Working Paper Series

WP 06-5 JUNE 2006

The Eurasian Growth Paradox

Anders Åslund and Nazgul Jenish

Abstract

In the first decade of postcommunist transition, multiple growth regressions showed that the more radical and comprehensive market economic reform was, the earlier a country returned to economic growth and the more vigorous its growth, and that Central Europe took the lead. Since 2000, however, the Commonweath of Independent States (CIS) countries have had more than 4 percentage points higher annual growth than the Central European countries. A regression analysis for 20 postcommunist countries shows, with strong significance, that reducing public expenditures has most effectively stimulated economic growth. As expected, oil exports are also positive and significant. The distance from the European Union is also positive and significant: that is, the further from the European Union, the higher the economic growth. The effect of corruption is negative for growth but only marginally significant. Neither the laggard effect nor investment reveals any significant effect. The conclusion is that at least among postcommunist countries more emphasis should be given to reducing public expenditures to boost economic growth.

JEL codes: E62, H30, O23, P27, P35, Q43
Keywords: economic systems, transition, economic growth, public sector economy, oil

Anders Åslund, who joined the Institute as a senior fellow in 2006, is author of *Building Capitalism: The Transformation of the Former Soviet Bloc* (Cambridge University Press, 2002) and coeditor of *Revolution in Orange: The Origins of Ukraine's Democratic Breakthrough* (Carnegie Endowment for International Peace, 2006). **Nazgul Jenish** is a doctoral candidate at the University of Maryland, College Park. This paper was presented at the Annual Bank Conference on Development Economics (ABCDE), St. Petersburg, Russia, January 18, 2006. The authors express gratitude for valuable comments made primarily by participants at ABCDE, notably François Bourguignon, Cheryl Gray, Shigeo Katsu, Hans Rausing, and Lucio Vinas de Souza. They have benefited greatly from the excellent research assistance of Mathew Gibson.

INSTITUTE FOR INTERNATIONAL ECONOMICS

1750 MASSACHUSETTS AVENUE, NW | WASHINGTON, DC 20036-1903
TEL: (202) 328-9000 | FAX: (202) 659-3225 | WWW.IIE.COM

Since the collapse of communism in 1989, economic output in different regions of the former socialist camp has developed in starkly contrasting fashions. Initially, output fell sharply all over. From 1992, however, Poland recorded growth, and then one country after the other followed, though Ukraine and Moldova remained in the doldrums as late as 1999.

The lesson from 1989–98 was that market economic reform worked. The more radical and the earlier the economic reform efforts were, the sooner a country would return to economic growth and the greater the upturn would be. Central Europe and the Baltics shone, while the countries of the Commonwealth of the Independent States (CIS) underperformed badly. Yet even the growth rates of the leaders were mediocre. We shall discuss these lessons in detail in the first section.

Strangely, everything was turned upside down from 1999 on. From 1999 to 2004, 11 CIS countries had an average annual growth of 7.8 percent,[1] while the four Central European Visegrad countries (Poland, the Czech Republic, Slovakia, and Hungary) recorded an average annual growth of only 3.6 percent. The three Baltic countries came closer to the first group with 7.1 percent growth, and Romania and Bulgaria closer to the Central Europeans with 5.4 percent (figure 1). We limit our investigation to these 20 countries.

How can this growth paradox be explained? Why did the pioneers of market reforms so quickly become the laggards in growth? This paper seeks to answer that question. In the second section, we investigate the facts and suggest variables that warrant further exploration. In the third section, we undertake a regression with the most interesting variables.

I. LESSONS FROM 1989 TO 1998: TRANSITION TO A MARKET ECONOMY WORKS

When the transition to a market economy started, recorded output plummeted in all countries, though the Soviet economy had already been in free fall. In 1990 only Poland and Hungary launched their transitions. The sudden declines in their registered production caused a shock, and their relative economic performance set the stage for the early debate. When other countries in Central and Southeast Europe entered the transition in 1991, their output plummeted even more, but these falls were nothing in comparison with the CIS countries, several of which saw real collapse.

Not only were the declines in output huge, they lasted for years. Poland took an early lead by returning to growth in 1992. By 1994 the whole of Central Europe and Southeast Europe registered growth, and three of the most vigorous reformers in the former Soviet Union had also arrived at growth:

1. Russia, Ukraine, Belarus, Moldova, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. Turkmenistan is excluded because of its extremely poor and unreliable statistics. All averages used here are unweighted because we are interested in the comparative performance of the countries. If weighted averages would be used, we would be preoccupied with the relative performance of Poland versus Russia since these economies dominate in their respective regions.

Armenia, Lithuania, and Latvia. In 1995 other reformers followed, namely Estonia, Georgia, and Kyrgyzstan. However, several former Soviet republics experienced prolonged decline followed by stagnation: in particular Russia, Ukraine, Moldova, and Kazakhstan. Only at the end of the decade did they return to economic growth.

The total fall in output was staggering. According to official statistics, the aggregate decline in GDP was 19 percent in Central Europe and 29 percent in Southeast Europe. In the former Soviet Union, the collapse was truly stunning, with 44 percent in the Baltics and 53 percent in the CIS (UNECE 2000).

No doubt, these figures are exaggerated. Perhaps half of the decline can be discarded as the result of statistical misrepresentation (Åslund 2002, chapter 4). The old system exaggerated output for the sake of fulfilling plan targets, while the new system stimulated underreporting for tax evasion. The inherited socialist statistical systems could not capture new decentralized enterprise development, and the underground economy mushroomed, especially in partially reformed countries (Berg 1994, Johnson, Kaufmann, and Shleifer 1997). Terms of trade or implicit trade subsidies changed sharply, and substantial Soviet subsidies to Central Asia were abolished (Orlowski 1993 and 1995, Tarr 1994, Rosati 1995). Shortages soon disappeared, quality improved greatly, and the structural changes were huge. Therefore, the statistical problems are substantial. In fact, many of the initial output declines have been reduced in later statistical revisions, which have succeeded in capturing more of real output. For our purposes, we have little choice but to use the official statistics, making the assumption that the later growth rates have been less distorted, though, like most, we dismiss Turkmenistan's statistics as sheer fiction.

