Albania: Growth during Transition and Growth Prospects

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Abstract

This paper tracks the evolution of the sources of growth in Albania since transition and evaluates the prospects for growth going forward. In doing so, we identify priorities for the future agenda in Albania. The first part of the paper undertakes a first-time growth accounting exercise for Albania. The key finding is that while Albania's impressive growth since transition has been driven primarily by high rates of TFP growth, through the improved allocation of resources, the rate of TFP growth has slowed significantly in recent years, while the rate of capital accumulation has only increased modestly. The second part of the paper uses an estimated neoclassical growth equation to obtain the predicted long run growth rate in Albania and other transition economies. The key finding here is that while Albania has made good progress in the areas of macroeconomic stabilization, price and trade liberalization, and privatization, sustaining high growth going forward will require higher levels of investment, educational attainment, and trade integration and improvements in governance and infrastructure.

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1. Introduction

The potential for transition to a market economy in 1991 brought much optimism to the countries of East and Central Europe (ECE) and the former Soviet Union (FSU). It was expected that the removal of an array of controls on economic activity would bring about dramatic growth in productivity and output as resources were reallocated to more productive activities. At worst, it was expected that the reallocation would be associated with a temporary decline in economic activity, so that output would follow a J-shaped trajectory during transition. Furthermore, it was expected that the high levels of education in the ECE and FSU countries would form a firm foundation for rapid economic growth over the medium to long term. More than a decade after transition, the record on growth has been mixed. While some countries have indeed experienced the J-shaped growth trajectory, others have only very recently begun to show tentative signs of climbing out of what was looking increasingly like an L-shaped growth trajectory. In addition, it appears that the prospects for growth going forward will depend on an intricate mix of structural and institutional reforms.

Albania has been one of the growth success stories among the transition economies of ECE and the FSU. A central focus among policymakers in Albania is to develop a strategy to sustain the impressive growth rates of the last decade. The empirical literature on economic growth has taken two complementary approaches to understanding what determines the growth experience of countries. First, the work on growth accounting has sought to decompose economic growth into the contributions of a number of fundamental sources of growth—physical and human capital accumulation and total factor productivity (TFP) growth.[1] Second, the cross-country work has sought to identify a number of structural determinants of growth—including, but certainly not limited to, investment, school enrollment, international trade integration, macroeconomic stability, infrastructure, and institutional quality.[2] The underlying notion is, of course, that these structural variables contribute to one or more fundamental sources of growth. For the case of transition economies, a body of empirical work has sought to identify the more particular determinants of growth during transition—including initial conditions, macroeconomic stabilization, price and trade liberalization, privatization, and institutional reform.[3] The

[1] See, for example, Bosworth and Collins (1996), Young (1995), and Jorgenson and Griliches (1967).
[2] See, for example, Barro (1991), Mankiw, Romer, and Weil (1992), Levine and Renelt (1992), Islam (1995), and Barro and Sala-i-Martin (2004).
[3] See, for example, de Melo, Denizer, and Gelb (1996), de Melo et. al. (1997), Fischer, Sahay, and Vegh (1996), and Havrylyshyn and van Rooden (1999).

underlying notion here is that at least during the initial stages of transition, growth is likely to be driven by the improved allocation of resources (i.e. TFP growth) resulting from price and trade liberalization under a stable macroeconomic environment.

In order to develop a strategy to sustain the impressive growth rates of the past decade in Albania, it is important to: (i) document in detail the pattern of growth in Albania during the transition years; and (ii) develop a basic understanding about how much progress has been made on the fundamental sources of growth and the structural determinants of growth—and thus, about how much progress remains to be made on these fronts. This paper, therefore, examines the growth experience in Albania during the last decade with two key objectives in mind: (i) to identify the sources of growth during this period; and (ii) to develop an assessment of the prospects for growth going forward and identify implications for the future agenda.

The paper is organized as follows. Section 2 documents the growth trajectory in Albania since 1990 and compares this with growth trajectories in other transition economies. The analysis shows that Albania's cumulative growth since 1990 has been among the highest for all transition economies (after Poland and Slovenia) and that Albania has experienced substantial structural transformation. Section 3 undertakes a growth accounting exercise for Albania. The key finding is that growth in Albania during transition has been driven primarily by high rates of TFP growth (i.e. by the improved allocation of resources), although the TFP growth rate has slowed significantly in recent years. Section 4 documents the current state of a number of structural determinants of growth in order to identify priorities for the future agenda. The key finding here is that while Albania has made good progress in the areas of macroeconomic stabilization, price and trade liberalization, and privatization, progress has been lacking in improving institutional quality, improving infrastructure, and achieving sufficient levels of investment, educational attainment, and trade integration.

2. The Pattern of Growth during Transition

Albania's growth experience since transition can be divided into four separate episodes. Figure 1 depicts the trajectory of real GDP in Albania since 1990. Table 1 lays out the sectoral composition of GDP as well as the overall and sectoral growth rates since 1990. Immediately after transition, real GDP contracted sharply by a cumulative 39% between 1990-92. Recovery began in earnest in 1993 as Albania instituted a successful macroeconomic stabilization program (by bringing its budget deficit, money growth, and inflation rate under control), liberalized prices and external trade, and privatized agricultural land. Between 1993-96, the economy grew at a rapid annual rate of 9.3%. Most of the growth during this period was driven by agriculture, services, and to a lesser extent, construction (the latter was still a small share of GDP).

In 1997, the collapse of the pyramid schemes brought widespread anarchy and a sharp contraction in real output by 7%. Albania was able to recover swiftly from this crisis so that growth returned in 1998. Between 1998-2001, the economy grew at an average annual rate of 7.4%, and in 1999, real GDP exceeded its level in 1990 for the first time.[4] This growth was driven during 1998-99 by strong growth in manufacturing and services. During 2000-01, manufacturing growth slowed significantly, the growth of services increased, and growth in construction accelerated substantially. In 2002, an energy crisis and poor weather slowed growth across the board, so that the economy grew a mere 4.7%. In 2003, the growth rate picked up somewhat to 6%.

Since 1990, Albania has experienced a significant structural transformation away from industry and into services. A large part of this structural transformation took place during the early years of the transition: from 1990 to 1992, the share of industry in GDP fell from 39% to 20%, the share of agriculture increased from 23% to 34%, and the share of services increased from 33% to 44%. Since 1992, the share of industry has stayed steady around 20%, the share of agriculture has fallen back down to 25% in 2003, and the share of services has risen to 54% in 2003. Within the industrial sector, construction has expanded dramatically throughout, from about 3% of GDP

[4] The GDP growth rates in table 1 are from the *World Development Indicators* 2003, while the sectoral composition and sectoral growth rates are from the World Bank's Live Database (LDB) for Albania. The LDB contains recent revisions to the national accounts, which suggest a sharper contraction of real GDP in 1997 and faster growth during 1998-01. Growth rates for other years are not affected. Since the recent revisions are still preliminary and the subject of a number of points of concern, we have used the WDI 2003 in most of our analysis. The recent revisions do, however, present a more accurate picture of the sectoral composition of GDP, which is why we have used the LDB numbers for this purpose in table 1. Here and in our subsequent analysis, we have also used the real GDP growth rates and investment rates for 2002 and 2003 from the LDB to extend our real GDP and investment series to 2002 and 2003.

during 1990-92 to 9.4% of GDP in 2003. The substantial structural transformation suggests that transition in Albania has indeed brought about a reallocation of resources toward more productive activities. In addition to this reallocation across economic sectors, the private sector's share of GDP has risen from 5% in 1990 to about 75% in 2002.

