Economic Growth in Transition CEECs: Implications for and of Modern Growth Theory

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Introduction

Transition to a market economy in the Central and Eastern European countries (CEECs) has led to a U-shape response of output, that is, a sharp decline in output followed by recovery. At the present stage the main object of these counties' policy is to recover the economic growth under the new market conditions and promote further sustainable economic development.

The paper is aimed at analyzing basic developments in the CEECs during the last 8-9 years, concerning the efforts to stabilize the economies and return to steady economic growth in perspective of the new endogenous growth theory[1]. Six countries are considered: the Czech Republic, Hungary, Poland, Slovakia, or the so-called Vishegrad group, as well as the Balkan countries Bulgaria and Romania. The Vishegrad countries were traditionally more developed than the other former socialist countries. Bulgaria and Romania had higher economic growth in comparison with the Vishegrad countries in the 1980s. The Vishegrad countries are relatively advanced in the transition. Unlike them Bulgaria and Romania have still problems of stabilizing inflation and providing the macroeconomics foundations for steady growth, and have just been undertaking adequate structural reforms to establish the microeconomics foundations of growth. The study is organized as follows.

The first section presents an overview of the basic macroeconomic indicators by country: GDP, inflation, unemployment, investment, trade balance, external debt, etc. The economic performance of these countries for the period 1990-1997 is analyzed in view of outlining the main determinants of their economic growth in terms of the modern growth theory. The last about nine years have brought radical changes in the CEECs, such as the growing share of the private sector in GDP, the redirection of trade from East to West, the positive alterations in the size structure of the manufacturing and service sectors, the resumption of foreign

[1] An earlier version of the paper was presented at the seminar in the Economic and Social Research Institute in Dublin (Ireland), 15 December 1997. This research was undertaken with support from the European Union's Phare ACE Programme 1996 (Contract No P96-6739-F), project titled "Measuring the endogenous economic growth in transition countries: the case of Bulgaria".

direct investment (FDI) in the region for the first time since the Second World War. In general, the CEECs succeeded in establishing the ownership, trading, structural, organizational, institutional, and parliamentary political conditions for a market economy. The results vary from country to country.

The second section presents the basic ideas of the new modern (endogenous) growth theory, as they are developed by its founders and their followers. The endogenous theory is discussed as a new approach to measuring and analyzing economic growth, giving rise to a variety of new issues, in particular these, concerning the transition CEECs' economic growth.

The third section discusses implications of the modern growth theory in the case of the economic performance of the transition CEECs. For the time being it is impossible or of no practical value to carry out direct measurement with the help of already existing models or new ones: firstly, because of the comparatively short period has passed since the beginning of the 1990s, and secondly, because of the mixed and not typical nature of the economic situation, that means transition from centrally planning to a market economy under the condition of a severe crisis. The economic performance of the CEECs, however, shows in a specific way the importance of the new modern growth theory for explaining and promoting economic growth. Finally, concluding comments are given, concerning the two main subjects: the nature and prospects for the future of the new endogenous growth theory and the efforts of the transition CEECs to turn the corner towards economic growth.

Economic Growth and Performance of the CEECs, 1990-1997: An Overview

The declines in output during the initial phase of transition in CEECs were considerably larger than most observers had expected. Although the process has begun, the recovery in all countries is slow and still precarious. Economic growth began in these countries, but up to 1995 most of them did not recover their level in 1989 (or in Poland's case 1979) [2]. It can be noted that Poland is relatively the best placed in terms of the relevant macroeconomics indicators, followed by Hungary, the Czech Republic, Slovakia (Table 1)[3].

The basic macroeconomics indicators (annual changes of output, unemployment, inflation, labour productivity, trade balance, external debt etc.) of the countries under review for the first eight years of transition to market type economy are presented in Table 2 and Table 3. General developments could be summarised as follows. The first four years, approximately, were dominated by a severe crisis. In the case of Bulgaria, for example, the crisis was expressed by slowdown of GDP by one third and of industrial production by half. After that some signs of these countries' recovery appeared: GDP began to grow, inflation to decline, fixed capital formation to increase, unemployment rate to decrease .

Generally, the immediate consequence of the transformation on rural performance was the drastic falls in agricultural production, in particular in 1992 and 1993. The Bulgaria's agriculture, for example, had the lowest production in 1993. For the period 1990-1994, the real output in agriculture decreased by 55%.