Soon a huge literature on the causes of the output changes evolved (Åslund, Boone, and Johnson 1996, Berg 1994, Berget et al. 1999, Christoffersen and Doyle 2000, De Melo, Denizer, and Gelb 1997, De Melo et al. 1997, De Melo and Gelb 1996, EBRD 1999, Havrylyshyn and Wolf 1999, Popov 2000, Sachs 1996, Selowsky and Martin 1996, Fischer and Sahay 2000, Fischer, Sahay, and Végh 1996a, 1996b, and 1997). By and large, it concluded that the more radical and comprehensive the market economic reform, the earlier a country returned to economic growth and the more vigorous its growth. The three foci of the transition were macroeconomic stabilization, deregulation, and privatization. As convinced reformers usually pursued all three aims in parallel, it is statistically difficult to disentangle these effects because of covariation.

Almost all transition countries started out with high inflation, and output continued to fall until inflation had been brought under control. Fischer, Sahay, and Végh (1996b, 89) concluded: "The simple—but essential—message that emerges . . . is that real GDP rebounds following inflation stabilization, which in turn appears highly correlated with the improvement in the public finances." In a broader international regression, Michael Bruno and William Easterly (1998) found that the critical threshold was relatively high, at 40 percent inflation a year. In addition, Christoffersen and Doyle (2000, 439) estab-

lished: "There is no evidence that disinflation necessarily incurs significant output costs, even at moderate inflation rates." Moderate inflation did not impede growth significantly.

Deregulation was the basis for the formation of a market economy, and over time regression analysis shows the rising importance of deregulation for growth (Berg et al. 1999). Privatization was always more controversial, but the regressions that included the share of GDP arising from the private sector showed that privatization had a clear positive impact on growth (Berg et al. 1999, De Melo, Denizer, and Gelb 1997, EBRD 1999).

The standard causes of long-term economic growth (Barro and Sala-i-Martin 2004) were of little or no importance. Surprisingly, Andrei Illarionov showed that the investment ratio in GDP was *negatively correlated* with economic growth: That is, the less a country invested, the higher its growth (figure 2). The explanation is probably that high investment reflected the maintenance of a soft budget constraint, a large public sector, wasteful public investment, and outright theft. Human capital was ample and underemployed, so there is little reason even to investigate it. Overall, technology and research and development appeared similarly irrelevant. Sensibly, nobody paid much attention to these factors. The issue was rather how to use the existing physical capital and import foreign technology to ease bottlenecks (Åslund 2002, 153–56).

Apart from the transition indicators, growth was correlated with the expansion of exports. Imports took off slightly later. The countries that were about to join the European Union benefited from privileged access to the large EU market. As a result, the share of their exports to the 15 EU members rose from half in 1989 to two-thirds in 2000. The CIS countries, by contrast, suffered from severe discrimination by the European Union, and the share of their exports to the European Union stayed constant, at around one-third (Åslund and Warner 2004). Covariation made it difficult to ascertain whether this was really a positive effect of market access or whether it was a result of the EU accession countries adopting many of the systemic features of the EU countries. A corollary was that the closer a country was to Brussels, the higher its economic growth.

With regard to politics, the 1990s evidenced a strong, positive correlation between democracy, comprehensive market reforms, and economic growth (Berg et al. 1999, EBRD 1999, Åslund 2002) because in the early transition, the threat against successful market reforms did not come from the many losers but from the few winners who engaged in rampant rent seeking (Hellman 1998). A corollary of the prior observations was that corruption was negatively correlated with economic growth (EBRD 1999).

In conclusion, radical market reform, macroeconomic stabilization, privatization, EU accession, export expansion, democracy, and reasonable governance all went together. Analytically, one problem was that the covariance was overwhelming. Another problem was that the growth rates remained anemic, and only Poland had convincingly exceeded its economic level of 1989. A third problem was that the

comparative standard—the CIS countries—were performing truly miserably. Thus, although one decade had passed, we could not really say all that much about the causes of economic growth, apart from the obvious point that a critical mass of market economic elements was vital. In particular Russia, Ukraine, Kazakhstan, and Moldova appeared stuck in an underreform trap (Åslund, Boone, and Johnson 2001).

II. A WORLD OF OPPOSITES, 1999–2004: THE WINNERS ARE THE PREVIOUS LOSERS

Strangely, whatever had been true until 1998 was subsequently false. The starkest contrast evolved between the four Central European countries and the eleven CIS countries.[2] Year after year, the latter group grew more than twice as fast as the former (figure 1). This phenomenon could not be explained by sheer chance.

The dividing event was the Russian financial crash of August 1998, which had many repercussions for the whole CIS region. Several other countries underwent similar crises at approximately the same time, and the patterns were very similar from country to country. Most postcommunist countries maintained higher public expenditures than they could finance domestically for years. They had high tax rates, but they failed to collect much revenue. Instead, they ran up excessive foreign debts. Sooner or later they lost international creditworthiness as the international financial institutions refused to provide more credit.

On the verge of external default, or in default, CIS governments reduced budget deficits. They could no longer borrow money abroad or from their population, and tax revenues could not be boosted in haste. Therefore, they were left with no choice but to cut expenditures severely. Several countries slashed public expenditures by about one-tenth of their GDPs in a year or two, often when their GDP was falling sharply. These cuts amounted to one-quarter or more of total public expenditures. Bulgaria cut its public expenditures as a share of GDP by 11 percent in 1997, Moldova by 10 percent from 1998 to 2000, Kyrgyzstan by 9 percent from 1995 to 1997, and Russia by 8 percent in 1999 (Åslund 2002, 226; EBRD 2005, 53).

Such drastic cuts are very different from ordinary budget trimming. When governments are fighting desperately to avoid disaster, budget politics changes completely. What was politically impossible became suddenly accepted as economically vital. One big target for drastic cuts by most transition countries was enterprise subsidies, which often involved rent-seeking schemes, such as barter. As a consequence, enterprises' budget constraints hardened sharply, and their playing field became more level. Another effect

2. We ignore Turkmenistan because of its substandard statistics.

was that many former state managers who had seized control over their old enterprises but did not know how to run them under capitalism were persuaded to sell them to new entrepreneurs in order not to lose everything.

