

Economic Growth in the Transition Economies – Sustainability and Vulnerability

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Abstract: This paper focuses on the growth prospects for the transition economies, in particular the likelihood of the countries achieving high and stable growth in the medium term. For this purpose we consider the growth experience of the transition countries during the second half of the 1990s. After the initial production fall, growth has been disappointingly low and at the same time highly fluctuating in most countries. Using panel data for the period 1995-98, we show that an important factor associated with higher growth is capital inflows. Countries with large current account deficits tend to grow faster than those with smaller deficits. Still, in spite of sizeable external deficits, investment spending has been relatively modest in most transition economies. The implication is that medium-term growth is likely to remain subdued while at the same time vulnerable to financing setbacks. The transition countries must take steps to increase domestic saving if they are to achieve strong and stable growth in the medium term.

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1. Introduction

When the formerly planned economies set out to reform their economies, expectations were high. One of the most important goals for the reform policy was to improve the material well-being of the population. In this respect the transition process has generally been disappointing. When the former Russian president Boris Yeltsin stepped down on 31. December 1999 he excused that he had dashed the hopes of transforming Russia into a rich country.¹

Market-oriented reforms were initiated in the beginning of the 1990s. The result was a dramatic output collapse in almost all transition countries. This fall, however, may be characterised as a one-time adjustment to fundamental economic changes. In many ways the subsequent growth experience in the second half of the 1990s is more worrying. This period could have been expected to be a “catch-up phase”, but growth has in general been quite low and, in addition, highly unstable. Growth substantially over the level in the advanced countries has been realised in only a small number of “success countries”, including of late Poland, Hungary and the Baltic States.

This paper focuses on the growth prospects for the transition countries, a topic made more germane in the light of the recent poor growth performance. A number of publications have considered the issue from different viewpoints. Sachs & Warner (1996) examine examples of countries growing rapidly in order to devise growth-promoting policies. The number of years needed to reach income levels comparable those in the EU could be anywhere from 10 to 200 years depending on the economic policies pursued. EBRD (1997) chapter 6 discusses the short-term prospects based on macroeconomic policy developments and the long-term prospects based on investment and education trends. Fischer et al. (1998) ask how far Eastern Europe is from the EU (in income terms) and find that the most advanced transition economies might need 30 years to catch up.² EBRD (1999) chapter 3 argues that growth rates of 4 to 7 per cent per year are realistic for the transition economies in the medium term.

In contrast to most of the references above, we take as our explicit starting point developments during the second half of the 1990s. Investment in the transition economies has on average fallen to around 20 per cent of GDP during the second half of the 1990s. This level is hardly sufficient to *sustain* growth rates above 3-4 per cent per year. Furthermore, investment is to a large extent financed externally as evidenced by large current account deficits in most transition economies. The large deficits might not endure. Lower capital imports could weaken growth in the medium term. The current account deficits also imply significant *vulnerability*. Sudden stops in the financing of external deficits could have disturbing effects on the real economy.

Using panel data for the period 1995-98, we show that an important factor associated with higher growth is the current account balance (net capital inflows), even when we control for various measures of reform intensity. Countries with large current account deficits tend to grow faster than those with moderate deficits. Indeed, the recent relatively favourable growth performance in the “success countries” is in most cases associated with very large external deficits.

¹ Yeltsin said (cited from Financial Times (2000)): “I ask you to forgive me for not fulfilling some hopes of those people who believed that we would be able to jump from the grey, stagnating (...) past into a bright, rich (...) future in one go.”

² Similar results are derived in Fischer et al. (1997).

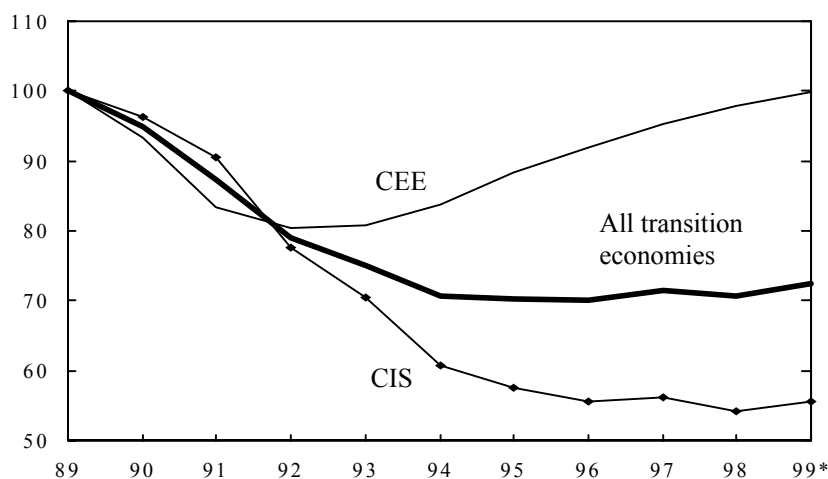
One implication of the analytical and empirical results in this paper is that the growth picture from the second half of the 1990s could repeat itself for a sustained period of time. Average growth may well remain at a rather low level and, at the same time, fluctuate considerably. If the transition countries are to avoid this outcome, they must implement reforms to increase public and government saving.

The paper is structured in the following way: Section 2 reviews the growth experience of the transition economies with special emphasis on the second half of the 1990s. Section 3 discusses possible explanations for the disappointing growth pattern, drawing on the recent literature on growth estimations. Section 4 highlights the transition economies' low capital accumulation and its implication for sustainable long-term growth. Section 5 discusses the large capital imports and the vulnerability implied. Section 6 is the empirical centrepiece where panel regressions for the period 1995-98 are used to identify the correlation between current account deficits and growth. Section 7 draws together the points raised in sections 4-6 and concludes by discussing some policy implications.

2. The growth experience during the 1990s

Figure 1 shows the GDP dynamics in CEE (Central and Eastern Europe excluding Bosnia and Yugoslavia but including the Baltics), the CIS countries as well as the transition economies as a whole. The index is calculated by accumulating the GDP growth rates.

Figure 1. GDP developments in regions of transition economies. 1989=100



Source: Own calculations based on EBRD (2000) p. 4

Figure 1 illustrates the large production fall observed in the transition economies. Initially, the fall was strongest in Central and Eastern Europe as this region started reforms earlier than the CIS countries. Modest growth in the CEE countries emerged in 1993. In 1999, GDP was back to the level 10 years earlier. The production fall was much more pronounced in the CIS countries. The recession was deeper and lasted longer. Not until 1995 was some kind of plateau reached. At this time the accumulated production loss amounted to more than 40 per

cent. The production path takes the shape of a U for the CCE countries while it has taken an L-shape for the CIS countries.

