcomes most. These countries have actually become less diversified in their exports and economic activities.

Which diversification strategies are best for Eurasia?

- Eurasian countries are best served by building diversified portfolios of assets: natural resources, built capital, and economic institutions. They should focus less on diversifying exports or production.

Chapter 2: Foreign Trade

Why does Eurasia trade more with Europe than with Asia?

- Economic mass, shorter physical distance, lower trade costs, and built physical capital have brought about greater trade with Western Europe. Looking ahead, Eurasia's human capital assets will be better used if the region trades more with East Asia.

How is Eurasia's intraregional trade different from its trade with the rest of the world?

- Just as Eurasia's global trade is driven by differences in endowments, intraregional trade increasingly reflects the differences among neighbors in natural resources, physical and human capital, and the institutions needed for investment and innovation.

What are the immediate payoffs to regional integration in Eurasia?

- With 85 percent of regional GDP in resource-rich economies that have similar endowments, and with regional economic mass small and trade barriers considerable, trade with the rest of the world will yield more benefits now. The payoffs to regional integration may be higher in the future as Eurasian countries build the assets needed to take advantage of economies of scale.

Chapter 3: Economic Structures

Have Eurasian economies become less diversified during the last two decades?

- While it is difficult to accurately measure the degree of diversification, it appears that resource-rich Eurasian economies have become more concentrated, while resource-poor economies in the region have become somewhat more diversified.

Has economic efficiency increased or deteriorated in the countries that have diversified more?

- Economic performance as measured by productivity growth, new employment, and economic volatility has improved in almost all countries, though there are signs that productivity growth has slowed since the early 2000s in both resource-rich and resource-poor economies.

Could activist industrial policies improve economic efficiency and development outcomes?

- Subsidies and special treatment for selected economic activities will result in economic inefficiency unless accompanied by investments in built capital and improvements in the institutions for managing public resource rents, providing public services, and regulating private enterprise.

Chapter 4: Natural Resources

How rich is Eurasia in natural resources?

- In aggregate, Eurasia is the most abundant region in nonrenewable natural resources; in per capita terms, the countries of the Gulf Cooperation Council (GCC) in the Middle East are richer.

How resource dependent are Eurasia's resource-rich economies?

- Eurasian countries depend more on natural resources for export earnings and government revenues than the resource-rich economies of the OECD (such as Australia, Canada, and Norway) but less than the GCC countries (such as Kuwait, Saudi Arabia, and the United Arab Emirates).

Are Eurasian economies efficient in converting natural resources into built capital?

- Resource-rich economies in Eurasia are good at generating resource rents, less adept at collecting government revenues from such sources, and—though they have become better during the last decade—least efficient in raising “adjusted net savings”—that is, building capital faster than depleting nonrenewable resources.

Chapter 5: Built Capital

Does Eurasia have a problem with its physical and human capital?

- Eurasia has less capital than it should given its resource riches, and the gaps are greater for less tangible forms of capital such as educational attainment and the quality of roads and railways than the more tangible types of capital such as number of schools and hospitals.

Are the resource-poor countries in Eurasia more capital constrained than the resource-rich economies?

- Resource-poor countries in Eurasia have lower capital stocks but have been investing more in education, health, and infrastructure than countries that have greater resource wealth.

Are Russia's education and infrastructure as good as those of its peers?

- On average, Russia does better than the other 11 countries in Eurasia, but the quality of capital—educational attainment—in Russia ranges from among the best in the world to the worst in Eurasia; but differences in built capital within Russia are smaller than the average differences between countries in Eurasia.

Are there straightforward solutions to the shortfalls in capital quality and quantity?

- All governments in Eurasia, but especially those in resource-rich countries, could spend much more on education and infrastructure and a lot less on energy subsidies.

Chapter 6: Economic Institutions

In which policy areas are Eurasia's institutional gaps greatest?

- Countries in the region are doing relatively well in managing resource rents, less well in providing high-quality public services, and least well in regulating production in ways that promote competition and encourage entrepreneurship.

Should oil funds be used for short-term economic stabilization or long-term development?

- Oil funds and fiscal rules should be designed to steady government revenues and offset output fluctuations over the business cycle; the longer-term objectives of increasing productivity and employment could be left to other instruments of public policy.

Have weaknesses in Eurasia's public services become a drag on private productivity growth?

- Slowing productivity growth since the early 2000s points to problems in curbing economic volatility in some countries, a growing shortfall in public education and infrastructure in many countries, and weak competition regimes in all.

Are regulations in resource-rich Eurasian economies good enough to meet their job creation imperatives?

- The design and enforcement of regulations for private enterprise have not made the problem of weak job-creation worse, but the rules have been implemented in ways that greatly favor state-owned enterprises and influential investors.

Notes

- 1 Hong Kong SAR, China; Indonesia; Japan; the Republic of Korea; Malaysia; Singapore; Taiwan, China; and Thailand.
- 2 The countries include three former republics of the Soviet Union—Estonia, Latvia, and Lithuania—and seven formerly communist economies in Central Europe: Bulgaria, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, and Slovenia. Cyprus (and Malta) joined the EU in 2004; Croatia in 2013.
- 3 The countries are Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.
- 4 The statement was made during the 2012 Russian presidential campaign.
- 5 The statement was made at the opening of the Azerbaijan-U.S. Convention “Vision for the Future” in May 2013.
- 6 For a summary, see Gogova and Winkler 2013.
- 7 UN National Accounts Main Aggregate Database; percentile distribution (shares) of Value Added in Services, other, corresponds to ISIC (International Standard Industrial Classification) Rev. 3 E–P. The series used to calculate the percentage distribution are in current local currency units.
- 8 Adjusted net savings are derived from gross national savings by making three changes. First, estimates of capital consumption of produced assets are deducted to obtain net national savings. Then, current expenditures on education are added to net domestic savings as an appropriate value of investments in human capital. Finally, estimates of the depletion of a variety of natural resources are deducted to reflect the decline in asset values with extraction and harvest. Environmental dissaving can also be subtracted by costing the damages from pollution, such as the health costs from urban pollution, and the global costs of carbon dioxide emissions. To keep matters simple, this report does not consider pollution costs.
- 9 Anecdote courtesy of Jørgen Møller.
- 10 A trio of reports published by the World Bank shows how this can be done. *Growing Green* by Deichmann and Zhang (2013) shows that energy efficiency can free up \$40 billion every year in Russia alone. *Energy Efficiency* by Stuggins, Sharabaroff, and Semikolenova (2013) summarizes the lessons from successful countries in Western Europe (Denmark, Germany, Ireland, and Sweden) and Central Europe (Lithuania, Poland, and Romania). *Balancing Act: Cutting Energy Subsidies While Protecting Affordability* by Laderchi, Olivier, and Trimble (2013) shows how better social protection systems can pay for themselves by helping protect the weakest households while reducing wasteful energy subsidies.
- 11 The East Asian countries are Cambodia, China, Indonesia, the Republic of Korea, the Lao People’s Democratic Republic, Malaysia, Mongolia, Papua New Guinea, the Philippines, Singapore, Thailand, and Vietnam. The new member states are Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic, and Slovenia.
- 12 It was probably coined by economists W. Max Corden and J. Peter Neary in 1982.
- 13 World Bank (forthcoming) analyzes these developments in more detail.

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