After public expenditures had been cut down to size in many countries, the multitude of taxes and their high rates made little sense, since a broad understanding developed that these taxes could not possibly be collected. Then, tax reforms, introducing ever fewer taxes as well as lower and flatter taxes, spread throughout the CIS and to the verge of the European Union. As tax rates fell, tax administration could be simplified and tax collection improved.

In hindsight, the Russian financial crash was pivotal in turning the CIS countries into full-fledged market economies. Their fiscal systems were put in reasonable order, and ever since inflation has been moderate. Most CIS countries derive at least 60 percent of GDP from their private sectors. Markets, albeit encumbered ones, drive their economies. A critical mass of market economy and private enterprise has been achieved, although the CIS countries continue to lag behind the EU accession countries, according to transition indicators of the European Bank for Reconstruction and Development (EBRD). The EBRD index has changed little since 1998, recording only a slight convergence (figure 3). The minimal movement of these transition indicators amidst major structural changes suggests that the indicators might not be very relevant as a measurement of actual structural developments.

Several dramatic developments followed the Russian financial crash of 1998. That year Russia devalued the ruble by three-quarters, and most other CIS countries subsequently devalued their currencies by about 50 percent, which benefited exporters. The ensuing commodity boom, driven by Chinese commodity imports, allowed the CIS countries to boost their exports despite stagnant EU markets and EU protectionism. Supply rather than demand drove the expansion, as evident from the failure of all forecasts based on demand to predict the CIS resurgence. Although only four of twelve CIS economies were significant energy exporters (Russia, Kazakhstan, Azerbaijan, and Turkmenistan), growth rates across the CIS were similarly strong. Commodity-poor Armenia has registered the highest growth rate. Nonetheless, to check the effect of major energy exports, in our regression analysis we introduce a dummy for the three major energy exporters in our sample (Russia, Kazakhstan, and Azerbaijan).

Increased investment followed the export boom, as would be expected, which has further reinforced economic growth. Extremely high foreign direct investment (FDI), motivated by potential oil production, spurred much of the growth in Azerbaijan and Kazakhstan.

It is generally acknowledged that countries with a lower level of economic development *ceteris paribus* grow faster than wealthier countries. Thus one would expect CIS countries to grow faster than Central Europe after they had caught up somewhat with regard to transition reforms. However, this "laggard effect" would hardly explain a difference of more than 1 to 2 percent annual growth between these

two groups of countries (Åslund and Warner 2004). The laggard effect measured against GDP per capita in purchasing power parities (PPP) must be assessed.

Clearly, additional factors are needed to explain a steady difference in economic growth of over 4 percentage points each year for half a decade. One possibility is that this is simply recovery growth and that the main explanation is the huge, unused capacity in many post-Soviet economies after an official decline in output of about half of GDP, as especially Yegor Gaidar (2005) has argued.

However, striking systemic differences have developed in recent years. Most conspicuously, the CIS countries have drastically cut public expenditures to about one-fifth less as a share of GDP than in Central Europe, where it turned out to be possible to collect quite high taxes and international financing has remained accessible. This implies that economic freedom has increased in the CIS countries in a fashion that EBRD transition indicators do not capture. A simple plot of growth against government expenditure as a share of GDP points to a negative correlation between these variables (figure 4). Although care should be exercised when interpreting such plots, more accurate regression analysis below confirms the strong negative association between growth and government spending. Thus public expenditure appears to plausibly explain observed differences in economic growth between Central European and CIS economies.

Similarly, the CIS has adopted a low-tax regime, while Central Europe has taken only limited steps in that direction. Low and flat taxes are proliferating in the East, while most of Central Europe still has comparatively high and progressive income taxes. Russia has had a flat income tax of 13 percent since 2000 and Ukraine since 2004. Admittedly, Slovakia chose a flat income tax of 19 percent in 2004 and Romania one of 16 percent in 2005, as tax competition stings, but Poland still has progressive taxes peaking at 40 percent. Corporate profit taxes are declining in the whole region, but payroll taxes are being reduced much more in the CIS than in Central Europe.

In addition, Central Europe has developed a habit of running budget deficits of about 6 percent of GDP, while the CIS countries have nearly balanced budgets, with an average budget deficit of barely 1 percent of GDP for the last half decade (EBRD 2004, 41).

The CIS countries also have de facto freer labor markets than the Central European countries (BEEPS 2002). This is another aspect of CIS economic freedom that EBRD transition indicators ignore. The same could be said about agricultural policies.

While growth and democracy were nicely correlated in the 1990s, we see the opposite picture after 1998. A simple plot of growth against a Freedom House democracy index suggests a negative correlation between these two indicators. The CIS countries, which are by and large authoritarian, have grown faster than the democratic countries in Central Europe.

But what lies behind this? Have the Central Europeans just relaxed, while the CIS governments were shaken up by the Russian financial crash of 1998? The European Union is most probably part of the explanation. The first parts of the common legislation, the *acquis communitaire*, were undoubtedly useful, helping to build market institutions, while the last parts included regulations such as the Common Agricultural Policy. It is also possible that the old idea of authoritarian advantage has some relevance when the main risk to economic development becomes popular pressures for regulation of labor markets in favor of insiders and excessive taxes on the rich to the benefit of social transfers for the majority. The dominant risk during the first decade was rent seeking by elites, which democracy checked best. As before, neither human capital nor technology is likely to have had much impact on growth, as free resources have remained ample.

III. REGRESSION ANALYSIS, 1999–2004

A. Specification

To investigate more accurately the relative contribution of the major factors, discussed above, to the differences in growth between the Central and East European and CIS countries, we estimate the following panel data model:

$$\begin{cases} y_{ti} = \alpha + \beta_1 \left(\frac{G}{GDP} \right)_{ti} + \beta_2 GDP_{t-1,i} + \beta_3 \left(\frac{I}{GDP} \right)_{ti} + \gamma_1 Oil_i + \gamma_2 Corrup_i + \gamma_3 CIS_i + \lambda_t + u_{ti}; \\ u_{ti} = \mu_i + v_{ti}, t = 1,.., \ T; \ i = 1,..., \ N; \end{cases}$$

where the dependent variable, y_{ti}, is annual GDP growth rate for country *i* in year *t*. The explanatory variables include $(G/GDP)_{ti}$, government expenditure as a share of GDP; $GDP_{t-1,i}$, lagged per capita GDP (in logs), to control for the "catch-up" effect; $(I/GDP)_{ti}$, fixed investment as a share of GDP, a measure of physical capital; Oil_i, oil-producing country dummy, to account for the effect of surging energy exports; $Corrup_i$, corruption index, a proxy for the quality of political institutions; and a CIS regional dummy.