The severe production fall in all transition economies has been ascribed to a number of factors, cf. Blanchard (1997), Mundell (1997), EBRD (1999) chapter 3, and Lavigne (1999) p. 150-161. Part – but not all – of the fall must be attributed to statistical misreporting, e.g. overstated production during the planning period and understated production now (to avoid tax payments). Lower investment and consumption demand and tight credit have played a role in some instances, but the most important explanation is related to “disorganisation” or “dislocation” during the transition. Price and trade liberalisation changed relative prices dramatically and necessitated a transfer of resources from sectors in decline to the new private and dynamic sectors. Search costs and information problems rendered the transfer of resources difficult and slow.

The reasons behind the fall and whether steps could have been taken to dampen it, will continue to be a heated topic of discussion. However, the fall is associated with a unique historical event, namely the shift from a planned to a market economy and the break-up of nations. The background for the production collapse is unlikely to repeat itself anytime soon.

Developments after stabilisation, i.e. from approximately 1995, are much more interesting if one wants to learn from experience. At this time the most pronounced transformation (liberalisation) had been effected in almost all transition countries. The political and macroeconomic frameworks were settling down and some kind of market economy was taking root.

Table 1 presents detailed growth figures for the transition economies 1995-99. The data quality improved up to this period as collection and calculation methods were enhanced. Note that the existence of an informal economy does not distort growth rates as long as the proportion between the formal and informal sectors remains constant. A number of interesting observations can be derived from the table.

First, the average growth rate in the CEE countries falls during the period, from 5.5 per cent in 1995 to an estimated 2.0 per cent in 1999. The growth rates for the CIS countries are negative except in 1997 and 1999, mainly reflecting developments in Russia. Average growth for the CEE countries during the period was 3.6 per cent, for the CIS countries -1.7 per cent and for all transition economies 0.5 per cent. It follows from the last row that the average growth rate in the EU was 2.3 per cent during the period 1995-99. The CEE countries recorded growth slightly above the EU, while the CIS countries had growth rates that were significantly below. In any case there was no obvious sign that the transition economies were catching up with the EU during this period.

Second, growth has fluctuated considerably during the period 1995-99. The standard deviation ranges from 0.4 in Slovenia to 11.2 in Turkmenistan. A *weighted* average of the standard deviations comes to 2.9 for the CEE countries, 4.1 for the CIS countries and 3.6 for the transition economies as a whole. The corresponding number for the EU countries is 0.8. Highly volatile economic growth is also found for other emerging markets, *inter alia* Latin America.³

³ See for example Gavin & Hausmann (1998) who also show that unstable economic policies can explain a significant part of the volatility in Latin America.

Table 1. *Economic growth, GDP and population in the transition economies*

| | Economic growth, per cent per year | | | | | | | GDP per capita ^{a)} | Total GDP ^{b)} | Pop. ^{c)} |
|----------------------------------------|------------------------------------|-------|-------|------|-------|---------|----------|------------------------------|-------------------------|--------------------|
| | 1995 | 1996 | 1997 | 1998 | 1999* | Average | St. dev. | | | |
| Albania | 13.3 | 9.1 | -7.0 | 8.0 | 8.0 | 6.3 | 7.7 | 2860 | 9.2 | 3.3 |
| Bulgaria | 2.9 | -10.1 | -7.0 | 3.5 | 2.5 | -1.6 | 6.4 | 4776 | 39.6 | 8.3 |
| Croatia | 6.8 | 6.0 | 6.5 | 2.5 | -0.3 | 4.3 | 3.1 | 6839 | 30.8 | 4.5 |
| Czech Republic | 5.9 | 4.8 | -1.0 | -2.2 | -0.2 | 1.5 | 3.6 | 12479 | 128.5 | 10.3 |
| Estonia | 4.3 | 3.9 | 10.6 | 4.7 | -1.4 | 4.4 | 4.3 | 7607 | 11.4 | 1.4 |
| Hungary | 1.5 | 1.3 | 4.6 | 4.9 | 4.5 | 3.4 | 1.8 | 10202 | 103.0 | 10.1 |
| Latvia | -0.8 | 3.3 | 8.6 | 3.9 | 0.1 | 3.0 | 3.7 | 5557 | 13.3 | 2.4 |
| Lithuania | 3.3 | 4.7 | 7.3 | 5.1 | -4.1 | 3.3 | 4.4 | 6437 | 23.8 | 3.7 |
| Macedonia | -1.2 | 0.8 | 1.5 | 2.9 | 2.0 | 1.2 | 1.5 | 4432 | 8.9 | 1.9 |
| Poland | 7.0 | 6.1 | 6.9 | 4.8 | 4.1 | 5.8 | 1.3 | 7658 | 296.4 | 38.7 |
| Romania | 7.1 | 4.1 | -6.6 | -5.4 | -3.2 | -0.8 | 6.1 | 5646 | 127.0 | 22.4 |
| Slovak Rep. | 6.9 | 6.6 | 6.1 | 4.4 | 1.9 | 5.2 | 2.1 | 9817 | 53.0 | 5.4 |
| Slovenia | 4.1 | 3.5 | 4.6 | 4.4 | 3.8 | 4.1 | 0.4 | 14305 | 28.6 | 2.0 |
| CEE^{d)} | 5.5 | 4.2 | 3.6 | 2.7 | 2.0 | 3.6 | 2.9 | 8415 | .. | .. |
| Armenia | 6.9 | 5.8 | 3.3 | 7.2 | 3.3 | 5.3 | 1.9 | 2162 | 8.0 | 3.8 |
| Azerbaijan | -11.8 | 1.3 | 5.8 | 10.0 | 7.4 | 2.5 | 8.6 | 2211 | 16.8 | 8.1 |
| Belarus | -10.4 | 2.8 | 11.4 | 8.3 | 3.4 | 3.1 | 8.3 | 6131 | 62.5 | 10.1 |
| Georgia | 2.4 | 10.5 | 10.8 | 2.9 | 3.0 | 5.9 | 4.3 | 3330 | 18.0 | 5.4 |
| Kazakhstan | -8.2 | 0.5 | 1.7 | -1.9 | 1.7 | -1.2 | 4.2 | 4300 | 64.5 | 14.9 |
| Kyrgyzstan | -5.4 | 7.1 | 9.9 | 2.1 | 3.6 | 3.5 | 5.8 | 2336 | 11.2 | 4.7 |
| Moldova | -1.4 | -7.8 | 1.3 | -8.6 | -4.4 | -4.2 | 4.2 | 1927 | 8.3 | 4.3 |
| Russia | -4.1 | -3.5 | 0.8 | -4.6 | 3.2 | -1.6 | 3.5 | 6474 | 949.7 | 145.7 |
| Tajikistan | -12.5 | -4.4 | 1.7 | 5.3 | 3.7 | -1.2 | 7.3 | 884 | 5.4 | 6.2 |
| Turkmenistan | -7.2 | -6.7 | -11.3 | 5.0 | 16.0 | -0.8 | 11.2 | 3169 | 15.2 | 4.9 |
| Ukraine | -12.2 | -10.0 | -3.0 | -1.7 | -0.4 | -5.5 | 5.3 | 3248 | 162.7 | 49.7 |
| Uzbekistan | -0.9 | 1.6 | 2.5 | 4.4 | 4.1 | 2.3 | 2.1 | 2117 | 50.8 | 24.5 |
| CIS^{d)} | -5.2 | -3.5 | 0.9 | -3.5 | 2.8 | -1.7 | 4.1 | 5574 | .. | .. |
| All transition ec.^{d)} | -0.5 | -0.1 | 2.0 | -1.1 | 2.4 | 0.5 | 3.6 | 6679 | .. | .. |
| EU | 2.4 | 1.6 | 2.5 | 2.7 | 2.1 | 2.3 | 0.8 | 20031 | .. | .. |