Tables 2 and 3 provide a comprehensive comparison of Albania's growth trajectory with those of other ECE and FSU countries for the 1990-2002 period.[5] Table 2 presents each country's real GDP for each year, relative to its real GDP in 1990 (with real GDP in 1990 = 100). Depending on whether real GDP in 2002 is above or below real GDP in 1990, each ECE country is placed in the "ECE positive growth" or "ECE negative growth" group. The comparison shows that Albania's cumulative growth of 24% since 1990 has been greater than that of any other ECE and FSU transition economy, except for Poland and Slovenia where cumulative growth since 1990 has been 46.7% and 27.3% respectively.

Table 3 presents additional information about the depth and duration of the initial decline in output and the strength of the subsequent recovery, for each country. Albania's initial decline in output was deeper than that of any other ECE economy. However, its initial decline was short in duration and its growth rate since initial recovery has been greater than that of any other ECE country.[6]

It is also interesting to note that all countries in the ECE negative growth group experienced a second crisis after initial recovery, whereas most countries in the ECE positive growth group did not (with the exception of Albania and the Czech Republic). This suggests that additional economic crises can impose real costs on the long run growth trajectory—in other words, countries do not tend to subsequently make up *all* of the growth lost during a crisis. In the case of Albania, this means that the crisis of 1997 has meant that Albania's growth performance has likely not been as impressive as it could have been otherwise, and it suggests that macroeconomic stability will be crucial to generating superior growth outcomes going forward.

[5] All ECE and FSU transition economies for which real GDP data was available for the entire 1990-2002 period were included in the comparison. That excluded Bosnia-Herzegovina, Serbia-Montenegro, and Azerbaijan.

[6] The FSU economies all experienced deeper and longer declines compared to most ECE countries and only two FSU countries—Turkmenistan and Uzbekistan—exceeded their 1990 real GDP by 2002.

The foregoing analysis shows that Albania's growth experience during transition has been a success story among the group of ECE and FSU transition economies. There are two possible sour notes in the growth experience itself. The first is the crisis of 1997. The second is the fact that the years 2002 and 2003 have been witness to the two slowest years of growth since recovery began in 1993 (except, of course, for the contraction of 1997). Policymakers in Albania will, undoubtedly, want to ensure that this does not mark a shift to a slower growth path in the years ahead.

3. Growth Accounting

As a first step in understanding how to sustain the impressive growth rates of the past decade in Albania, in this section, we address a number of important questions: What have the fundamental sources of growth been during the past decade? How have the sources of growth changed, if at all, in recent years? What are the sources of growth likely to be in the years ahead? Once we answer these questions, once we understand what fundamental sources must generate growth going forward, we can then examine the structural and policy determinants of these sources of growth, to see where Albania has made progress and where it needs to make further progress.

The growth accounting methodology makes it possible to decompose the observed growth of real GDP into the contributions of factor accumulation (i.e. the contributions from growth in the capital stock and labor force) and total factor productivity (TFP) growth. There now exists a small body of growth accounting work for transition economies, although none of this work covers Albania.[7] To our knowledge, ours is the first paper to undertake this exercise for Albania.

Methodology

We start with the following standard Cobb-Douglas production function:

$$Y_t = A_t K_t^{\alpha} L_t^{1-\alpha}$$

where Y is real GDP, K is the physical capital stock, L is the labor force, A is the level of total factor productivity (TFP), and α is the capital share of income. Taking logarithms and differentiating yields the following growth accounting equation:

$$\frac{dY}{Y} = \alpha \frac{dK}{K} + (1-\alpha)\frac{dL}{L} + \frac{dA}{A}$$

Equation 2 says that the growth of real GDP $\left(\frac{dY}{Y}\right)$ during any time period can be decomposed into three fundamental sources of growth: (i) the contribution from growth in the physical capital

[7] See, for example, De Broeck and Koen (2000) for growth accounting work on the FSU countries and Campos and Coricelli (2002) for growth accounting work on a number of ECE countries.

stock $\left(\alpha \frac{dK}{K}\right)$; (ii) the contribution from growth in the labor force $\left((1-\alpha)\frac{dL}{L}\right)$; and (iii) the contribution of TFP growth $\left(\frac{dA}{A}\right)$. It is also possible to incorporate human capital into the growth accounting framework. We do not do this because there does not exist a reliable time series on educational attainment for Albania. In our results, therefore, the contribution of TFP growth will include any contribution from accumulation of human capital. However, as we show in the next section, educational attainment in Albania has likely fallen since transition, so that human capital could not have made a positive contribution to growth.

Data

The series on real GDP and the labor force were obtained from the *WDI* 2003.[8] The physical capital stock was calculated using the standard perpetual inventory method:

$$K_{t+1} = (1-\delta)K_t + I_t$$

where I is the level of investment and δ is the rate of depreciation. In order to ensure that assumptions about the initial capital stock are immaterial for capital growth rates during our period of interest, it is necessary to obtain a historical investment series stretching sufficiently far back in time. We use a historical investment series from the Central Bank of Albania for the 1950-80 period and merge this with more recent investment data from the *WDI* 2003.[9] We assume that the initial capital stock in 1950 is zero. Since any capital in 1950 would effectively have been depreciated away by 1980 or 1990, our results are robust to alternative assumptions about the initial 1950 capital stock. We use the commonly assumed capital share in income of $\alpha = 0.30$, but we also check for sensitivity with a much higher capital share of $\alpha = 0.50$. In addition, we use the standard depreciation rate of $\delta = 0.05$.

[8] As described earlier, we update the *WDI* 2003 real GDP series to 2003 by using the real GDP growth rate for 2002 and 2003 from the World Bank's Live Database for Albania.

[9] The constant price investment series in the *WDI* 2003 is flawed since it does not seem to account for the substantial inflation of the early 1990s. Thus, we apply investment rates (nominal investment / nominal GDP ratios) to real GDP to obtain a constant price investment series for the 1980-2003 period.

Results

The results from implementing the growth decomposition in equation 2, for the period 1982-2003 are presented in table 4. We present the results for several sub-periods: the pre-transition period 1982-89, the contraction period 1990-92, and the recovery period 1993-03. We further divide the recovery period into three separate episodes of growth: 1993-96, 1998-01, and 2002-03.