The CIS dummy serves as a proxy for the distance from the European Union and stands in for other time-invariant, structural factors that differ between the Central and East European and CIS regions, such as labor market regulation. We control for common shocks reflecting global and regional economic conditions by including fixed year effects, λ_t. The error term is composed of two parts: μ_i, the unobserved individual effect, and v_{ti}, the idiosyncratic component.

Unlike the standard growth literature, our regression does not include any measures of human capital since all postcommunist countries enjoy relatively high levels of education, which do not vary considerably across countries and over the sample period and hence cannot explain the observed variation in growth. Nor does the regression contain specific labor market indicators since the data, even when it is available, are plagued with severe measurement errors.

Moreover, as it is now recognized in the econometric literature, simply increasing the number of right-hand-side variables in growth regressions is unlikely to take away the omitted-variables bias problem. Therefore, we do not here strive for the maximum generality and completeness of explanatory variables but rather focus on a few principal variables and robust ways of evaluating their impact.

The error-component specification is well suited for this purpose. It allows us to exploit variation both across countries and over time, as well as to reduce the omitted-variables bias. For instance, any differences in human capital across countries are captured by country-specific effects.

B. Data

Our sample consists of observations for 20 transition economies—11 CIS countries, 3 Baltic states, and 6 Central and Southeastern European countries—from 1999 to 2004. The GDP per capita (PPP) data come from the World Bank's 2005 WDI report. The annual GDP growth rate and government expenditure data are drawn from the 2004 EBRD Transition Report. Investment figures are from the UNECE databases. Finally, we use the corruption perception index scores constructed by Transparency International. Higher scores correspond to lower levels of perceived corruption. The indicator displays little variation over time, and therefore the period averages, rather than individual year estimates, enter the regression. All the data are expressed in terms of ratios, obviating the need to control for population and country sizes.

C. Estimation Procedure

There are two major possible sources of estimation bias: first, the likely correlation of lagged GDP per capita, investment, and government spending with the unobserved individual effects, and second, the potential endogeneity of investment and government spending—that is, investment and government spending may be correlated with the contemporaneous idiosyncratic error term.

We first estimate the model with the fixed-effects procedure, commonly used in panel data regressions. This technique is robust to the presence of correlation between regressors and unobserved individual effects, as it removes the country-specific effects by subtracting time averages before applying the ordinary least squares procedure. However, the fixed-effects technique does not take care of the second

problem. Another shortcoming of the method is that it cannot consistently estimate coefficients on time-invariant regressors such as *Oil, CIS,* and *Corruption.* Nevertheless, it provides a useful benchmark for the time-varying regressors.

An alternative strategy that addresses both estimation concerns is to difference the regression and then estimate jointly the transformed equation and the equation in levels with the two-step efficient general method of moments (GMM) procedure proposed by Arellano and Bover (1995). In this procedure, investment and government spending are instrumented with their second lags. The GMM estimator is consistent, asymptotically normal, and invariant to the choice of transformation.

D. Results

Overall, the regression results support our main predictions: Government spending and energy exports are the key to explaining the differences in growth in the transition countries, economic regulation and corruption seem to have moderate impact, and the laggard effect and investment seem to play a negligible role.

Table 1 summarizes the findings. The first column reports the fixed-effects method estimates. The second column presents the GMM estimates. We carried out a series of sensitivity checks using different right-hand-side variables. One of them incorporates potential spillovers from neighboring countries. We rerun the GMM regression by adding the weighted average of the log per capita GDP for a country's neighbors and big trading partners. The results are shown in column 3.

Throughout all the regressions, the coefficient on government expenditures is negative and strongly significant. It is significant at the 1 percent level in the fixed-effects and GMM regressions, shown in columns 1 and 2, and is significant at the 5 percent level in the regression with spillovers. Not only does it have the predicted sign, it has also the largest effect, in terms of magnitude, among all the variables entering the regression. The estimate implies that a 1-percent-of-GDP reduction in government spending, everything else equal, gives rise to about a 0.14 percent increase in the GDP growth rate.

As anticipated, energy exports boost growth. The coefficient on *Oil* is positive and significant at the 5 percent level. The distance from the European Union seems also to have a positive effect on growth, as suggested by a positive coefficient on *CIS.*

The coefficient on corruption, which proxies for the quality of institutions, is positive and marginally significant, indicating that low levels of corruption are associated with higher growth. This finding is consistent with the preceding finding about a negative correlation between government spending and growth since high government spending, as a rule, goes hand in hand with high corruption.

The laggard effect does not appear to be a major factor accounting for the big gap in growth rates. The coefficient on lagged GDP per capita has a negative sign, but it is not statistically significant.

Nor do these regressions reveal a significant relationship between investment and growth, though the estimated coefficient is positive. One possible explanation is that most postcommunist countries started transition with high initial levels of physical capital. Therefore, the marginal effect of additional investment is small. Another explanation is that it takes time for improvements in investment to translate into growth, and the time series is simply too short to detect any stable relationship between the two variables. However, some previous studies (Barro and Sala-i-Martin 2004) using longer series for a larger country sample also obtained insignificant estimates.

The effect of spillovers from neighboring economies turns out to be statistically insignificant. The weights are constructed based on geographic distances between countries. Though not perfect, this weighting system accounts reasonably well for economic linkages between countries, such as trade and the costs of transporting goods.

Most of the CIS countries, especially the oil exporting states, enjoy considerably lower internal energy prices than the Central and East European economies. The sizable energy price differentials across the two regions are therefore deemed by some analysts to be the leading explanation of the observed growth differences. To test this hypothesis, we rerun the same regressions with an additional explanatory variable—internal gasoline prices in each of the sample countries. Gasoline prices serve as a proxy for domestic energy prices. Although we do not report here the estimates for those regressions because of some data problems, the preliminary estimates nevertheless suggest that our main results are robust to the inclusion of energy prices. It affects neither the sign nor the significance of the coefficients. Moreover, the magnitudes of the coefficients on the major explanatory variables such as government expenditure, oil, corruption, and lagged GDP do not change or change only negligibly. Thus the lower internal energy prices do not seem to be a major source of vigorous growth in the CIS region.