[3] It should be noted, for example, that after the Great Depression the USA GDP level of 1929 has been recovered in 1937.

Total consumption significantly decreased in the 1990s in every country considered except Poland, where consumption has been declining since the crisis of the late 1970s and early 1980s.

Investment in every country under review decreased faster than GDP. The most dramatic year was 1991, when the fixed capital formation rates were twice lower than those of output in the Czech Republic and Slovakia, much lower than that of the output in Poland, Bulgaria and Romania. For Hungary are typical the same rates of decline (over 11%) for GDP and fixed capital formation in 1991. Since 1994 the fixed capital formation rate notably increased in the Czech Republic, Romania, Poland, etc. In general, however, in the mid-1990s investment rates and the ratio of investment to GDP have been still low This indicator is predetermined to a great extent by two others: indebtedness and foreign direct investment (FDI).

Except the former Czechoslovakia and Romania, the emerging market economies inherited considerable external debt burdens from the old regimes. In 1989 Poland was with the largest debt in absolute term (about $ 43 billion, as the country is inhabited by over 36 million population), followed by Hungary (over $ 20 billion, and 10 million population), Bulgaria ($ 9 billion, and 9 million population), the former Czechoslovakia ($ 6.5 billion, and about 17 million population) and Romania ($ 1 billion, and 23 million population). Bulgaria's external debt was negligible in the early 1980s, and it was accumulated during the following years, while the old regime in Romania gave a priority at that time to reducing the state external debt. The Czechoslovak government had not built up foreign debt. In mid-1990s the gross external debt in these countries is still very high amounting in 1996 to 1.9 years' exports in Hungary, 1.7 years' exports in Poland and 1.6 years' exports in Bulgaria. Relating to GDP, the external debt in Bulgaria is bigger than the annual mid-1990s GDP, in Hungary it is about three-quarters of the GDP, in Poland is about half of it. Hungary is typical of punctual repayment, since in 1985 and 1994 the ratios of debt servicing to exports were about 36 - 37% (Table 6).

The importance of foreign direct investment (FDI) to the transformation of the CEECs should be stressed. It is known that Hungary has dominated in the region as a destination and imported more capital than any other CEEC. Having a declining trend of the public and external debt ratios, Hungary has regained the confidence of international investors. FDI inflows were strong and this country could borrow on the international capital market at continuously improving rates (European Economy, 1997, p. 8). Discussing the phenomenon of FDI in Hungary, other favorable factors should be mentioned: the better geographical location of the country in comparison with the other CEECs, the good country's image, the relatively higher level of industrial development, the highest share of foreign trade with developed market economies in the past decades compared with the other countries under review which indicates deeper economic relations with the Western countries. Nevertheless, without a large inward flow of FDI the Hungarian debt crisis would have become inescapable as early as 1993. In any case, with a fall in GDP of over 20% between 1989 and 1995 and a huge burden of debt servicing, there was no way of generating at home the capital needed to modernize the economy. So a large inward flow of FDI remains the only possible way of financing the structural and technological renewal of the economy, introducing new management methods, and attaining new levels of organization and discipline.

World practice shows that the preferences to locate productive capacity in one country rather than another are based mainly on economic factors such as labour costs, profitability, tax regimes, transport costs, but also geographical proximity, political stability and economic prospects. In this aspect, the CEECs advantages so far are their relatively very low labour costs, skilled labour force and the potential for market expansion. The most often discussed factor with foreign investors until now is the availability of highly trained and cheap labour force in the CEECs which could give such projects a high return on capital. There are available data only for Hungary, where it is estimated that only 40% of foreign capital was spent on purchasing, restructuring and modernising formerly state-owned firms (Ehrlich, 1996, p.10).

Theoretically FDI is always regarded as favoring local growth because it is likely to bring advanced technologies, techniques and business methods. Thus FDI facilitates the capital formation that could boost exports and industry as a whole. The local impact of FDI, however, is more complex and less unambiguously beneficial than it is regarded. Generally, foreign companies are in fast-growth, high-productivity sector but tend to bring with them a restricted range of functions and could not been integrated well into the local economies (Bradley, J. (ed.), 1995, p. 46). In many cases the initial motive for FDI in the CEECs is to gain market share or eliminate a potential competitor. The take-overs are not always designed to improve or modernize the activity. In addition, since all the countries considered have not yet developed long-term industrial strategies, FDI could impact on or change their industrial structure development in a different way (Elteto, at al, 1995).