A number of interesting points stand out. First, during the transition period, most movements in real GDP were driven by movements in TFP. During the sharp contraction of 1990-92, TFP fell dramatically at an average annual rate of –16.5%. During the subsequent recovery of 1993-03, when the economy grew at an average annual rate of 6.27%, the average annual rate of TFP growth was a robust 6.14%, whereas the contribution of factor growth (i.e. the combined contributions of capital growth and labor force growth) was a mere 0.13%. This result that the initial contraction and the subsequent growth in real GDP were primarily driven by large negative and subsequently large positive rates of TFP growth, is consistent with the findings of De Broeck and Koen (2000) and Campos and Coricelli (2002) for other transition economies. It is also consistent with our prior expectations. During the initial years of transition, the disorganization or chaos resulting from the removal of central controls and coordination—as described by Blanchard and Kremer (1997)—produce large negative TFP growth rates as output falls and large parts of the capital stock are idled. Subsequently, as the economy achieves macroeconomic stability and introduces structural reforms, the reallocation of resources to more productive activities allows the economy to generate rapid growth with low rates of investment, so that TFP growth rates are high. While this result may have been expected, it is necessary to see it confirmed by the data. Furthermore, it does remind us that the impressive growth rates of the past decade in Albania have primarily been a result of the substantial reallocation and structural transformation that accompanied transition. This point will be nontrivial when we discuss the prospects for sustaining the impressive growth rates of the past decade going forward.

One concern about the measurement of the capital stock for a transition economy is that during the initial contraction, a significant portion of the communist capital stock may not only be temporarily idled, but may actually be permanently scrapped. If so, this would cause the contribution of capital accumulation to be underestimated during the subsequent recovery. In order to address this concern, we apply a one-time adjustment for the permanent scrapping of a significant portion of the communist capital stock—in particular, we contract the capital stock by

the same rate as output between 1990-92, so that the (K/Y) ratio is not allowed to rise during the course of the contraction. We then repeat the growth accounting exercise using our new adjusted capital stock series. The results are presented in table 5, panel A. Panel B tests for sensitivity by also changing the capital share from 0.3 to 0.5. The essence of the result discussed earlier remains unchanged—while the contribution of capital growth during recovery does rise somewhat, most of the growth still appears to have been driven by TFP growth. In panel A, during the average annual real GDP growth of 6.27% between 1993-03, the contribution of TFP growth was 5.42%, while the contribution of factor growth was a mere 0.85% (of which the contribution of capital growth was 0.67%). We will treat the results in table 5, panel A as our benchmark growth decomposition, although the essence of the results discussed also holds true with a higher capital share of $\alpha = 0.50$ (table 5, panel B) and without adjustment for permanent scrapping of communist capital (table 4).

A second interesting point emerges when one examines how the growth decomposition changes over time within the recovery period 1993-03. In more recent years, the TFP growth rate has been sharply lower: 2.66% for 2002-03 and 6.01% for 1998-01, versus 9.66% for 1993-96 in table 5, panel A. This is accompanied by a modest rise in the contribution of capital growth from a negligible 0.10% during 1993-96 to 0.78% during 1998-01 and 1.62% during 2002-03 (as well as an increase in the contribution of labor from –0.51% during 1993-96 to 0.56% during 1998-01 and 1.07% during 2002-03). As a result of this modest increase in the contribution of factor accumulation, growth during 1998-03 did not decline as much as it may have otherwise. Looking at the year-by-year decomposition (not presented in the tables), one finds the same trend: declining TFP growth in recent years, accompanied by a modest rise in the contributions of capital and labor force growth.

The above results offer particular implications for the future agenda. Let us suppose that the TFP growth experienced by a transition economy can come from three potential sources:

(1) Very substantial improvements in TFP that occur in the aftermath of transition, as a significantly distorted economy reallocates resources on a large scale and experiences substantial structural transformation.

(2) Improvements in TFP that occur in any developing market economy from the improved allocation of resources, as a result of structural reforms.

(3) Improvements in TFP that occur in any economy as a result of innovation and learning on the part of entrepreneurs.

The evidence from Albania suggests that growth during the past decade has been driven primarily by the substantial reallocation of resources that occurs in the aftermath of transition (i.e. TFP growth from source #1). This has been made possible by the fact that Albania was swift in achieving macroeconomic stabilization and moved to liberalize prices and external trade and privatize agriculture and SMEs soon after transition.

On the other hand, the evidence indicates that this fundamental source of growth during transition—TFP growth—has slowed significantly in recent years. Thus, the evidence indicates that TFP growth deriving from substantial post-transition reallocation is gradually drawing to a close. At the same time, the contribution of capital accumulation has only picked up modestly. This suggests that in order to sustain high GDP growth going forward, Albania must forge ahead on two fronts: (i) raise the rate of capital accumulation; and (ii) accelerate structural reforms in order to generate greater improvements in TFP from alternative sources. We turn to this issue next.

4. Education, Investment, Trade Integration, Institutions

The work on growth accounting in the previous section showed that in order for Albania to sustain high growth going forward, it must increase its rate of capital accumulation and also generate additional improvements in TFP through the improved allocation of resources. In this section, we address the more specific policy priorities that are necessary to achieve these objectives in Albania. In particular, we point out that Albania must seek to raise its investment and secondary school enrollment rates, increase the degree of trade integration, and improve institutional quality. We explain why each of these policy priorities is important and we show that progress has been lacking along these dimensions in Albania.

As our earlier analysis showed, the contribution of capital accumulation to growth during most of the transition in Albania has been negligible. During the two most recent years 2002-2003, the contribution of capital accumulation to growth increased modestly to 1.62%. This is still significantly below the contribution of capital accumulation to growth in the high growth economies of East Asia. Bosworth and Collins (2003) report that for seven East Asian economies, which grew at 6.7% between 1960-2000, the contribution of capital accumulation was 3.28%. This provides some indication that Albania should seek to raise its rate of investment in order to realize greater growth from this source.

In a growth accounting framework, if human capital is not explicitly included as a factor of production, the TFP growth rate includes any contribution to growth from increased educational attainment. Our work in the previous section indicated that as TFP growth deriving from large-scale post-transition reallocation draws to a close, it is important for Albania to generate TFP improvements from alternative sources. Thus, if increasing educational attainment is one such alternative source of TFP improvements, Albania should seek to increase its educational attainment by raising school enrollment rates. Aside from a higher level of educational attainment, a higher degree of trade integration and improvements in institutional quality can also generate improvements in TFP by leading to an improved allocation of resources. A higher degree of trade integration allows an economy to specialize in the production of those products in which its relative productivity is highest and also facilitates the transfer of technology and ideas from more advanced economies. Better institutional quality reduces transaction costs and allows a private manufacturing sector to develop in those products in which the economy is naturally most productive.

The important role of investment, school enrollment, trade integration, and institutional quality in economic growth is also underscored by the neoclassical growth model with human capital. In such a model, investment and school enrollment rates are key determinants of the steady-state level of output per worker. Given current levels of output per worker, a higher steady-state level will generate faster growth. Another important determinant of the steady state is the level of technology, which can itself depend on the degree of trade integration and the quality of institutions. Thus, if a country seeks to generate high rates of growth, it must ensure that its investment, school enrollment, trade integration, and institutional quality are at levels sufficient for that purpose.

We turn now to examining the current state of the above four structural determinants of growth in Albania. We start by documenting the pattern of educational attainment and school enrollment since transition and then move on to a more general analysis of whether the current levels of the four variables are likely to serve as bottlenecks to growth going forward.