A substantial literature on economic growth and the size of the state exists but does not agree. La Porta et al. (1999) showed with empirical material from 200 countries that bigger government is usually better, but such a regression does not say anything about causality. The Scandinavian countries had very small and efficient states in the 1930s, which were therefore allowed to grow, and corruption takes a long time both to develop and to dwindle (Treisman 2000). The postcommunist region offers a particular starting position of states that are both large and highly corrupt. Our regression suggests that with those initial conditions a sharp reduction in public expenditures is the best way of boosting economic growth. Naturally, it would be desirable to reduce corruption swiftly, but knowledge and capability of how to do so are very limited. Yet we do know that corruption usually falls with rising income.

It should be emphasized that the postcommunist state was no average state but extreme in most regards. First of all, by any measure it was much larger than the state in other countries at that level of development, whether measured in terms of taxation, public distribution, degree of regulation, or share

property owned by the state. As a natural consequence, it was less subject to checks and balances than most other states, and it was severely overstretched. Second, the postcommunist state was pretty parasitical. It did the wrong things, hindering economic development rather than promoting it, while antisocially redistributing from the poor to the rent-seeking elites (Milanovich 1998, Hellman 1998). Third, the postcommunist state was ineffective and inefficient because of a high degree of corruption in comparison with other states (Transparency International 2005). Thus, regardless of what one may think of the role of the state in general, in postcommunist countries it would be rather surprising if economic growth would not be boosted by a reduction of the size of the state, however measured. Some of the transition indicators measure the role of the state in regulation and ownership; we suggest adding the redistributive function of the state.

IV. CONCLUSIONS

The main conclusion arising from our analysis of economic growth in the postcommunist region since 1999 is that the sharp rise in the growth rate in CIS countries can mainly be explained by a drastic reduction in public spending and budget deficits in these countries. A second explanation, unsurprisingly, is that the commodity boom on world markets boosted that growth as well.

Contrary to common views, the impact of the laggard effect is not conclusive from our regression. The coefficient on lagged per capita GDP is negative but statistically insignificant. Growth in the CIS countries is tempered by higher corruption than in Central Europe, which is also born out by the regressions, though it is only marginally significant. Greater distance from Brussels also seems to have a positive effect on growth.

In effect, the CIS countries have adopted the highly successful East Asian growth model lock, stock, and barrel, while the less dynamic Central European countries have adopted the EU model, which has not been conducive to high economic growth, even if some countries—mainly Ireland, the three Baltic countries, and Slovakia—have managed to go against the current. That one model is generally superior does not mean that all its parts are superior. Depressingly, the CIS countries that have generated impressive growth are largely authoritarian.

International institutions designed to promote growth in the postcommunist world, notably the World Bank and the EBRD, need to incorporate these insights in their advice. For years the EBRD has shown how Central Europe has scaled its transition indicators, but it fails to explain why Central Europe has only achieved a growth rate of 3 to 4 percent in recent years. By contrast, Janos Kornai (1992) noticed that the Central European states had developed a premature West European social welfare system. This has turned out to be a social welfare trap with West European tax rates, social transfers, and labor market

regulations. These countries' EU membership has reinforced these negative features and reduced their inclination to reform, while they ignore the Maastricht restriction, which is supposed to limit budget deficits to 3 percent of GDP, instead maintaining steady budget deficits on the order of 6 percent of GDP.

The obvious conclusion is that high public expenditures and taxes are bad for economic growth, at least in the postcommunist countries, which were saddled with excessively large governments of poor quality. Unsurprisingly, liberal economic policy or greater economic freedom does promote economic growth. Consequently, international financial institutions should advocate cuts in public expenditures in postcommunist countries with poor growth.

REFERENCES

Arellano, Manuel, and Olympia Bover. 1995. Another Look at the Instrumental Variables Estimation of Error-Components Models. *Journal of Econometrics* 68**:** 30–51.

Åslund, Anders. 2002. *Building Capitalism: The Transformation of the Former Soviet Bloc*. New York: Cambridge University Press.

Åslund, Anders, Peter Boone, and Simon Johnson. 1996. How to Stabilize: Lessons from Post-Communist Countries. *Brookings Papers on Economic Activity* 26, 1: 217–313.

Åslund, Anders, Peter Boone, and Simon Johnson. 2001. Escaping the Under-Reform Trap. *International Monetary Fund Staff Paper*, Special Issue.

Åslund, Anders, and Andrew Warner. 2004. The EU Enlargement: Consequences for the CIS Countries. In *Beyond Transition: Development Perspectives and Dilemmas*, ed. Marek Dabrowski, Ben Slay and Jaroslaw Neneman. Aldershot: Ashgate.

Barro, Robert J., and Xavier Sala-i-Martin. 2004. *Economic Growth*, 2d ed. Cambridge, MA: MIT Press.

BEEPS (EBRD–World Bank Business Environment and Enterprise Performance Survey). 2002. The BEEPS II Interactive Dataset: Enterprise Survey in Transition. Available at http://info.worldbank.org/governance/beeps2002/.

Berg, Andrew. 1994. Supply and Demand Factors in the Output Decline in East and Central Europe. *Empirica* 21**,** 1: 3–36.

Berg, Andrew, Eduardo Borensztein, Ratna Sahay, and Jeronim Zettelmeyer. 1999. The Evolution of Output in Transition Economies: Explaining the Differences. Working paper 73. Washington: International Monetary Fund.

Bruno, Michael, and William Easterly. 1998. Inflation Crises and Long-Run Growth. *Journal of Monetary Economics* 41: 3–26.

Christoffersen, Peter, and Peter Doyle. 2000. From Inflation to Growth: Eight Years of Transition. *Economics of Transition* 8, 2: 421–51.

De Melo, Martha, Cevdet Denizer, and Alan Gelb. 1997. From Plan to Market: Patterns of Transition. In *Macroeconomic Stabilization in Transition Economies*, ed. Mario I. Blejer and Marko Skreb. New York: Cambridge University Press.