* Estimate.

^{a)} Purchasing power parity adjusted, US dollars, 1998.

^{b)} Purchasing power parity adjusted, billion US dollars, 1998.

^{c)} Population in millions, 1998.

^{d)} Weighted average.

Sources: Economic growth from EBRD (2000) p. 4, for EU from EO (1999). GDP per capita from IMF (1999) p. 68. Population from EBRD (2000) p. 37-87.

We conclude that the transition economies found themselves in an unsatisfactory situation during the second half of the 1990s. The countries had lost a significant share of their GDP prior to the period and one could have expected a rapid catch-up phase. When growth resumed it was not only rather low, but it was also much more unstable than in the industrialised countries.

The disappointing picture is aggravated by the gap in per capita production between the transition economies and the EU. The purchasing power parity adjusted GDP in the CEE countries was a bit over 40 per cent of the EU average in 1998. In the CIS countries it was even lower, approximately 20 per cent. The second half of the 1990s saw only very slow catch-up for CEE countries, and divergence for the CIS countries.

3. Explaining the growth dynamics during the second half of the 1990s

The transition economies experienced rather low but highly fluctuating growth during the second half of the 1990s. It is plausible that – to some extent – the same factors are behind

low average growth as well as considerable volatility.⁴ We start by outlining a number of possible explanations and then turn to available empirical evidence in the form of growth regressions.

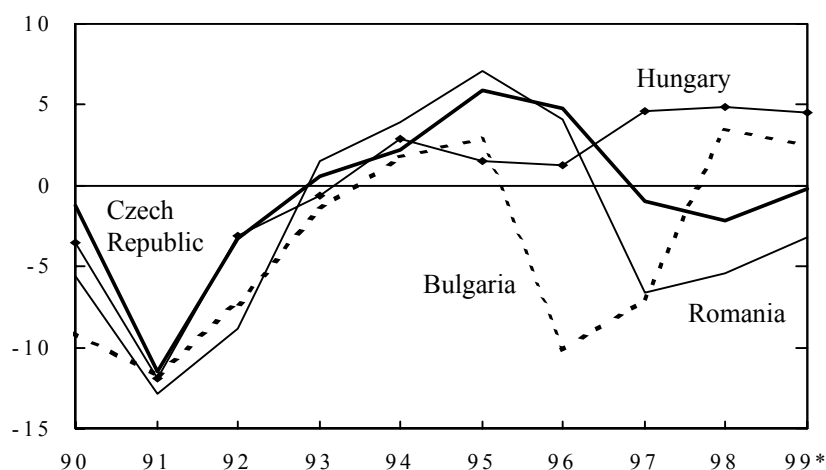
X The relocation from sectors in decline to new modern sectors took longer than initially anticipated. Reforms continued to release resources, which were only gradually absorbed because of search costs or rigidities.

X War, civil unrest or serious internal instability directly or indirectly influenced a number of countries. This includes entities of the former Yugoslavia and some Central Asian countries.

X A number of countries, especially in the CIS, had very high inflation rates in the mid-1990s. The inflation itself can have distorted price signals, reduced investment and led to low and patchy growth. Also, disinflationary policies can have influenced the growth rate negatively.

X Numerous countries faced severe financial crises during the period with lower or negative output growth as an immediate result. This includes Hungary in 1995-96, the Czech Republic in 1996-98, Bulgaria in 1996-97, Albania in 1997, Romania in 1997-99, the Slovak Republic in 1998-99, and Russia and the Ukraine in 1998. In many cases rapid capital outflows or financing difficulties led to crises. Figure 2 plots the growth performance for a number of these countries. Growth had resumed when the crisis hit causing a renewed downturn. The

Figure 2. Growth rates in selected CEE countries. Per cent per year



Source: EBRD (2000) p. 4

growth performance of these countries can most appropriately be described by a W.⁵

X As a heritage from the Soviet planning system the transition economies are very open and at the same time highly specialised. The countries are sensitive to terms-of-trade shocks. Also, most transition countries receive substantial foreign capital inflows and are therefore

⁴ Gavin & Hausmann (1998) go one step further in the case of Latin America and argue that volatile growth causes lower average growth.

⁵ Berg et al. (1999) label this phenomenon "double dip".

susceptible to changing interest rates and volatile capital flows. The second half of the 1990s saw major price changes for primary commodities and large swings in capital flows, partly as a result of the crises in Asia, Russia and Latin America.

Most empirical analyses seeking to determine the factors behind the growth experience of the transition economies are panel growth regressions. Fischer et al. (1996) pioneered this literature. The research generally considers the entire reform period and pools together panels with the longest possible data series (including the initial period with severe output falls). The regressions use various (proxy) variables in order to test for the importance of initial conditions, economic stabilisation, different economic reforms, as well as other factors. Havrylyshyn et al. (2000) give an overview of the results and supplements with other kinds of evidence.