The data for labor productivity show that its decline also follows the U-shape response of output, but the recovery is faster (Table 7). This phenomenon should be explained except by other processes going on, by the process of overcoming of the overemployment (or the substantial labor hoarding) during the pre-transition period. For example, the number of employed in the Czech Republic decreased by 10% in 1985-1995, in Bulgaria by over 27% in 1990-1997. Taking into account the size of the output decline, the worst positions of Romania and Bulgaria could be understood.

The two digit levels of unemployment rates are typical of all the countries under review in the 1990s except the Czech Republic and Romania (Table 2). The low unemployment rate in the Czech Republic (only 3%) is a good indicator in itself, but it could be considered also as evidence that restructuring processes are only just in the beginning on the micro level.

The unemployment rates are different by economic sector and they influence directly on the employment distribution. In all the countries under review the proportion of the employed in service sector increased at the expense mainly of industry. The following picture is typical for Bulgaria. The level of agricultural employment is about the same it was in 1989 (780 thousand), but due to the faster decrease in the industry employment, its proportion in total employment increased from 18% in 1989 to over 24% in 1996 and 1997. At present, one in every four employed in Bulgaria is engaged in agriculture, which is a rather high rate for agricultural employment both by international standards and for an industrial developed country at Bulgaria's level.

The transition CEECs could regard as an achievement the redirection of their trade from East to West. This means that the region is steadily returning to its position as an integral part of Europe and world economy. This situation is evident even in the case of Bulgaria

being in the past one of the most economically connected with the former centrally planned economies, in particular the former Soviet Union, i.e. its main trading partner and main supplier of energy and raw materials. It should be noted, however, that the collapse of CMEA trade, in particular both former Soviet markets and Soviet suppliers, has been earlier and deeper than expected. Every country paid a very high cost for the redirection in recent years, and will continue to do so.

It is argued that at present the CEECs economic growth is driven mainly by domestic demand which entails imports rising very fast there. The slower exports growth, however, resulted in a substantial widening of external imbalances in the second half of the 1990s (Table 4). The decline of the growth rate of EU imports from 7% in 1995 to only 3.75% in 1996, obviously has negatively affected economic developments in the CEECs. According to the EC forecasts, "the trade balances of the CEECs will further deteriorate, although at a slower pace" (European Economy, June 1997, p. 2). The arguments of this institution are that external imbalances can be treated as a normal phenomenon for transition countries, because of their high need for mainly imported investment goods. However, the dynamics of the fixed capital formation in these countries until now does not support much similar views. Studies on small firms developments in transition countries showed that among the biggest problems preventing small firms from increasing sales on the domestic market was the low level of demand (Bartlett and Rangelova, 1997a). The decreased purchasing ability of population should also be taken into account. On the other hand, theoretically the persisting trade balance deficits could be regarded as a sign of an eventually overheating of the economy.

Western countries could make, and have made, important contributions to the process of reform. Access to the markets of industrial countries is vital for a rapid return to growth. This interpretation is consistent with the view that most East Asian countries, for example, have achieved rapid economic growth and development by export promotion policies rather than import substitution policies (see Ito and Kruger (Eds.), 1995, p. 263). In fact, however, the Western countries maintain import restrictions on many potential Eastern European exports like food, textile, steel, etc. This problem is very complicated, but in general, we can say that providing the CEECs countries with access to western markets is the direct and best way to strengthen their market economies.

Most uncertainties on this subject concern agricultural relations. While the six CEECs considered as a whole realized ECU 960 million a positive trade balance of agricultural products with the EU in 1990, the deficit was over ECU 435 million in 1993, i.e. in the initial period under the concluded bilateral Association Agreements among the CEECs and the EU. It turned out that the method implemented for trade negotiations favored the EU, but not at all the CEECs. Thus, concerning the growing EU surpluses, Western Europe has gained until now more from the opening up of the CEECs economies than vice versa. The only country, achieved a favorable balance was Hungary, although it was reduced by half in comparison with those of the previous years (Rangelova, 1997a).