De Melo, Martha, Cevdet Denizer, Alan Gelb, and Stoyan Tenev. 1997. *Circumstance and Choice: The Role of Initial Conditions and Policies in Transition Economies*. World Bank Policy Research Working Paper no. 1866. Washington: World Bank.

De Melo, Martha, and Alan Gelb. 1996. A Comparative Analysis of Twenty-Eight Transition Economies in Europe and Asia. *Post-Soviet Geography and Economics* 37, 5: 265–85.

European Bank for Reconstruction and Development (EBRD). 1999. *Transition Report 1999*. London.

European Bank for Reconstruction and Development (EBRD). 2001. *Transition Report 2001*. London.

European Bank for Reconstruction and Development (EBRD). 2002. *Transition Report 2002*. London..

European Bank for Reconstruction and Development (EBRD). 2003. *Transition Report 2003*. London..

European Bank for Reconstruction and Development (EBRD). 2004. *Transition Report 2004*. London.

European Bank for Reconstruction and Development (EBRD). 2005. *Transition Report 2005*. London.

Fischer, Stanley, and Ratna Sahay. 2000. The Transition Economies after Ten Years. International Monetary Fund Working Paper no. 30. Washington.

Fischer, Stanley, Ratna Sahay, and Carlos A. Végh. 1996a. Stabilization and Growth in Transition Economies: The Early Experience. *Journal of Economic Perspectives* 10, 2: 45–66.

Fischer, Stanley, Ratna Sahay, and Carlos A. Végh. 1996b. Economies in Transition: The Beginnings of Growth. *American Economic Review* 86, 2: 229–33.

Fischer, Stanley, Ratna Sahay, and Carlos A. Végh. 1997. From Transition to Market: Evidence and Growth Prospects. In *Lessons from the Economic Transition: Central and Eastern Europe in the 1990s*, ed. Salvatore Zecchini. Norwell, MA: Kluwer.

Gaidar, Yegor T. 2005. *Dolgoe vremya* (The Long Term). Moscow: Delo.

Havrylyshyn, Oleh, and Thomas Wolf. 1999. Growth in Transition Countries, 1991–1998: The Main Lessons. Paper presented at the conference A Decade of Transition, International Monetary Fund, Washington, February 1–3.

Hellman, Joel S. 1998. Winners Take All: The Politics of Partial Reform in Postcommunist Transitions. *World Politics* 50: 203–34.

Johnson, Simon, Daniel Kaufmann, and Andrei Shleifer. 1997. The Unofficial Economy in Transition. *Brookings Papers in Economic Activity*, 27**,** 2: 159–239.

Kornai, Janos. 1992. The Postsocialist Transition and the State: Reflections in Light of Hungarian Fiscal Problems. *American Economic Review* 82, 2: 1–21.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. 1999. The Quality of Government. *Journal of Law, Economics and Organization* 15, 1: 222–79.

Milanovich, Branco. 1998. Income, Inequality, and Poverty during the Transition from Planned to a Market Economy. Washington: World Bank.

Orlowski, Lucjan. 1993. Indirect Transfers in Trade among Former Soviet Union Republics: Sources, Patterns and Policy Responses in the Post-Soviet Period. *Europe-Asia Studies* 45**,** 6 (September): 1001–24.

Orlowski, Lucjan. 1995. Direct Transfers between the Former Soviet Union Central Budget and the Republics: Past Evidence and Current Implications. *Economic Planning* 28**,** 1: 59–73.

Popov, Vladimir. 2000. Shock Therapy versus Gradualism: The End of the Debate. *Comparative Economic Studies* 42**,** 1 (Spring): 1–57.

Rosati, Dariusz K. 1995. The Impact of the Soviet Trade Shock on Central and East European Economies. In *Output Decline in Eastern Europe: Unavoidable, External Influence or Homemade?* ed. Robert Holzmann, G. Winckler, and János Gács. Boston: Kluwer.

Sachs, Jeffrey D. 1996. The Transition at Mid Decade. *American Economic Association Papers and Proceedings* 86, 2: 128–33.

Selowsky, Marcelo, and Ricardo Martin. 1996. Policy Performance and Output Growth in the Transition Economies. *American Economic Review* 87**,** 2: 349–53.

Tarr, David G. 1994. The Terms-of-Trade Effects of Moving to World Prices on Countries of the Former Soviet Union. *Journal of Comparative Economics* 18**,** 1 (February): 1–24.

Transparency International. 2005. The Corruption Perceptions Index. Available at www.transparency.org/policy_research/surveys_indices/cpi/2005.

Treisman, Daniel S. 2000. The Causes of Corruption: A Cross-National Study. *Journal of Public Economics* 76: 399–457.

UNECE (United Nations Economic Commission for Europe). 2000. *Economic Survey of Europe*, no. 1. New York: United Nations.

World Bank. 2005. *World Development Indicators*. CD-ROM. Washington.

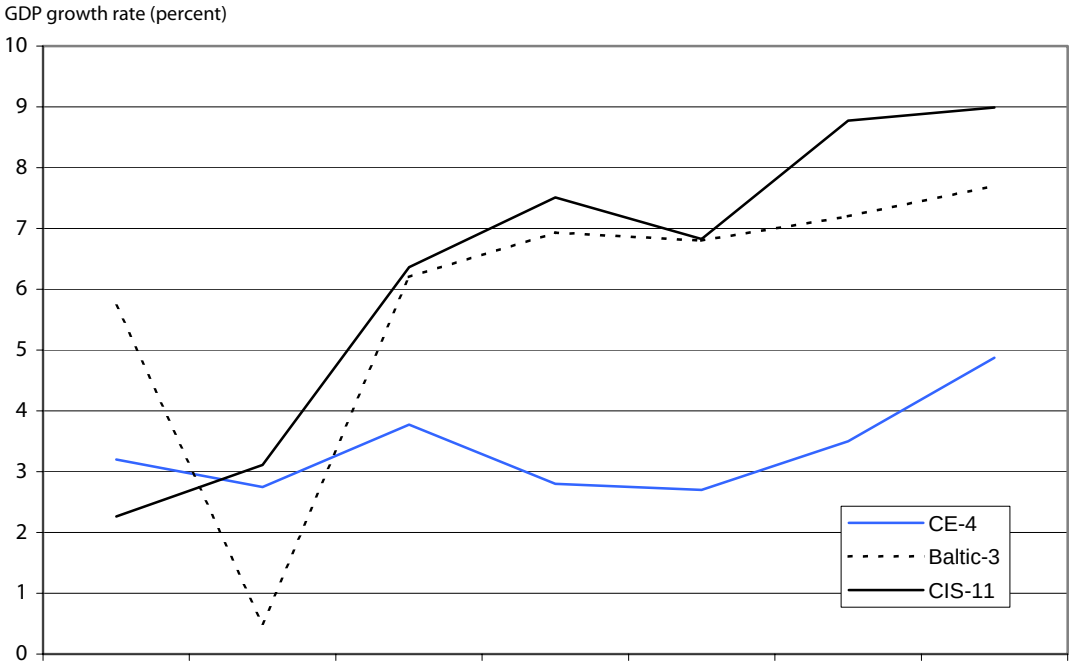
Table 1 Regression for GDP growth rate in transition countries