Educational Patterns

Table 6 presents the pattern of school enrollment rates in Albania during the course of the transition, as well as a comparison of public education spending across a number of ECE economies.[10] Several important points stand out. First, the secondary school enrollment rate in Albania has fallen dramatically, from about 78% in 1990 to a low of about 39% in 1995. While our data suggests that the secondary enrollment rate recovered somewhat to 49% by 2001, data from the LSMS 2002 for Albania indicates that the secondary enrollment rate was 38.7% in 2002.[11] Even with the UNICEF numbers, figure 2 shows that the collapse of the secondary enrollment rate in Albania has been far more dramatic than in any other ECE transition economy. The numbers in table 6 suggest that the fall in the secondary enrollment rate is due to a collapse of vocational and technical enrollment soon after 1990. While the general secondary enrollment rate has risen somewhat, this increased uptake has not been sufficient to make up for the near complete collapse of vocational and technical enrollments.

[10] Our data is from UNICEF's TRANSMONEE database. It is important to realize that the data on secondary school enrollment rates in the *WDI* cannot be used to compare the pre-1996 and post-1996 periods because of a change in definition.
[11] World Bank, *Albania Poverty Assessment*, 2003.

The fall in the secondary enrollment rate since 1990 has meant that among age cohorts who were supposed to enroll in secondary school after 1990, the educational attainment profile falls drastically after the compulsory 8 years of schooling. This is shown in figure 3 (from the World Bank's *Albania Poverty Assessment*, 2003). Overall educational attainment in Albania—measured by average years of schooling among those aged 21 or older—is 8.5 years. This is lower than educational attainment among other countries in the region.[12]

Public spending on education in Albania has fallen from 4.2% of GDP in 1990 to 2.7% of GDP in 2001. While this decline may be due in part to a general decline in public spending during transition, the public education spending share of GDP is still lower than that in other countries in the region. Given the key role of school enrollment and educational attainment in economic growth, the dramatic decline in the secondary school enrollment rate and the low levels of public investment in education do not bode well for the long run growth trajectory in Albania. A key policy priority must, therefore, be to raise the rate of human capital accumulation by increasing secondary school enrollment rates.

Comparison of Growth Determinants with High Growth and Slower Growth Countries

In order to form an assessment about whether the current levels of school enrollment, investment, and trade integration in Albania may serve as bottlenecks to generating rapid growth going forward, we undertake a comparison with groups of high growth and slower growth countries. Our first comparison group includes all non-oil, non-transition countries with populations exceeding one million in 1995, and for which PPP-based real GDP figures are available for the 1980-2000 period.[13] This yields a group of 87 countries, which we divide into two sets: the **high growth countries** are those for which the growth rate of real GDP per capita during 1980-2000 was above the 75th percentile of all growth rates and the **slower growth countries** are the rest. The list of 21 high growth countries (with 1980-2000 per capita growth rates above 2.25%) and 66 slower growth countries (with growth rates below 2.25%) is presented in table A1 in the appendix.

Table 7 presents the average secondary enrollment rate, investment rate, trade share of GDP, and export share of GDP for the high growth and slower growth set of countries, as well as for

[12] Ibid.

[13] We take PPP-based real GDP numbers from the Penn World Tables (PWT), version 6, because the PWT makes this measure available for a wider set of countries than the WDI. We need *PPP-based* real GDP per capita because our second comparison group is limited to countries with income levels similar to Albania.

Albania. The levels of these steady-state determinants for Albania are significantly below the averages for the high-growth countries and comparable to (or even somewhat lower than) the averages for the slower growth countries. This provides some evidence that the current levels of secondary enrollment, investment, and trade integration in Albania are not sufficient for the purposes of generating rapid growth going forward.

One concern in comparing Albania with the group of all countries is that Albania's current level of GDP per capita may be less than the average for the high growth group in 1980. If so, then Albania today would be able to generate high growth even if it had a lower steady-state (i.e. lower values of the steady-state determinants) than those countries. In order to address this concern, we form a second comparison group of countries for which real GDP per capita in 1980 is similar to Albania's real GDP per capita today. The list of this group of similar countries is presented in table A2 of the appendix. Again, the average secondary enrollment, investment, trade share, and export share for the high growth and slower growth countries within this list of similar initial income countries is presented in table 7.

The idea behind this test is that given similar initial levels of output per worker, the high growth countries experienced high growth because their steady-state levels of output per worker were sufficiently above their initial levels of output per worker. Thus, in order for Albania to experience high growth over the medium to long term, its levels of the steady-state determinants must be similar to those of the high growth group. However, looking at the numbers in table 7, we notice that Albania's secondary enrollment rate is significantly below the average for the high growth group, although somewhat higher than the average for the slower growth group. Albania's investment rate and measures of trade integration are not only significantly below the averages for the high growth group, but also somewhat below the averages for the slower growth group. This provides evidence that the current levels of school enrollment, investment, and trade integration in Albania are likely to serve as bottlenecks to generating rapid growth going forward. Thus, raising investment and school enrollment rates and increasing the degree of trade integration must be key policy priorities for Albania going forward.

Long Run Growth Prospects

In addition to the comparisons above, we can also use an estimated neoclassical growth equation to obtain a rough forecast of Albania's long run growth rate, given its investment and school enrollment rates and its current level of GDP per capita. This forecast can be compared with

predicted growth rates for other transition economies to compare Albania's long run growth prospects with those of other transition economies. In addition, we can find what Albania's predicted growth rate would be under a counterfactual scenario where its investment and school enrollment rates are higher.

The predicted long run growth rates will, of course, depend on the particular specification of the neoclassical growth equation used in the exercise. We follow Fischer, Sahay, and Vegh (1998) and Denizer (1997) in using a specification which includes only the very basic variables—investment, secondary school enrollment, population growth, and initial income. These are the same variables used by Mankiw, Romer, and Weil (1992) and Levine and Renelt (1992).[14] Our objective is not to include all variables which may plausibly matter for growth in Albania, but rather to assess what Albania's investment and school enrollment rates, along with its current level of GDP per capita, imply for its long run growth potential. By including only the very basic variables, we wish to minimize controversy about whether or not a variable should be included in the estimated equation.

We estimate the following neoclassical growth equation:

$$ygrowth_i = \alpha_0 + \alpha_1 \ln\left(\frac{I}{Y}\right)_i + \alpha_2 \ln(sec_i) + \alpha_3 \ln(n_i + g + \delta) + \alpha_4 \ln(y_{0,i}) + \varepsilon_i$$

where $ygrowth$ is the growth rate of real GDP per capita between 1980-2000, y_0 is the initial real GDP per capita in 1980, (I/Y) and n are the average investment and population growth rates for 1980-2000, *sec* is the average secondary school enrollment rate for 1980-96, and $g+\delta$ (the rates of technological progress and depreciation) is assumed to be a uniform 0.05 for all countries.[15] The underlying theory is, of course, that investment, secondary enrollment, and population growth are determinants of the steady state and that a steady state level of GDP per capita farther above the initial level of GDP per capita will generate faster growth. Data for real GDP per capita is obtained from the Penn World Tables (version 6.1), while data for all other variables is obtained from the *WDI* 2003. We include all non-oil, non-transition countries with

[14] Unlike Fischer, Sahay, and Vegh (1998) and Denizer (1997), we do not simply use the estimated coefficients from Levine and Renelt (1992). The Levine and Renelt estimations were implemented using a much earlier version of the Penn World Tables. Given changes in the data in newer versions, it is inappropriate to directly apply the coefficient estimates from Levine and Renelt to more recent data for transition economies. Thus, we estimate the basic neoclassical growth equation ourselves using the more recent data source.