Initial conditions. Fischer et al. (1996) find using annual data 1992-94 for 25 transition economies that the breakdown of trade and the emergence of new states are associated with lower growth. Berg et al. (1999) and Havrylyshyn et al. (1998) also show that initial trade patterns and regional positions are important for the growth dynamics. However, they find that the growth effect of initial conditions vanishes over time.

Economic stabilisation. Almost all studies find a strong link between nominal stability and growth. Fischer et al. (1996) find that disinflation policies using an exchange rate anchor are associated with higher growth. Later studies using the inflation rate on the right-hand side have confirmed the result, at least if the inflation is above a certain threshold level (see e.g. Christoffersen & Doyle (1998)).

Economic reforms. Reforms are shown in almost all studies to be conducive to higher growth although there are no uniform conclusions with respect to which reforms are favourable and when they start yielding positive results. Fischer et al. (1996) and Fischer & Sahay (2000) show that market reforms contribute to lower production falls and higher growth. Conversely, Havrylyshyn et al. (1998) and Christoffersen & Doyle (1998) find empirical support for a J-curve effect: Reforms are initially detrimental to growth but contribute positively after some time. (See also the discussions in de Melo et al. (1997) and Berg et al. (1999).)

Other factors. Christoffersen & Doyle (1998) find that growth in the transition economies has been positively correlated with export market growth. Havrylyshyn et al. (1998) show that large government spending (as a percentage of GDP) is correlated with lower growth.⁶ Not surprisingly, most studies find that war or serious political disturbances are associated with lower growth (Fischer & Sahay (2000)). Havrylyshyn et al. (1998) report the results from considering the two periods 1990-93 and 1994-97 separately. They find that the statistical fit improves and that the reform variables have stronger explanatory power in the second period.

In conclusion, the empirical literature lends some support to the suggestion that the rather low and unstable growth can be explained by common factors. Adverse initial conditions might have continued to afflict especially the CIS countries. Countries that did not succeed in maintaining nominal stability have been "punished" by lower growth. War and civil unrest deter growth. Shocks from abroad have easily been transmitted to the real economy. Whether governments' reform efforts (or lack thereof) can help to explain low and unstable growth in the short term is less clear.

⁶ The explanation might be that public expenditures draw away resources from the emerging private sector and reduce its expansion.

4. Investment and sustainable growth

We now turn to the prospect of the transition countries achieving high and stable growth during the next decade or so in light of the limited success during the second half of the 1990s. Economic growth can basically emerge from three different sources, notably increased use of labour, increased use of capital or a more efficient use of the resources employed (see Romer (1996) chapters 1-3). The latter source is total factor productivity (TFP) growth, “manna from heaven” growth, or – as it is sometimes (misleadingly) labelled – technological progress.

It is unlikely that the labour force is going to change substantially in the medium term. The population remains broadly constant in all transition economies and women’s participation rates are already high. The labour force in transition countries is generally considered well educated. Still, better schooling and skill-specific training could improve the “quality” of the labour force and increase this factor of growth in quality-adjusted terms. We are not going to pursue this point.

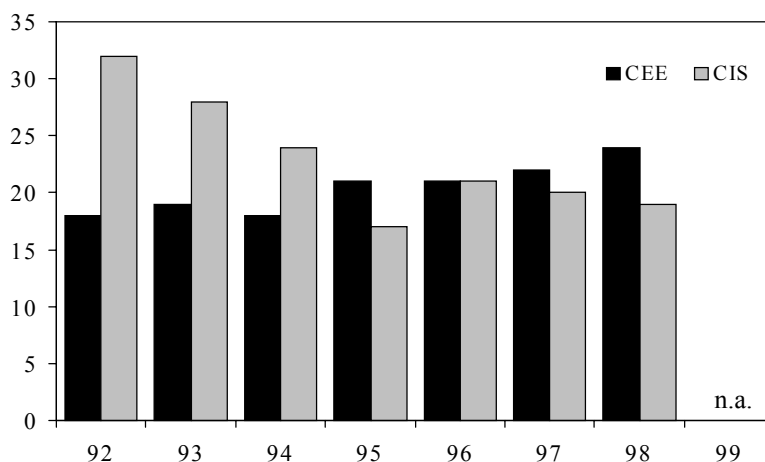
Growth of the capital stock can contribute to higher growth. The transition economies were left with an inflated capital stock when the planning system collapsed. Furthermore, the production in most transition economies is still below the level at the beginning of the 1990s. Nevertheless, in general there is little idle production capacity. Existing machines and equipment date back to the period before the transition, and are technologically or economically obsolete. (See EBRD (1995) chapter 4, Sutela (1998) and Stern (1998).) In most transition economies the capital stock is today a binding constraint for sustainable economic growth.

TFP growth is the third source of economic growth. This kind of “manna from heaven” can stem from a number of factors, including many influenced by the transition processes. Liberalisation of prices, trade and industry can lead to a more efficient use of existing resources. Economic policies, e.g. monetary stability and institution building, could have the same effect. TFP growth could also be the result of pure technological progress and better organisation of the production at the firm level. This type of TFP growth could, however, be embedded in increased use or replacement of other production factors, most notably capital.

In sum, the transition economies can expect only modest economic growth from a bigger or better labour supply. There is some potential for increased TFP growth related to reforms and institution building. Nevertheless, it seems reasonable to conclude that a larger capital stock would benefit growth, either directly or via embedded technological progress.⁷

Figure 3 shows gross the median fixed investment in per cent of GDP for the CEE and the CIS countries, respectively. The investment rates are calculated from official data and are in general likely to *overestimate* the actual level of investment. Firms and government bodies have incentives to overstate the investment (e.g. to save taxes or receive transfers), while the official GDP is likely to be underestimated.

⁷ Empirical research generally finds that investment is an important factor associated with long-term growth. Sala-i-Martin (1997) show that this result is quite robust to specification changes.

Figure 3. Investment, median for CEE and CIS. Per cent of GDP

Source: WB (1996-2000)

The investment rates hover around 20 per cent of GDP during the period. There seems to be a trend towards higher investment in the CEE while that is not the case in the CIS. The investment rate for the CEE countries has surpassed the rate for the CIS countries during the second half of the 1990s.