The inflation rate in all countries regarded continues its gradual downward trend with the exception of Bulgaria and to a lesser extent Romania. According to forecasts of the European Commission, it is expected to get close to or reach single digit levels in 1998 (European Economy, June 1997).

In general, all of the transition CEECs have suffered, to one degree or another, from inherited conditions connected with low competitiveness, the lack of developed financial and fiscal institutions, low confidence in economic policy, and the accumulation of bad loans. The initial conditions in *Bulgaria*, however, were more unfavorable than average in this entire region. The fact that Bulgaria has lagged behind the other CEECs in stabilization and structural reform reflects, to some extent, these relatively adverse initial conditions. In addition, we observed inconsistent implementation of the reform and economic mismanagement. The lack of structural reforms began to have harmful repercussions on the monetary reform and economic stabilization as a whole. After two years of moderately improving macroeconomics stability and growth (1994 and 1995), Bulgaria fell into a new economic decline in 1996, when GDP dropped by 10.9%. The lack of structural reform, combined with a real appreciation of the currency, led to a weakening of the balance of payments and decline in foreign reserves. Impending external debt service obligation, in addition, helped to create an exchange rate crisis. The Bulgarian currency fell from 70 per 1 USD at the beginning of 1996 to 500 per 1 USD by late December. At the beginning of 1997, the currency collapsed. In February the exchange rate approached 3000 BGL per 1 USD. Retail sales in the first two months of the year slow down by 70% in comparison with the same period in 1996, the average public sector wage fell to about USD 10 per month. The monthly inflation for January was 43.8%, for February was 242.7%, in March it was only 12.3%, but in April it was -0.7%, i.e. deflation, in May there was again inflation in size of 5.6% .

In April 1997 new parliamentary elections have been held in Bulgaria aimed to stabilize the economy and to restore confidence. The programme agreed with the IMF entails the introduction of a currency board arrangements (from 1 July 1997), price liberalization, and a major acceleration of privatization. In general, the programme is with a strong emphasis on structural reform. In the end of 1997 there were indications that Bulgaria has been starting to emerge from its deep economic crisis. Money has begun returning to the banking system The most expressive change was the fact that the central bank was able to increase its foreign exchange reserves to a highest level since 1990. Only in a few months later a remarkable success was achieved in terms of the financial stabilization in the country. One year after the introduction of the currency board arrangements the progress in the implementation of the reform is evident, although since the mid-1998 we have again observed an outflow of money from the banks as well as delaying privatization and structural reform. The main priority is however, to make up lost time and revive the economy. According to the OECD opinion (OECD Economic Surveys, Bulgaria, 1997, p. 2):

"The hope is that the crisis may at last provide a context to realize painful but necessary decisive measures to deal with loss-making banks and enterprises, accelerate privatization, and improve the overall environment for domestic and foreign businesses."

The economic growth in *the Czech Republic* is stable, but some problems have begun to emerge. This country is characterized by the strength of domestic demand (at present fuelled by rapid wage inflation, see Table 3), resulting in strong growth in imports. The economy therefore faces a large trade deficit, accompanied with other monetary and fiscal problems (Table 4). Analysts show that enterprise restructuring is getting more urgent.

Although significant progress has been made with the privatization programme since the beginning of transition, the process has now slowed (European Economy, June 1997, p.5).

The economy of *Slovakia* continues to grow rapidly. However, there are indications of overheating. Firstly, while in 1995 industrial production was still growing rapidly (8.3% in 1995), it began slowing down and it was only 2.5% in 1996, and 2.2% in 1997 (Table 2). Secondly, due to the strong increase in imports, the trade balance deteriorated from a deficit from 1.1% in 1995 to a ten times higher deficit in 1996 (-11.1%). There are indications for further deterioration (Table 4).

Hungary keeps to its moderate economic recovery. The country enjoys the confidence of international investors, and has attracted relatively large amount of FDI in the region. In the same time the growing gap has been widened between exports and imports. The Hungarian banking sector is relatively healthy, the structural reforms and privatization are going ahead.

The main source of growth in *Poland* is the private sector where nearly 80% of GDP is producing and about 60% of the labor force are employed (see Table 5). Poland managed to halve the debts it has accumulated since the early 1970s by repeated rescheduling. At present, the country meets a huge influx of FDI , which ranked Poland among the major recipients in per capita terms. Unemployment continues to decline.