[15] The average secondary school enrollment rate is for 1980-96 only because as point out earlier, the *WDI* data on secondary school enrollment rates after 1996 is not comparable with the same before 1996.

populations exceeding one million in 1995 in our estimation. The estimated coefficients, along with robust standard errors, are presented in table 8. All estimated coefficients are statistically significant at the 5% level. The included variables together explain 55% of the variation in per capita growth rates.

Next, we apply the estimated coefficients from table 8 to the current levels of investment, school enrollment, population growth, and real GDP per capita in the transition economies to obtain predicted future long run growth rates for these economies. The results are presented in table 9. The results indicate that if Albania's investment, secondary enrollment, and population growth rates stay at their current levels, then its long run per capita GDP growth rate from this point forward will be approximately 2.16%. This is significantly lower than the predicted long run per capita growth rate for most other transition economies (except for the Kyrgyz Republic and Tajikistan). The average predicted long run growth rate for all transition economies is 3.69%. The low predicted growth rate for Albania is all the more surprising given that its current real GDP per capita is significantly below the average for all transition economies.

While the low predicted growth rate for Albania is partly due to its higher population growth rate, it is also due to its low investment and secondary enrollment rates. For example, if Albania's investment rate were to rise to 30% and its secondary enrollment rate were to rise to 80, then its predicted long run per capita growth rate would rise to 4.13%. A predicted per capita growth rate of 4.13% does not mean that the growth rate is expected to be a uniform 4.13% for every year from this point forward. Rather, since each country is converging to its steady state, the growth rate during the initial years is expected to be higher than 4.13%. The message from the above analysis is clear: Albania's current investment and secondary enrollment rates are too low to generate sustained high growth going forward. Albania must, therefore, seek to raise its investment and secondary enrollment rates to improve its long run growth prospects.

Policy Initiatives

What particular measures will allow Albania to achieve the higher levels of investment, secondary school enrollment, and trade integration that are necessary for rapid growth? We offer the following suggestions:

1) Maintain macroeconomic stability. The experience of transition has shown that macroeconomic instability or crises causes investment to collapse and sets the growth trajectory

back several years. Thus, maintaining macroeconomic stability is important because it provides an environment conducive to investment and growth.

2) Improve the investment climate and remove obstacles to competitiveness. Improving the quality of institutions, governance, and infrastructure are key elements in improving the climate for investment. Private exporters tend to identify a range of difficulties which characterize the investment climate in Albania. These include: the lack of working capital, administrative difficulties including delays in reimbursement of VAT, high social security contributions, poor infrastructure, and competition from the informal economy. The government of Albania must be proactive in undertaking the reforms that are necessary to address all such difficulties in the investment climate. This will not only stimulate investment, but also allow a manufacturing export sector to flourish, which will increase the degree of trade integration, improve the allocation of resources, and allow Albania to take advantage of its proximity to major European markets.

3) Mobilize resources for essential public investments. The government must undertake important public investments to improve educational attainment and infrastructure. At the same time, the government must ensure that it does not substantially eat into the national savings pool available for private sector investment. This will require the government to mobilize revenue from additional sources—improvements in governance and a serious attempt to deal with the informal economy are central to achieving that objective.

As the above discussion makes clear, the quality of institutions and governance permeate almost every dimension of the necessary future agenda in Albania. Table 10 presents measures for the Rule of Law, Government Effectiveness, and Regulatory Quality for Albania, as well as averages for the ECE positive growth, the ECE negative growth, Baltic, and CIS country groups from table 2. The numbers indicate that the measures of institutional quality for Albania are lower than even the averages for the ECE negative growth group and comparable to the averages for the CIS group. It is fair to say, therefore, that aggressive attempts to improve the quality of institutions and governance must lie at the heart of Albania's quest for sustained rapid growth in the years ahead.

5. Conclusion

Our analysis shows that Albania has been one of the growth success stories among transition economies during the past decade. Most of this growth has been driven by very substantial improvements in TFP, as Albania has reallocated resources to more productive activities and has experienced substantial structural transformation in the aftermath of transition. The rate of TFP growth has slowed significantly in recent years. As Albania moves to the next phase of economic growth, it needs to raise its rates of physical and human capital accumulation and also generate improvements in TFP from alternative sources. In order to achieve these objectives, Albania must seek to raise its rates of investment and secondary school enrollment and make progress in improving infrastructure, institutional quality, and governance.

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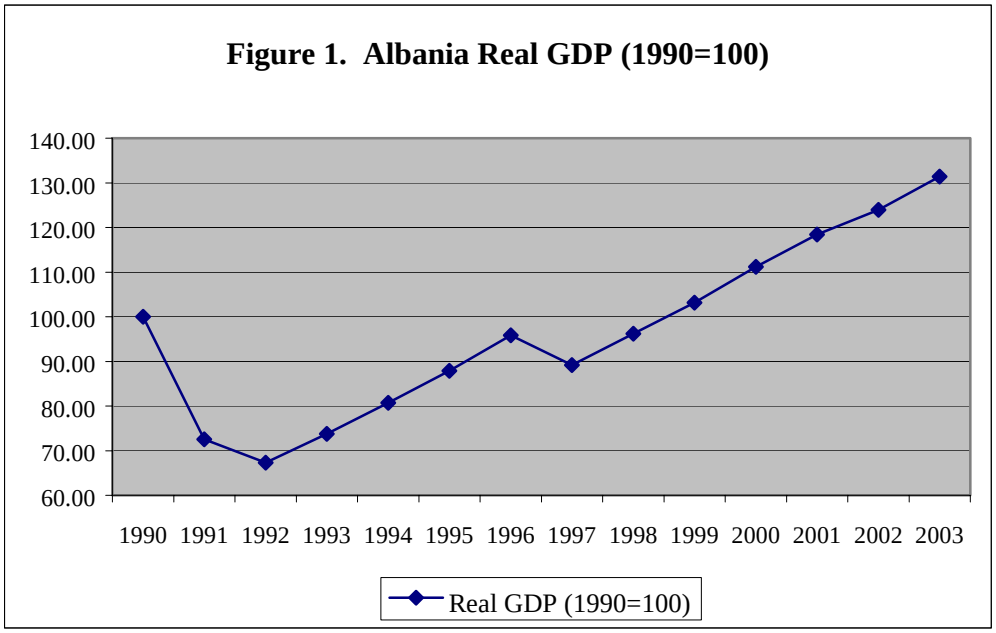