Investment rates of close to 20 per cent of GDP is a rather subdued level if the countries aspire to achieve growth rates significantly above the level in the EU, say 5 to 10 per cent per year. This can be illustrated by the following "back-of-the-envelope" calculation. A constant relationship between capital (K) and output (Y) is assumed.⁸ An often-used estimate for the capital-output ratio is 2.5.⁹ Gross investment (I) is assumed to be 20 per cent of GDP and (physical) depreciation (D) 5 per cent of the capital stock. Longer-term output growth $\Delta Y/Y$ can be found as:

$$\frac{\Delta Y}{Y} = \frac{Y}{K} \cdot \frac{\Delta K}{Y} = \frac{Y}{K} \cdot \left(\frac{I - D}{Y} \right) = \frac{Y}{K} \cdot \left(\frac{I}{Y} - \frac{D}{K} \cdot \frac{K}{Y} \right) = \frac{1}{2.5} \cdot (0.2 - 0.05 \cdot 2.5) = 0.03$$

The capital stock as a fraction of GDP increases by 7.5 per cent a year, thus making possible economic growth equal to approximately 3 per cent per year. Sensitivity analyses using different parameter assumptions, show medium to long-term growth to be below 5 per cent if investment remains at the current level.

There are significant differences between countries in their ability to use capital effectively. The recent experience of the Czech Republic is a case in point. In spite of large investment, Czech growth has remained subdued since the exchange rate crisis in 1997. This might be a result of the long gestation periods of some investment (e.g. infrastructure projects), but it also illustrates the fact that many other factors explain how effectively the capital stock is employed. Some of these factors are related to the economic and structural policies pursued.

⁸ This is the result if we assume that the economy is populated by price-taking and profit-maximising producers with Cobb-Douglas production functions and neutral TFP-growth.

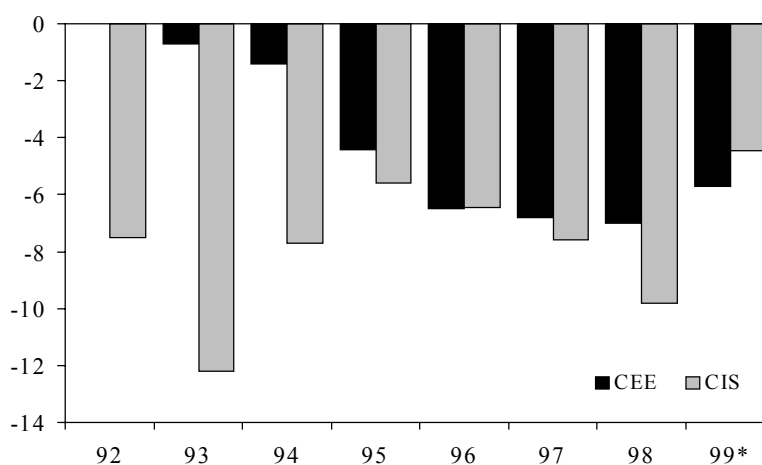
⁹ The chosen parameters are often used for rough growth calculations, see for example Fischer (1993). The parameters are not necessarily valid for all transition countries.

Nevertheless, a growing capital stock is an important precondition for sustained growth in the longer term. Turning to the “tiger economies” in East Asia, they all saw a rapid accumulation of capital, supported by investment rates of generally more than 30 per cent of GDP (Sachs & Warner (1996)).

5. Capital imports and vulnerability

Domestic investment must by definition be financed either by domestic saving or capital imports. The capital imports is convenient measured as the current account balance. Figure 4 shows the median of the current account balances as per cent of GDP for the CEE countries and CIS countries, respectively. The data is associated with very large uncertainty.

Figure 4. *The current account, median for CEE and CIS. Per cent of GDP*

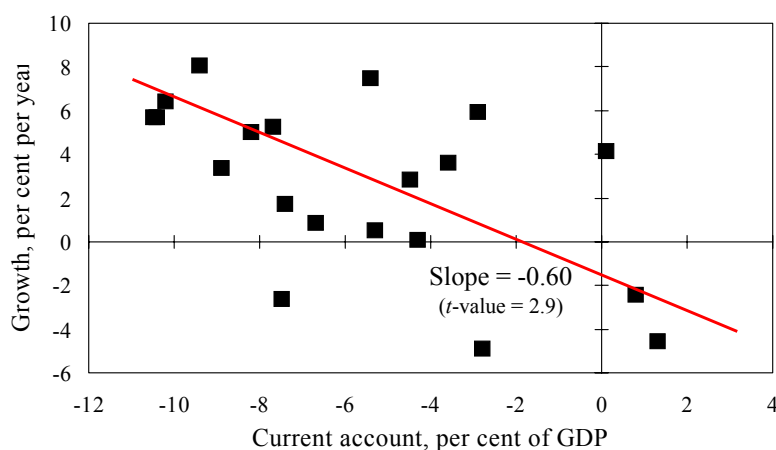


Source: EBRD (2000) p. 12

The median for the current account balance of the CEE countries has shown deficits in the range 5-7 per cent of GDP since 1996. The median deficit for the CIS countries has usually been larger, with the exception of the estimates for 1999. Almost all countries has experienced significant deficits. For some CIS countries the deficits are so large (above 15 per cent) that the numbers can only be explained by misreporting. Only one country, i.e. Russia, has had systematic current account surpluses during the period. The surpluses can partly be explained by the large exports of energy and metals, but could also to some extent be the result of deficiencies in Russian foreign trade statistics.

There has been significant covariation between the growth rates and the current account deficits during the second half of the 1990s. These variables are plotted against each other in figure 5. The first axis shows average economic growth during the period 1996-98, while the second axis shows the average current account balance during the same period. Countries with average current account deficits above 12 per cent during 1996-98 are omitted.

Figure 5. *The current account balance and economic growth, averages for 1996-98.*



Source: Own calculations on data from EBRD (2000) p. 4, 12

Figure 5 suggests that on average transition countries with the highest growth rates have had the highest current account deficits the period 1996-98. This relationship does not indicate the causality, however. High growth can lead to large import demand and corresponding current account deficits. Alternatively, large capital inflows (here measured as large current account deficits) can bring down real interest rates and fuel a domestic boom.