Romania showed marked growth decline since 1996. A comprehensive programme of macroeconomic stabilization and structural reforms was announced in the beginning of 1997. However, the GDP dropped by 6.6% in 1997.

The debate about the EU's eastward enlargement has so far been marked by a prejudiced view that the countries joining would be the potential winners of accession, while the current members would be the losers (Gabrisch, H., 1996). This impression is probably reinforced by the pressure for early accession exerted by the CEECs, on the one hand, and the EU's delay, on the other hand. The EU interest to help these countries to overcome present economic crisis without expanding destabilisation effects in Europe coincides with its fear of the effects a very fast accession procedure that might have on both sides.

In 1998 preliminary talks with three from the countries under review (the Czech Republic, Hungary and Poland) on their full membership in the EU began. As the overview presented shows these countries are closer to the economic criteria demanded for membership in the EU than the rest ones. Giving priority of the three countries, however, will create conditions for widening the gap between them and the rest Central and Eastern European countries. Bulgaria and Romania still have to do much more efforts to achieve economic progress. On the other hand, these countries will be discouraged because the long-time prolongation definitely will not contribute to settle the problems existing, and even could have the opposite effect. For all CEECs the shorter is the horizon time for entry, the more effective will be they in improving their economies.

Basic Features of the Modern Growth Theory

In the last over ten years economic growth theory has been characterized by numerous developments (Romer, 1986; Lucas, 1988; Rebelo, 1991). The common feature of these models is that, in contrasts with the classical and neo-classical growth theory, they assume

that there is no diminishing return to capital. Investment, whether in physical or human capital, leads to an increase in productivity that exceeds the private gain. According to a Romer definition:

> "Exogenous growth models fill in the blank with a constant that is a fundamental parameter of the economy. Endogenous growth models fill it in with an expression that is a function of other basic parameters of the model, including parameters that can be changed by policy-makers" (Ito and Krueger (eds.), 1995, p. 67).

In other words, while long-term growth was driven by some unexplained trend of technical progress called total factor productivity (TFP), which became known as the Solow residual or in the terminology of Gomulka (1986, p.21) "the measure of our ignorance", endogenous theory explicitly takes into account the fact that technical progress has itself economic determinants, and depends on the incentives to innovate, to acquire education, and on the acquisition of knowledge as a by-product of economic activity (learning-by-doing), all channels being dependent on many aspects of the economy. Recent empirical studies indicate that additional sources of cross-country variation should be included, especially differences in government policies and in initial stocks of human capital (Barro and Sala-I-Martin, 1995, p.10). Other endogenous growth models emphasize on the role of international trade (Barry ,1996).

There are studies identifying a variety of endogenous growth patterns. Bradley reviews these developments, focusing on the set of four mechanisms which these theories have postulated may be responsible for generating faster economic growth. Taken in turn, these are: human capital; public capital or infrastructure; industrial policy; and technology and trade (Bradley (ed.), 1995, p.27).

The origin of the endogenous growth theory could be connected with the research interest in growth based on catch-up theory. In general, catch-up depends on what Abramovitz (1986) called "social capability". This means "the ability effectively to assimilate the required technical and organizational changes which in term depends on institutional arrangements and the incentives facing political decision-makers as well as investments in intangible capital" (Crafts, 1996, p. 31).

The new modern (or endogenous) growth theory is based on the neo-classical methodology and relies on the same concept such as aggregate capital stocks, aggregate production function, etc. It uses modern mathematical methods of dynamic optimization and differential equations. A clear distinction between the growth theory of the 1960s and that of the 1980s and 1990s is that the recent research pays much more attention to empirical studies. Many empirical studies pioneered by Barro (1990, 1991), followed by De Gregorio (1992) among others, has investigated the empirical link between long run growth and a variety of economic and social, political and institutional indicators in a cross section of countries, with the average growth rate of different countries as the dependent variable and various economic, social and political factors that might affect the growth rate.

It is well demonstrated in the literature, however, that until now there have been very few systematic tests of the new growth theory and most of the empirical work motivated by this theory has actually tested implications of the neo-classical growth models than testing

endogenous theory itself (Pack, 1994). The practice to include a wide range of explanatory variables has the advantage of trying to define omitted variables, but at the same time entails disadvantages. Scientists, however, make a serious effort toward reaching this goal, or in the terminology of Romer (1989, p. 51), growth theory once again entered "a period of ferment".