Table 1. Albania: Sectoral Composition of GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
							% of GDP							
Agriculture	23.2	26.4	33.7	34.0	33.7	35.0	33.0	32.7	31.1	28.8	28.0	26.7	26.1	25.3
Industry	39.3	32.4	20.5	19.2	18.4	19.0	20.2	16.4	18.8	23.2	21.7	21.5	21.0	20.8
Construction	2.8	2.7	3.1	3.7	3.8	4.3	4.7	4.6	4.9	5.3	6.8	9.0	9.2	9.4
Manufacturing							14.4	11.8	13.9	16.6	15.5	15.3	14.7	
Services	32.8	38.8	43.7	46.0	49.1	43.4	46.8	50.9	50.1	48.0	50.3	51.8	53.0	53.9
							% annual growth rate							
GDP	-9.6	-27.5	-7.2	9.6	9.4	8.9	9.1	-7.0	7.9	7.3	7.8	6.5	4.7	6.0
Agriculture	3.6	-17.4	18.5	10.4	8.3	13.2	3.0	-9.7	4.9	0.4	4.5	3.0	2.3	3.0
Industry	-6.0	-40.2	-41.3	2.5	4.7	12.6	15.9	-25.8	26.1	34.2	0.5	7.2	2.0	5.0
Construction		-29.9	7.0	30.0	15.0	21.2	18.4	-10.5	18.0	17.8	37.2	43.9	7.1	8.5
Manufacturing								-25.1	29.5	29.6	0.7	6.5	0.3	
Services	-35.2	-14.1	4.4	15.5	16.6	-3.8	17.8	-0.6	8.1	4.3	12.7	11.1	7.1	7.9

Source: WDI 2003 for GDP growth rates. Albania Live Database for sectoral composition and sectoral growth rates

Table 2. Real GDP Trajectories in Transition Economies (1990=100)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Albania	**100.0**	**72.5**	**67.3**	**73.8**	**80.7**	**87.9**	**95.9**	**89.2**	**96.2**	**103.2**	**111.2**	**118.4**	**124.0**
Central and Eastern Europe (Negative Growth)													
Bulgaria	100.0	91.6	84.9	83.6	85.2	87.6	79.4	74.9	77.9	79.7	84.0	87.4	91.5
Croatia	100.0	78.9	69.7	64.1	67.8	72.5	76.8	82.0	84.0	83.7	86.8	90.4	95.1
Macedonia, FYR	100.0	101.6	94.9	87.8	86.3	85.3	86.3	87.5	90.5	94.4	98.7	94.7	95.4
Romania	100.0	87.1	79.4	80.7	83.8	89.8	93.3	87.7	83.0	82.0	83.4	87.9	91.6
Central and Eastern Europe (Positive Growth)													
Czech Republic	100.0	88.4	86.7	87.2	89.5	95.3	99.9	98.6	97.6	98.0	101.2	104.5	106.6
Hungary	100.0	88.1	85.4	84.9	87.4	88.7	89.9	94.0	98.6	102.7	108.0	112.1	115.8
Poland	100.0	93.0	95.4	99.0	104.2	111.5	118.2	126.2	132.3	137.7	143.2	144.6	146.7
Slovak Republic	100.0	85.4	79.7	76.7	80.7	85.9	91.0	96.1	99.9	101.2	103.4	106.8	111.5
Slovenia	100.0	91.1	86.2	88.6	93.3	97.1	100.5	105.1	109.1	114.8	120.1	123.7	127.3
Baltic Region Countries													
Estonia	100.0	92.0	72.5	66.5	65.1	67.9	70.6	77.5	81.1	80.6	86.3	90.7	96.1
Latvia	100.0	89.6	58.4	49.7	50.0	49.6	51.3	55.7	57.8	58.5	62.4	67.2	71.2
Lithuania	100.0	94.3	74.3	62.2	56.1	58.0	60.7	65.1	68.5	65.8	68.3	72.3	77.2
CIS Countries													
Armenia	100.0	88.3	51.4	46.9	49.4	52.8	55.9	57.8	62.0	64.0	67.9	74.4	84.0
Belarus	100.0	98.8	89.3	82.5	72.9	65.3	67.1	74.8	81.1	83.8	88.7	92.3	96.6
Georgia	100.0	78.9	43.5	30.7	27.5	28.3	31.4	34.8	35.8	36.8	37.5	39.2	41.4
Kazakhstan	100.0	89.0	84.3	76.5	66.9	61.4	61.7	62.8	61.6	63.2	69.4	78.6	86.3
Kyrgyz Republic	100.0	92.1	79.4	67.1	53.6	50.7	54.3	59.7	60.9	63.2	66.6	70.1	69.8
Moldova	100.0	84.0	59.6	58.8	40.7	40.1	37.7	38.4	35.8	34.6	35.4	37.5	40.2
Russian Federation	100.0	95.0	81.2	74.1	64.8	62.1	60.0	60.5	57.6	60.7	66.2	69.5	72.4
Tajikistan	100.0	92.9	66.0	55.1	43.4	38.0	31.7	32.2	33.9	35.2	38.1	42.0	45.8
Turkmenistan	100.0	95.3	90.2	81.2	67.2	62.3	58.2	51.6	55.2	64.6	75.9	91.5	105.2
Ukraine	100.0	91.6	82.7	71.0	54.7	48.0	43.2	41.9	41.1	41.0	43.4	47.4	49.6
Uzbekistan	100.0	99.5	88.4	86.3	81.8	81.1	82.5	86.8	90.5	94.4	98.0	102.4	106.7

Source: World Development Indicators, 2003.

Table 3. Decline and Recovery in Transition Economies

Country	Cumulative Growth Between 1990-2002 (%)	Number of Years of Decline Before Initial Recovery	Total Number of Years of Decline Between 1990-2002	Cumulative Decline Before Initial Recovery (%)	Cumulative Growth Since Initial Recovery (%)	Average Annual Growth Since Initial Recovery (%)
Albania	**24.0**	**2**	**3**	**-32.7**	**84.2**	**6.3**
			Central and Eastern Europe (Negative Growth)			
Bulgaria	-8.5	3	5	-16.4	9.4	1.0
Croatia	-4.9	3	4	-35.9	48.4	4.5
Macedonia, FYR	-4.6	4	5	-14.7	11.8	1.6
Romania	-8.4	2	5	-20.6	15.4	1.4
Mean	**-6.6**	**3**	**4.75**	**-21.9**	**19.6**	**2.1**
			Central and Eastern Europe (Positive Growth)			
Czech Republic	6.6	2	4	-13.3	23.0	2.1
Hungary	15.8	3	3	-15.1	36.4	3.5
Poland	46.7	1	1	-7.0	57.7	4.2
Slovak Republic	11.5	3	3	-23.3	45.3	4.2
Slovenia	27.3	2	2	-13.8	47.8	4.0
Mean	**21.6**	**2.2**	**2.6**	**-14.5**	**42.2**	**3.6**
			Baltic Region Countries			
Estonia	-3.9	4	5	-34.9	47.5	5.0
Latvia	-28.8	3	4	-50.3	43.4	4.1
Lithuania	-22.8	4	5	-43.9	37.4	4.1
Mean	**-18.5**	**3.7**	**4.7**	**-43.0**	**43.0**	**4.4**
			CIS Countries			
Armenia	-16.0	3	3	-53.1	79.1	6.7
Belarus	-3.4	5	5	-34.7	48.0	5.8
Georgia	-58.6	4	4	-72.5	50.2	5.2
Kazakhstan	-13.7	5	6	-38.6	40.5	5.0
Kyrgyz Republic	-30.2	5	5	-49.3	37.7	4.7
Moldova	-59.8	6	7	-62.3	6.6	1.1
Russian Federation	-27.6	6	7	-40.0	20.7	3.2
Tajikistan	-54.2	6	6	-68.3	44.6	6.3
Turkmenistan	5.2	7	7	-48.4	103.8	15.3
Ukraine	-50.4	9	9	-59.0	21.0	6.6
Uzbekistan	6.7	5	5	-18.9	31.5	4.0
Mean	**-27.5**	**5.5**	**5.8**	**-49.6**	**43.8**	**5.8**

Source: Calculations based on Table 2.