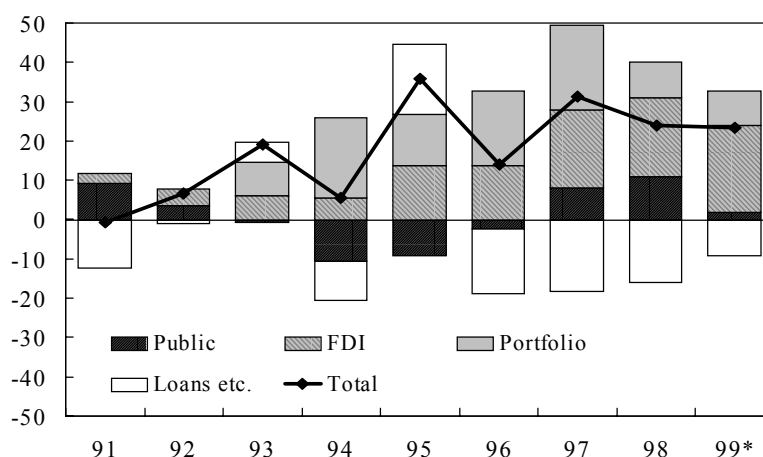
The association between growth and current account deficits can be the consequence of other factors influencing both variables. As an example one can imagine that comprehensive reforms lead to high growth and, *independently thereof*, large capital inflows. Likewise, stable macroeconomic policies can bring about growth and capital inflows. These issues are addressed by informal growth estimations in section 6. For the time being we take a given two variables are correlated: high growth is associated with capital inflows. The finding has a number of important implications:

X IMF (1999) chapter 1 argues that there is an increasing divergence between the “success countries” and the transition countries with weak performance. As a point of departure this is correct. Growth in, for example, Poland, Hungary and the Baltics has on average been positive and much higher than in, say, Russia and the Ukraine. This, however, masks the fact that the “success countries” have had large current account deficits (capital inflows), making their growth performance less remarkable. The success countries are (with the exception of Slovenia which has a balanced current account) situated in the upper-left corner in figure 5.

X Capital imports are often welfare improving for countries with a small capital stock. They do, however, increase the vulnerability to changes in international capital flows. Figure 6 shows the composition of net capital inflows to the transition economies during the 1990s.

During the last couple of years the current account deficits have been financed by foreign direct investment (FDI) and – to a lesser degree – by portfolio investment. The large element of FDI in the financing implies that the foreign debt of the transition economies has not increased in proportion to the current account deficits.

Figure 6. *Capital inflows to the transition economies. Billion USD, 1991-99*



Source: IMF (1999) p. 52

FDI inflows are frequently considered less volatile than, for example, portfolio investment, bank loans, or bond issues. It is worth recalling, however, that direct investment often takes the form of large share purchases in, say, telecom, energy and manufacturing companies. In case of serious disruptions, these large share possessions could be sold.

Even if FDI is rather stable, the transition economies are vulnerable to sudden stops in capital inflows. Part of the FDI is derived from the sale of former state-owned enterprises to foreign owners. When there are no more attractive state enterprises to privatise, this source of capital inflows dries up. Changing investor sentiments can also lead to rapid changes in FDI, something which e.g. Russia has experienced when seeking to sell its oil companies abroad.

Sudden stops or a reversal of external financing can have serious effects on the economy, cf. Calvo (1998).¹⁰ If external financing dries up, the interest rate increases and domestic demand drops off with a recession as the result. As an alternative the authorities can implement policies to reduce the current account deficit. Such recessionary policies reduce demand and imports but usually lead to lower growth. The situation after the crisis in Russia in 1998 illustrates this point. Interest rates increased and fiscal and monetary policies were tightened in many transition economies. The difficult financing situation and tighter policies were important factors behind the setback in many transition economies in 1998-99.

X Capital inflows represent a transfer of resources from foreigners to the transition economies. The foreigners putting money in the transition economies will demand interest or dividends and eventually want their money back. Consequently, present current account deficits must (in general) be followed by current account surpluses at a later stage. The adjustment needed to reverse the external balance from deficits to surpluses could be burdensome at a later time. This point holds whether the inflows take the form of FDI or other types of resource transfers.

¹⁰ Razin & Milesi-Ferretti (1997) provide estimates of the growth changes resulting from a "correction" of the current account balance. Their main result is that a current account correction leads to very different results; some countries experience large output falls, others output gains. Countries seeing growth rates pick up generally have a strong export performance after the correction.

The ability of a country to service its debt (or pay dividends) in the future depends on the use of the transferred resources. If capital imports are spent on productive investment it might be relatively easy to service debt and pay dividends. On the other hand, the adjustment might be difficult if the imported capital is spent on consumption or unproductive investment. Large current account deficits combined with low investment and weak growth raise the question of whether capital inflows are in fact finding productive uses in the transition economies. The problems are discussed in UN/ECE (1999) section 3.7.

X A related, but not identical, problem is the risk of financial crises. Large current account deficits might increase the probability of financial crises, especially if the deficits result in the build-up of short-term liabilities, see for example McGettigan (2000). The countries become more vulnerable to changes in investor sentiments as a sudden capital outflow can lead to a financial crisis. This seems to have been the case in the Czech Republic where the crisis in May 1997 was preceded by large capital inflows (see Begg (1998)). The large current account deficits and the increased risk of exchange crises – not least in the "success countries" – have recently drawn the attention of the players on international capital markets. (See, for example, WSJE (1999) and Lehman Brothers (1999).)

X A final, often ignored, point is that the large FDI inflows in the longer term will create a significant gap between the GDP (measuring the production) and the GNP (measuring the income of domestic residents). The foreign owners will repatriate earnings from their investment and thereby reduce the resources available for the domestic general public. This implies that production growth in the future might overstate the domestic welfare gains (as a fraction of the production has to be transferred abroad).

In conclusion, although capital imports can be welfare improving, the magnitude of the current account deficits in most transition economies gives rise to concern. The inflows are large relative to investment and production growth. The economies are vulnerable to sudden stops and might face adjustment problems or financial instability at a later stage.

6. Growth estimations for the period 1995-98

We argued in the previous section that transition economies with relatively high growth on average have had large current account deficits. A number of problems related to this simple correlation were pointed out. In this section we take a closer (but still informal!) look at the connection between capital inflows and economic growth. We estimate growth regressions on panel data for transition economies and include the current account variable.

Diverging from the literature referenced in section 4, we are only going to consider the four-year period from 1995 to 1998. The period is characterised by modest growth for the CEE economies and relative stability for the CIS countries. The choice of sample reduces the risk of picking up spurious correlations from the initial period of economic down-spiralling. We would expect economic developments in this period to inhibit coherent lessons for future growth patterns. An added advantage is that we have available unbroken reform indices from the European Bank for Reconstruction and Development starting in 1994.

The objective is to include the current account deficit in the regressions. A number of CIS countries have unreasonably large deficits, probably the result of misreporting. We have excluded all countries which in any year during the period 1995-98 had a reported current account deficit above 15 per cent of GDP, i.e. Armenia, Azerbaijan, Kyrgyzstan, Moldova,

Tajikistan, and Turkmenistan. This leaves us with very few degrees of freedom, something that must be kept in mind when interpreting the results.