Macroeconomists have known for some time that the economics of ideas and knowledge differs in important ways from the familiar economics of objects. They change their thinking about fundamental policy issues in growth and development. For instance, in the case of East Asian countries, microeconomic flexibility and good macroeconomics policy has been an essential feature of successful economies. It could be generalized that "whether there is endogenous growth or not, any understanding of the East Asian experience, and especially of the rapid acceleration of economic growth after policies were changed, must take into account the role of economic policy in affecting growth rates.... those policies which immediately proceeded the transition to rapid growth" (Ito and Krueger (eds.), 1995, p.3).

It could be argued whether the present time is relevant to apply the economic growth theories to the experience of transition countries, mainly because of the mixed and untypical nature of the economic situation there in the last years, i.e. neither plan nor market under the condition of a severe crisis, which in addition is a period not long enough in itself for studying economic growth. But there are at least three argument supporting the idea.

(a) Firstly, when a topic like studying economic growth goes out of fashion or practice (as it has been more or less the situation in the CEECs since 1990), much of what is known in the area goes out of research work and even is not transmitted to students. Then when activity picks up, a new generation of researchers has to spend time rediscovering results that have previously been established.

(b) Secondly, short-run fluctuations more often than not have long-run effects. Because "long-term growth presumably constitutes a process of commutative rather than repetitive change to a greater degree than other economic phenomena" (Abramovitz, 1989, pp. 116-117). From this follows that we need to understand better the relationship between the short-run behavior of the economy and its long-run dynamics.

(c) Thirdly, if we are able to make better analyses using the modern growth theory, we could apply it for improving the short-term economic policy in the CEECs.

The CEECs Experience and the Modern Growth Theory

The increasing interest in the new endogenous theory has resulted in explosion of empirical applications, reflecting in different way the economic relations in both market economies and the transition CEECs, namely: investment and growth; innovation and growth; growth and welfare; trade policy and growth; economic integration and growth; international debt and growth; fiscal policy and monetary policy and growth (Barro, 1990; De Gregorio, 1992); human capital and growth, in particular labor force structure and educational levels, economic implications of the aging population; peripherality in economic geography and modern growth theory (see Barry, 1996), etc. Until recently, the effect of nation's

institutions in stimulating or retarding economic growth was a completely ignored issue but nowadays is regarded as one of the important growth factors.

In open economies like the CEECs trade policies could affect very strongly innovation and growth. The integration of these countries into the world trade could create powerful forces that speed up growth. At the same time trade policy is quite heavily constrained by international agreements, and may have very negative impact in a recently liberalized economies.

Further on we discuss some implications how the underlying forces of growth have changed in the transition from centrally planning to market type economies (Table 8). There are concerned three main groups of growth determinants: *first*, monetary and financial policy, in particular managing exchange rates (ER) and the role of inflation for promoting growth in their capacity of factors for stabilization of the transition countries' economies; *second*, the role of the macroeconomics policy, in particular of the government for restructuring of these economies and *third*, the role of hidden economy, in particular tax evasion (TE).

1. Monetary and Financial Policy: Implications for Growth Policy

One of the implications in the endogenous theory is that two otherwise identical economies except for economic policies, could have as a result of their economic performance in long-term not only different levels of income but also different rates of economic growth.

Managing Exchange Rates

The ER became one of the most important policy indicators in the CEECs. The choice of ER regime has implications for economic growth. The ER regime can influence economic growth mainly through investment and productivity. There are a variety of ER regimes within the two polar regimes: fixed and floating, for example, pegged to a single currency, pegged to a basket of currencies, limited flexible, managed floating, independently floating, etc. Theoretically, adopting a pegged ER in the beginning of the 1990s (as it was the practice of the countries under consideration except Bulgaria) can lower inflation by inducing greater policy discipline and greater confidence in a given currency. Thus pegged rates are associated with higher investment, but also with slower productivity growth which is regarded as an advantage of the floating regimes. The theory also indicates that small open economies are better served by a fixed ER, and that the less diversified is country's production and export structure and the more geographically concentrated is its trade, the stronger is the case for a fixed ER. Also the lower is the level of economic and financial development, the greater is the relevance of a fixed ER regime (World Economic Outlook, October 1997, p. 82-83). This means that the capability to use the nominal ER as an adjustment mechanism could result in better stability of growth.