Table 4. Albania Growth Accounting Results I

(without adjustment for permanent scrapping of significant part of communist capital)

	Average Annual Real GDP growth (%)	Contribution from:			
		Capital Growth	Labor Force Growth	TFP Growth	Factor Growth
1982-89	2.17	2.20	1.93	-1.97	4.13
1990-92	-15.26	0.47	0.78	-16.50	1.24
1993-03	**6.27**	**-0.05**	**0.18**	**6.14**	**0.13**
1993-96	**9.25**	**-0.54**	**-0.51**	**10.30**	**-1.05**
1998-01	**7.35**	**0.05**	**0.56**	**6.75**	**0.60**
2002-03	**5.35**	**0.78**	**1.07**	**3.50**	**1.85**

Table 5. Albania Growth Accounting Results II

A. Assuming Significant Part of Communist Capital is Permanently Scrapped between 1990-92

	Average Annual Real GDP growth (%)	Contribution from:			
		Capital Growth	Labor Force Growth	TFP Growth	Factor Growth
1982-89	2.17	2.20	1.93	-1.97	4.13
1990-92	-15.26	-4.85	0.78	-11.19	-4.07
1993-03	**6.27**	**0.67**	**0.18**	**5.42**	**0.85**
1993-96	**9.25**	**0.10**	**-0.51**	**9.66**	**-0.41**
1998-01	**7.35**	**0.78**	**0.56**	**6.01**	**1.34**
2002-03	**5.35**	**1.62**	**1.07**	**2.66**	**2.69**

B. Assuming Capital Share of 0.50 & Permanent Scrapping of Significant Part of Communist Capital

	Average Annual Real GDP growth (%)	Contribution from:			
		Capital Growth	Labor Force Growth	TFP Growth	Factor Growth
1982-89	2.17	3.70	1.38	-2.91	5.07
1990-92	-15.26	-7.94	0.55	-7.87	-7.39
1993-03	**6.27**	**1.12**	**0.13**	**5.02**	**1.25**
1993-96	**9.25**	**0.17**	**-0.37**	**9.44**	**-0.19**
1998-01	**7.35**	**1.31**	**0.40**	**5.65**	**1.70**
2002-03	**5.35**	**2.71**	**0.76**	**1.88**	**3.47**

Table 6. Albania School Enrollment Rates and Public Educational Spending

	1989	1990	1992	1995	1998	2001
Pre-Primary Enrollment Rate	42.5	44.4	27.9	28.9	28	33.5
Primary Enrollment Rate	102.2	102	94.5	96.8	92.6	103.1
Secondary Enrollment Rate	78.8	78.3	50.4	38.6	42.1	49
of which:						
General Secondary	24.5	23	31.7	30.6	35.8	41.3
Vocational/Technical	54.3	55.3	18.7	7.9	6.2	7.6
Higher Education Enrollment Rate	6.9	7.8	11	10.2	12.3	14.8
Public Education Spending / GDP ratio (%)						
Albania	4	4.2	4.2	3.8	2.9	2.7
Bulgaria		5	6.1	4	3.9	4
Romania	2.2	2.8	3.6	3.4	3.3	
Poland		4.8	5.4	5.2	5.1	5.4
Hungary	5.7	5.8	6.6	5.5	4.9	5.1

Source: UNICEF Transmonee Database 2003

Figure 2. Secondary School Enrollment Rates

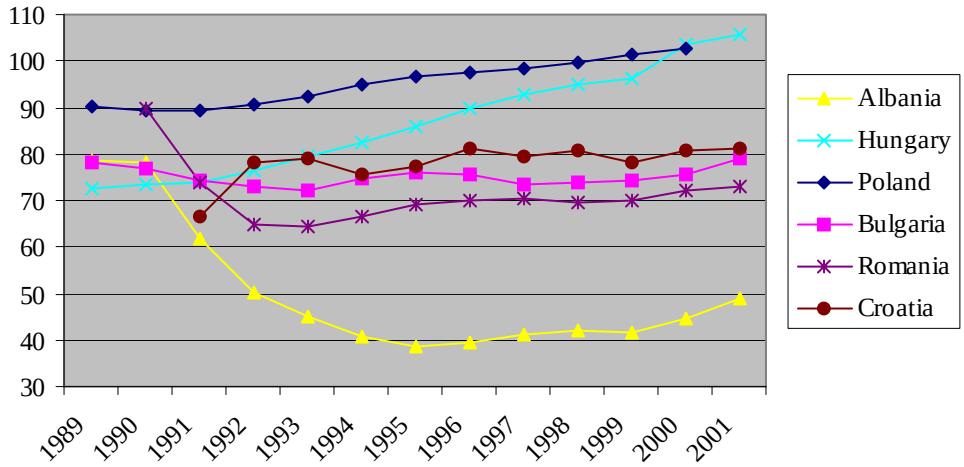
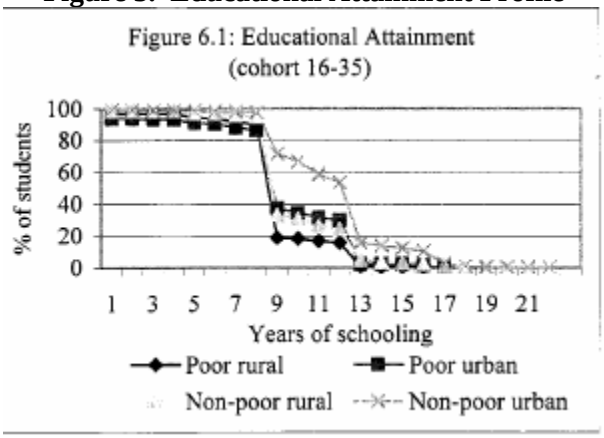


Figure 3. Educational Attainment Profile



Source: Albania Poverty Assessment

Table 7. Comparison with Higher Growth & Slower Growth Countries

	Secondary School Enrollment Rate	Investment (% of GDP)	Trade (% of GDP)	Exports (% of GDP)
All Countries				
High Growth	54.2	25.0	67.3	32.3
Slower Growth	47.1	19.7	58.2	26.5
Countries with Similar (Y/L)				
High Growth	54.9	27.4	81.9	39.6
Slower Growth	40.7	21.3	60.6	27.5
Albania	45.1	18.3	58.5	18.1

Notes: Figures for Albania are 1999-2001 averages. Growth in comparison countries is for 1980-2000--for those countries, enrollment rates are averages for 1980 and 1990, and investment, trade, and export shares are averages over the entire 1980-2000 per

Table 8. Estimated Neoclassical Growth Equation

Dependent Variable: Growth of Real GDP per capita 1980-2000

	Estimated Coefficient	Standard Error
Constant	-21.93**	3.66
ln(I/Y)	3.09**	0.75
ln(sec)	0.76**	0.35
$\ln(n+g+\delta)$	-7.47**	1.43
$\ln(y_{80})$	-1.11**	0.32
Observations	83	
R^2	0.53	

Note. Equation estimated using robust standard errors.
** denotes estimated coefficient is statistically significant at the 5% level.