Explanatory variable	Fixed effects	GMM	
		No spillovers	Spillovers
	(1)	(2)	(3)
Constant	—	0.089 (0.065)	0.084 (0.133)
G/GDP	–0.229*** (0.087)	–0.136*** (0.044)	–0.138** (0.058)
Lagged GDP per capita	–0.165 (0.112)	–0.009 (0.017)	–0.007 (0.017)
I/GDP	0.075 (0.068)	0.047 (0.057)	0.042 (0.057)
Oil	—	0.024** (0.012)	0.025** (0.012)
Corruption	—	0.008* (0.005)	0.008* (0.005)
CIS	—	0.015 (0.015)	0.015 (0.015)
Year 2000	–0.010 (0.006)	–0.004 (0.004)	–0.004 (0.004)
Year 2001	0.000 (0.005)	0.002 (0.004)	0.002 (0.003)
Year 2002	0.003 (0.005)	0.001 (0.005)	0.001 (0.004)
Year 2003	0.019** (0.006)	0.014** (0.004)	0.014** (0.004)
Year 2004	0.029** (0.008)	0.019** (0.005)	0.019** (0.005)
Spillovers			0.001 (0.034)
$\overline{R}^2$	0.69	0.51	0.51

*** denotes significance at 1 percent, ** at 5 percent, and * at the 10 percent levels.

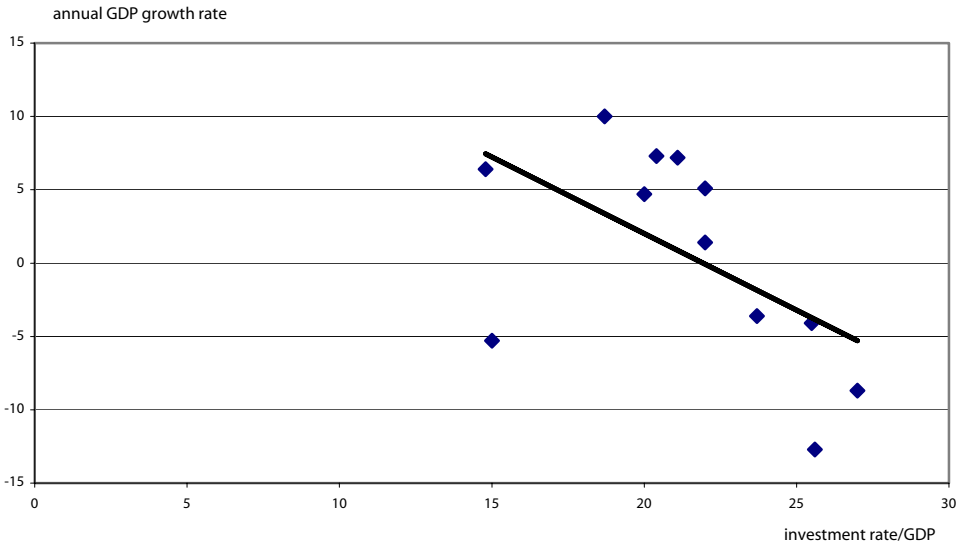
Notes: Robust standard errors are shown in parentheses. Sample size is 120.

Figure 1 GDP growth rates in CE-4, Baltic-3, CIS-11, 1998–2004



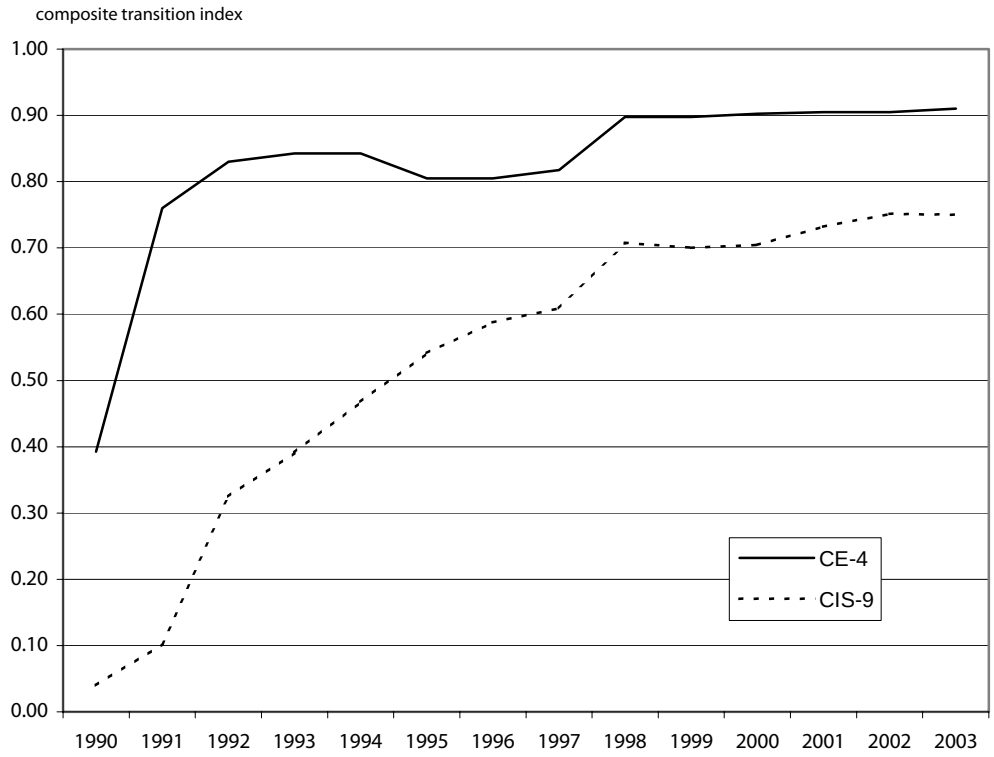
Source: World Bank, World Development Indicators 2005, UNECE online statistics.