The data set consists of the following variables available on an annual basis:

- G = Economic growth, per cent per year.
- CA = Current account balance as a percentage of GDP.
- MAR = Index capturing the degree of market liberalisation and trade reforms.
- ENT = Index measuring the extent of privatisation and restructuring.
- FIN = Index measuring the level of reforms in the financial sector.
- $SHARE$ = Share of GDP delivered by private enterprises.
- $LCINF$ = Natural logarithm to 100 + percentage inflation.

MAR , ENT , FIN and $SHARE$ are the reform indexes assembled by the EBRD.¹¹ The variable $LCINF$ is used as a (somewhat indirect) indicator for the extent of stabilisation policies. The inflation rate used to construct $LCINF$ is taken from EBRD (2000) p. 37-87. The operator (-1) behind a variable denotes that the variable is lagged one year.

As usual in this literature, it is difficult to establish whether variables are endogenous or exogenous. The estimations are merely able to identify correlations between the right-hand variables and economic growth on the left-hand side. It might, however, be useful to consider the character of the current account variable, ca . Only the most advanced transition economies have regular access to international capital markets. Most transition economies rely on privatisation revenues, FDI, occasional credits to local or central government, or loans from international financial institutions. These types of capital inflows might to a large extent depend on “exogeneous” factors outside the country. Calvo et al. (1995) documents the early experience and argues that external factors are an important determinant of capital flows to the transition economies.

The estimation method is random effect GLS. The panel consists of 19 countries and the sample period is in most cases 1995-98. As with other growth estimations for transition economies, the results are not very robust. Changes of sample size and changes in the specification have large impacts on the estimated parameters. Furthermore, the explanatory power of the variables is not sufficient to obtain significant parameters for a large number of variables in the data set.¹²

Our starting point is regression (1) where the growth rate is estimated on the current account and a constant.

$$G = 0.66 - 0.34 \cdot CA \quad (1)$$

(1.1) (0.15)

No. of observations = 76, $R^2 = 0.11$.

¹¹ The source for the reform variables is EBRD (1994-99). The indices MAR , ENT and FIN were calculated as simple averages of the scores given by EBRD.

¹² This problem plagues most other growth estimations using data from transition economies. Many studies use an eclectic approach including variables sequentially or only variables of particular interest. See for example Havrylyshyn et al. (2000).

The figures in brackets are standard errors. The regression is obviously misspecified but provides a benchmark estimate of the coefficient to the current account variable, i.e. -0.34 . A one percentage point increase in the deficit is associated with 0.34 higher growth.

The danger is that the correlation between growth and the current account is spurious and rest on the omission of (reform) variables. To address this problem we estimate a relationship between the reform variables (in the spirit of the analyses presented in section 3) and the growth rate. Subsequently we consider the effect of including the current account variable on the right hand side.

Table 2. Estimation results from growth estimations under different assumption

| | (2) | (3) | (4) | (5) | | (6) | (7) | (8) | (9) | (10) |
|----------------------|------------------|-------------------|-------------------|-------------------|----------------------|----------------|-------------------|------------------|-------------------|------------------|
| <i>Constant</i> | -10.9** (4.1) | -12.0** (3.8) | 8.8 8.2 | 5.28 (8.0) | <i>Constant</i> | -1.03 (5.4) | -3.22 (5.0) | 41.6** (8.3) | 40.4** (8.6) | 25.3** (11.5) |
| <i>MAR(-1)</i> | 3.43* (1.8) | 3.51** (1.7) | 2.30 1.7 | 2.55 (1.7) | <i>MAR</i> | -3.95 (3.0) | -3.30 (2.9) | -2.99 (2.5) | -2.79 (2.5) | -3.46 (2.9) |
| <i>ENT(-1)</i> | 2.79 (2.0) | 2.22 (1.9) | 2.0 1.8 | 1.91 (1.8) | <i>ENT</i> | 3.61 (2.5) | 3.63 (2.3) | 2.15 2.1 | 2.10 (2.1) | -1.20 (2.7) |
| <i>FIN(-1)</i> | 0.27 (1.9) | 1.10 (1.9) | -0.08 1.8 | -0.65 (1.9) | <i>FIN</i> | 0.62 (2.2) | 1.10 (2.2) | 1.78 1.9 | 1.71 (1.9) | 3.53* (2.2) |
| <i>SHARE(-1)</i> | -0.11 (0.06) | -0.14** (0.06) | -0.16** 0.07 | -0.18** (0.06) | <i>SHARE</i> | 0.04 (0.07) | 0.00 (0.07) | -0.08 0.07 | -0.08 (0.07) | -0.08 (0.08) |
| <i>LCINF(-1)</i> | .. | .. | -2.26** (0.82) | -2.00** (0.82) | <i>LCINF</i> | .. | .. | -7.49** (1.2) | -7.34** (1.25) | -4.53** (1.9) |
| <i>CA</i> | .. | -0.42** (0.16) | .. | -0.35** (0.16) | <i>CA</i> | .. | -0.33** (0.16) | .. | -0.08 (0.15) | -0.32* (0.19) |
| Sample | 95-98 | 95-98 | 95-98 | 95-98 | Sample | 95-98 | 95-98 | 95-98 | 95-98 | 96-98 |
| Obs. | 76 | 76 | 76 | 76 | Obs. | 76 | 76 | 76 | 76 | 57 |
| R² | 0.16 | 0.28 | 0.22 | 0.32 | R² | 0.12 | 0.20 | 0.34 | 0.39 | 0.32 |

Standard errors in brackets under parameter estimates.

* significant at 10 per cent level, ** significant at 5 per cent level.

Estimation (2) in table 2 has G on the left-hand side (as before) and the reform variables ENT , FIN , MAR , and $SHARE$ on the right-hand side. The right-hand side variables are lagged one year to reduce possible simultaneity problems. The parameters have the right sign, except (perhaps) for the variable $SHARE$, but only the market variable is significant. In estimation (3) the current account CA variable is added.¹³ The result is a marked improvement in explained variation; the parameter is significant and broadly of the same magnitude as in estimation (1). We now add the variable $LCINF$ lagged one year to estimation (2) and get the results reported as estimation (4). The effect is a marked improvement of the fit and the inflation variable parameter is highly significant. Still, adding CA to this estimation still improves the estimation, cf. estimation (5). The parameter to CA is significant at the 5 per cent level.