Table 9. Predicted Long Run Growth Rates for Transition Economies

	Real GDP per capita (PPP-based $) 2000	Gross Domestic Investment (% of GDP)	Population Growth Rate	Secondary School Enrollment Rate	**Predicted Long Run per capita Growth Rate**	Standard Error of Predicted Growth Rate
Albania	3,350	18.3	0.85	45.1	**2.16**	0.33
Armenia	2,791	18.5	0.16	42.7	**3.30**	0.51
Azerbaijan	2,793	22.7	0.83	35.6	**2.88**	0.29
Bulgaria	5,785	18.9	-1.00	76.2	**4.90**	0.74
Belarus	8,408	23.8	-0.35	70.9	**4.01**	0.41
Czech Republic	13,673	29.2	-0.24	81.1	**4.04**	0.40
Estonia	9,588	26.7	-0.43	78.0	**4.43**	0.43
Croatia	8,524	23.1	0.02	80.1	**3.43**	0.32
Hungary	10,444	29.0	0.32	101.8	**3.65**	0.28
Kazakhstan	7,394	20.5	-1.09	55.4	**4.81**	0.69
Kyrgyz Republic	3,014	18.1	0.94	40.8	**2.07**	0.33
Lithuania	7,242	21.6	-0.52	63.2	**4.08**	0.49
Latvia	7,648	27.3	-0.78	73.8	**5.29**	0.55
Moldova	2,082	22.3	-0.26	38.0	**4.74**	0.62
Macedonia, FYR	5,135	19.3	0.62	67.3	**2.45**	0.32
Poland	9,229	24.7	-0.03	95.8	**3.76**	0.32
Romania	4,287	19.2	-0.15	71.9	**3.81**	0.54
Russia	8,013	17.8	-0.51	70.0	**3.43**	0.52
Slovak Republic	11,417	28.8	0.08	84.0	**3.73**	0.33
Slovenia	15,756	28.1	0.11	96.6	**3.37**	0.32
Tajikistan	1,321	14.5	0.83	29.0	**2.15**	0.63
Ukraine	4,624	19.4	-0.80	59.3	**4.68**	0.69
Average	6,933	22.3	-0.06	66.2	**3.69**	0.46

Note. Investment, population growth, and secondary school enrollment rates are averages for 1999-2001.

Table 10. Institutional Indicators for Transition Economies

	Rule of Law	Government Effectiveness	Regulatory Quality
Albania	-0.73	-0.53	-0.23
ECE Positive Growth	+0.39	+0.39	+0.55
ECE Negative Growth	-0.19	-0.30	+0.08
Baltics	+0.34	+0.42	+0.78
CIS	-0.84	-0.82	-0.99

Notes: Each indicator is measured on a scale of -2.5 to +2.5, with higher values indicating better governance. Source of data is Kaufmann, Kraay, and Mastruzzi (2003). Reported figures are averages for 1996-2002.

Table A1. Country List

Country	Real GDP per capita, 1980 (PPP based $)	Growth Rate of Real GDP per capita, 1980-2000 (%)
Fast Growth Countries		
China	1072	6.26
Korea	4830	5.95
Ireland	9978	4.86
Thailand	2756	4.56
Mauritius	5768	4.41
India	1162	3.79
Hong Kong	12516	3.79
Uganda	442	3.77
Malaysia	4905	3.53
Indonesia	1891	3.27
Sri Lanka	1782	3.08
Chile	5418	3.02
Dominican Rep.	2916	2.96
Portugal	9024	2.85
Bangladesh	967	2.77
Pakistan	1159	2.75
Egypt	2419	2.74
Nepal	863	2.63
Norway	16772	2.39
Turkey	4325	2.29
Japan	15631	2.28
Spain	11520	2.25
Slower Growth Countries		
United States	21337	2.23
Tunisia	4354	2.21
United Kingdom	14340	2.18
Finland	15484	2.15
Guinea-Bissau	453	2.08
Austria	15706	2.05
Netherlands	16164	2.04
Australia	17092	2.01
Israel	11394	1.98
Belgium	16303	1.89
Denmark	18282	1.88
Germany	15841	1.83
Italy	15161	1.81
Canada	19022	1.74
France	16201	1.61
Syrian Arab Rep	2965	1.61
Sweden	17179	1.60
New Zealand	14304	1.37
Morocco	2976	1.11
Colombia	4314	1.10
Burkina Faso	769	1.10
Slower Growth Countries		
Greece	11767	1.09
Benin	996	0.99
Uruguay	7944	0.95
Malawi	648	0.95
Switzerland	22320	0.84
Trinidad and Tob	9466	0.82
Mexico	7603	0.71
Panama	5318	0.66
Brazil	6327	0.64
Ghana	1204	0.57
Senegal	1465	0.51
Guinea	2584	0.46
Costa Rica	5413	0.40
El Salvador	4160	0.32
Jamaica	3470	0.31
Paraguay	4449	0.26
Philippines	3275	0.22
Argentina	10556	0.20
Mali	948	0.11
Kenya	1231	0.06
Ethiopia	641	-0.05
Guatemala	4053	-0.17
Cameroon	2125	-0.20
Jordan	4051	-0.20
South Africa	7892	-0.23
Gambia, The	1284	-0.27
Zimbabwe	2627	-0.28
Peru	4866	-0.30
Mozambique	1129	-0.43
Honduras	2272	-0.50
Bolivia	3046	-0.56
Ecuador	4191	-0.95
Venezuela	7905	-1.04
Rwanda	1104	-1.04
Tanzania	599	-1.09
Niger	1111	-1.19
Madagascar	1087	-1.31
Cote d'Ivoire	2498	-1.45
Zambia	1240	-1.65
Burundi	756	-1.83
Togo	1370	-2.27
Nigeria	1209	-2.64
Nicaragua	3066	-2.76
Chad	1622	-2.89

Source: Penn World Tables

Table A2. Country List--Similar Income Countries

Country	Real GDP per capita, 1980 (PPP based $)	Growth Rate of Real GDP per capita, 1980-2000 (%)
Fast Growth Countries		
Korea,	4830	5.95
Thailand	2756	4.56
Mauritius	5768	4.41
Malaysia	4905	3.53
Chile	5418	3.02
Dominican	2916	2.96
Egypt	2419	2.74
Slower Growth Countries		
Turkey	4325	2.29
Tunisia	4354	2.21
Syria	2965	1.61
Morocco	2976	1.11
Colombia	4314	1.10
Panama	5318	0.66
Brazil	6327	0.64
Guinea	2584	0.46
Costa Rica	5413	0.40
El Salvador	4160	0.32
Jamaica	3470	0.31
Paraguay	4449	0.26
Philippines	3275	0.22
Guatemala	4053	-0.17
Jordan	4051	-0.20
Zimbabwe	2627	-0.28
Peru	4866	-0.30
Honduras	2272	-0.50
Bolivia	3046	-0.56
Ecuador	4191	-0.95
Cote d'Ivoire	2498	-1.45
Nicaragua	3066	-2.76

Source: Penn World Tables