Figure 2 Investment rate as a proportion of GDP vs. GDP growth rate in Russia, 1993–2004 (percent)



Source: UNECE Online Statistics.

Figure 3 Composite transition index for CE-4 and CIS-9, 1990–2003



Sources: De Melo et al. (1997); Havrylyshyn and Wolf (1999), p. 34; Åslund (2002); EBRD 2001, pp. 12, 14; EBRD 2002, p. 20; EBRD 2003, 16.

Figure 4 Public expenditure and growth in CIS-11, CE-4, Baltic-3, 1999–2004

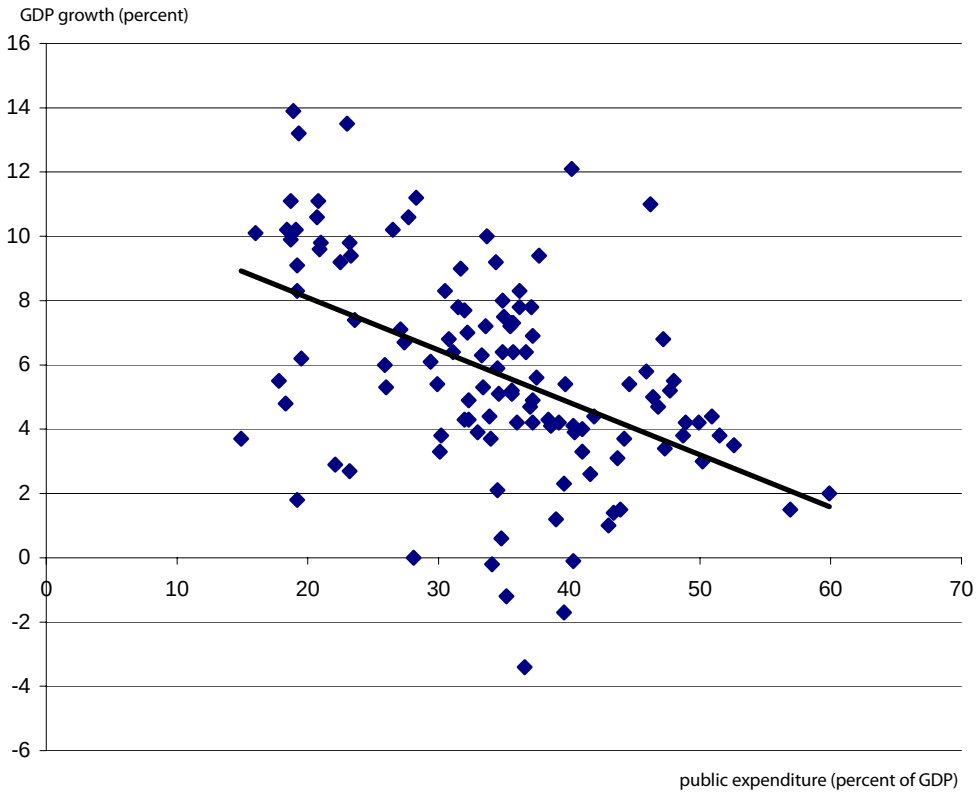
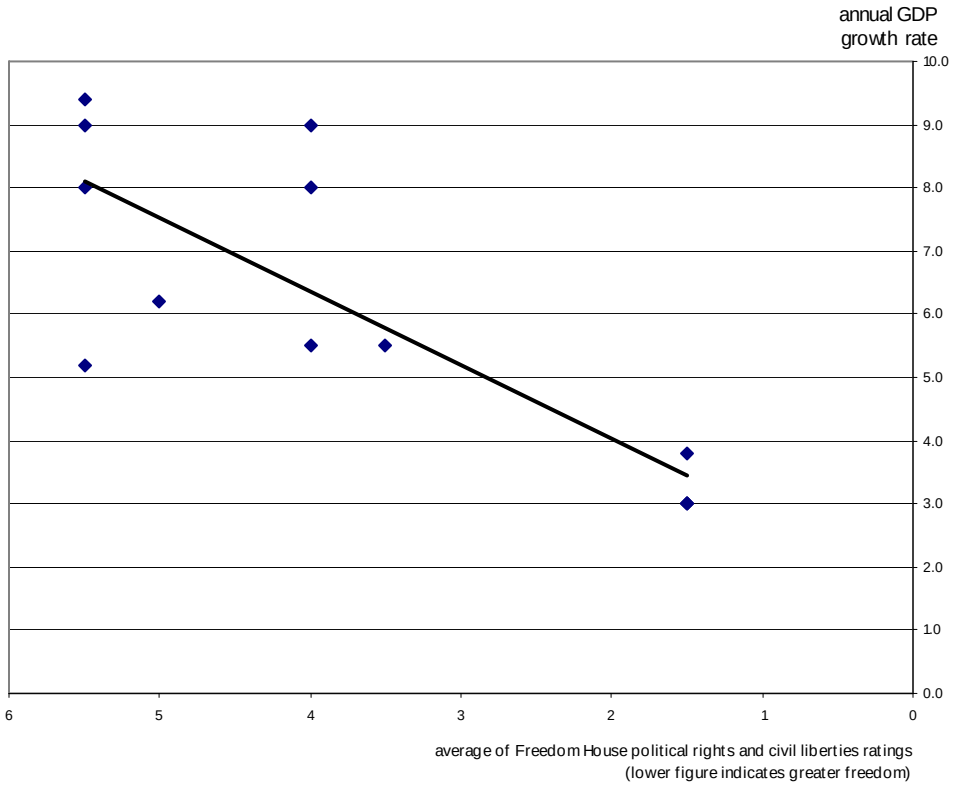


Figure 5 Democracy rating vs. GDP growth in CE-4 and CIS-9, 2003



Sources: Freedom House, 2004; table 1.