The right hand panel in table 2 reports the results from using contemporaneous reform variables. Estimation (6) shows the results from using only ENT , FIN , MAR , and $SHARE$. There are no significant variables. Notice that the parameter to the contemporaneous MAR has a negative sign, while the parameter to the lagged MAR was positive. This might be an example of a J-curve effect. Also in this case, the inclusion of CA is possible; the parameter has the right sign and is significant at the 10 per cent level. Estimation (8) repeats (6) with $LCINF$ included. We see that the estimated parameter to $LCINF$ is (numerically) very large

¹³ Ito (1999) presents growth regressions where FDI inflows are one of the right-hand variables.

and highly significant. The parameters to the reform variables change sizes. The inclusion of *LCINF* has a very pronounced effect on the estimated equation; a possible explanation is a potential simultaneity bias. The inclusion of *CA* (estimation (9)) changes little in this case. The sign is still negative, but the parameter is small and not significant. This result can only partially be explained by a correlation coefficient of 0.33 between *LCINF* and *CA* for the used sample. However, by starting the estimation one year later (estimation (10)) the parameter *CA* again becomes significant (at the 10 per cent level), and the size is comparable to the findings in the other estimations.¹⁴ Thus, the extreme importance of the inflation variable seems to be associated with the initial period(s) of the sample where there was still very high inflation in many transition economies.

We can summarise the empirical analyses in the following way. The inclusion of a large number of reform variables resulted in many parameters with “wrong” signs while, at the same time, most parameters were insignificant. However, even when including a large number of reform variables, there is still “space” for the current account variable. In general the inclusion of *CA* improves the fit substantially.¹⁵

Obviously none of the estimations presented in table 2 are well-specified. However, the point of the exercise in this chapter has *not* been to find an estimation “explaining” the growth dynamics in the transition economies. On the contrary, the aim has been to “clean away” as much of the variation by variables which could conceivably explain the growth pattern and demonstrate that even in this case there is “space” for the current account variable. Moreover, we do not claim to have shown any causality but merely (partial) covariation. Even when taking into account a host of reform variables, we find that the transition economies with the highest growth rates are also those with the largest current account deficits.

We have not been able to come up a growth estimation with satisfactory statistical properties. Estimation (11) shows an estimation with many significant parameters:

$$G = 8.48^{**} - 3.28^{**} \cdot \Delta MAR + 0.28^{**} \cdot \Delta SHARE - 1.71^{**} \cdot LCINF(-1) - 0.27^{*} \cdot CA \quad (11)$$

(3.6) (1.5) (0.10) (0.6) (0.15)

No. of observations = 76, $R^2 = 0.52$.

The operator Δ denotes change from previous year. However, relation (11) is not stable with respect to shortening of the sample. If for example the year 1995 is excluded the parameter to *LCINF*(-1) drops markedly (in numerical terms), while the parameter to *CA* increases somewhat (again in numerical terms).

In sum, the simple panel estimations (1)-(11) show that there is “space” for the current account balance in the growth regressions. The current account variable fits into growth regressions together with reform variables and variables capturing the degree of macroeconomic stabilisation. The parameter to *CA* is generally between -0.4 and -0.25. This

¹⁴ Further, employing “between regression”, i.e., estimation on country averages, lead to the same conclusion as the parameter to the inflation variable decreases (numerically) while the parameter to the current account variable increases very much (in numerical terms).

¹⁵ In addition to the variables presented above, a number of other variables were tried, including the initial production level and regional dummy variables were tried. Controlling for the initial (1995) GDP-level does not impact the regressions in any noteworthy way. The parameter was insignificant and the sign was very unstable. This is consistent with the findings in Berg et al. (1999) that the importance of the initial conditions diminishes over time. In general the inclusion of additional variables did not make much difference and the results are not reported.

seems to be of a reasonable magnitude and corresponds rather well with the import share in GDP found in many transition economies. It must be underscored, however, that the results are derived from estimations based on very few observations. Also, the results are sensitive to the inclusion or exclusion of variables and changes in the time period.

Our rudimentary regressions illustrate the point that high growth appear correlated with large current account deficits, even when we control for other factors like reform progress and economic stability. Growth would have been lower if the current account deficits could not have been financed. If we take the parameter CA to be -0.34 (as in estimation (1)), a reduction of the current account deficit from 10 per cent of GDP to 3 per cent corresponds to approximately $2\frac{1}{2}$ percentage-points lower growth. Access to international financing of current account deficits has helped, *inter alia*, the success countries in maintaining their growth rates.

7. Final comments

This paper has considered aspects of the growth outlook facing the transition economies. Two related questions were discussed: Can high average growth be achieved and sustained in the medium term? How vulnerable is growth to external/exogenous developments? Focus was on the size of investment as well as its financing.

Using back-of-the-envelope calculations, it was illustrated that the transition economies will not be able to sustain growth significantly above the level in the advanced economies as long as investment remains at the current level. A substantial share of investment is financed from abroad. In rough measures the investment constitute 20 per cent of GDP and the external financing amounts to approximately 1/3 of the investment. This raises an additional question with respect to the sustainability of the growth path. Moreover, growth in the transition economies could be very vulnerable to financing setbacks.¹⁶

The analysis highlights a fundamental problem underlying the growth process in most transition economies. Leaving aside other factors, these countries tend to grow faster the more readily external financing is available. To put it differently, very few – if any – transition economies have experienced strong export growth without imports rising sharply at the same time. Economic development in the transition economies has not been export-oriented to the same extent as seen in East Asia and China.

The problem of disappointing growth in the transition economies is multifaceted and no single solution will prove adequate. It does appear, however, that increased domestic resource mobilisation would be a step in the right direction. Sachs & Warner (1996) argue that high saving (and investment) seem to be a common denominator for most countries experiencing rapid growth.

How to achieve higher domestic saving is another matter. In practice there is scope for higher saving in the government sector as well as the private sector. (EBRD (1996) chapter 6 discusses the topic.) The structural balance of central and local government budgets could be

¹⁶ Individual transition countries are increasingly understanding these problems. See, for example, Darvas & Simon (2000) where the importance of capital stock accumulation and its financing is discussed in the context of growth in Hungary.

strengthened in many countries.¹⁷ Also steps to reduce the tax burden on interest income and reforms encouraging private pensions might be beneficial steps. Reforms aimed at improving domestic credit intermediation are also important. Long-term growth and improved economic welfare in the transition economies rest on increased domestic resource mobilisation.

¹⁷ Begg (1998) argues that the Czech exchange rate crisis in 1997 partly stems from too expansive fiscal policies. The central government budget was in balance prior to the crisis, implying that the government did not contribute to national saving even during this period of strong growth.

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