What is the situation in the CEECs under review? In 1991 Bulgaria adopted the so-called dirty (or managed) floating regimes (until 1 July 1997, when a currency board regime was introduced on the basis of Deutsche Mark). In theory the floating ER is strongly related to the rates of inflation. Judging by the elasticity coefficients, calculated on the basis of monthly data available for the period 1991-1997, in practice such a relation was not observed, or when it was observed, it was weak. This means that the ER did not follow

inflation. The impact of other factors influencing the ER should be remembered, primarily the intervention of the Central Bank.

Romania adopted two ERs: the official and the so-called market ER, as there are constraints that the latter could not fluctuate more than 10% around the official one. As a result until now the real ER in this country is relatively stable. It could be speculated that the system of constrained market ER did not allow in Romania the same developments of the ER which were observed in Bulgaria as well as in most CEECs, namely a gradual appreciation of the real ERs.

In the mid-1990s sustained economic growth in the Vishegrad countries was accompanied by rising external imbalances. In response of concerns about the worsening trade balances these countries turned a special look at the relation between this imbalance and the ER policy.

It was noted that Hungary attracted relatively large amounts of FDI, but at the same time a growing gap has been observed between exports and imports. In this connection it should be added that a high level of international reserves is generally regarded as positive phenomenon, but the other side of the story is that accumulating international reserves there are indirect costs in form of upward pressure on ER in a debtor country. In order to improve the trade balance a stabilization package of March 1995 was introduced in Hungary, including a pre-announced crawling peg regime with monthly 1.9% in the first, and 1.3% devaluation in the second half of 1995. The package brought about 9% devaluation and 8% import surcharge on consumer and intermediate goods for domestic sale. Halpern (1996) analyses five real ER indicators for Hungary, as they are explained in econometric equations by employment, unemployment, productivity, interest spread and real producer wage. The conclusion is that for Hungary is important to increase flexibility of ER to avoid large fluctuations in differences in yields on foreign and domestic assets, or more generally, to react to ever changing external and internal position.

Inflation and Growth

It is known that there are many channels through which inflation affects economic growth: allocation of resources, in particular the role of money and its effect on the productivity of capital and the rate of capital accumulation. Because of high rate of inflation households and firms tend to divert resources from productive activities to other activities allowing them to reduce the burden of the inflation tax. High inflation rates change the consumer behavior. In the case of transition countries high rates of inflation force people to exchange their money deposit into hard (convertible) currency which change the patterns of money turnover entailing further consequences. It has to be stressed that removing inflation is necessary but not a sufficient condition to foster growth.

In practice, there are different combinations between the degree of inflation and growth, e.g. inflation without growth, low inflation and slow growth, rapid growth and inflation, growth without inflation, etc. The studies on interaction of inflation and growth are among the most numerous in the field of economic growth research. However, economists cannot until now unambiguously identify the relationships between inflation and growth both in short-term and long-term. The experience in the CEECs is one challenge more in this sphere. At the same time, using the endogenous growth theory, some scholars began to specify empirical

growth models in a way, which made it possible to isolate the analytical and empirical links between inflation and growth.

Gylfason and Herbertsson (1996) use a simple model of the simultaneous determination and interaction of inflation and growth to estimate the growth part of the model. The model is constructed by incorporating money into an optimal growth framework with increasing returns to scale. Several channels through which high inflation tends to reduce growth and declining growth tends to amplify inflation are discussed. The effect of inflation on growth is estimated using data for 170 countries for the period 1960-1993. The result shows that during this period increased inflation tended to retard growth in a large group of countries at all income levels, both across countries and over time. The link between inflation and growth is fairly strong: an increase in inflation from 5% to 50% a year from one country or time to another reduces the rate of growth of GDP per capita by 0.6% to 1.3% a year depending on the benchmark regression, other things being equal. The link is not linear. As the authors claim, their model constitutes an attempt to introduce money and inflation into the effects of monetary and fiscal policy, private saving, and portfolio choice on both inflation and growth in long-term. The link between inflation and growth is established here by combining the quantity theory of money and portfolio choice with an optimal growth model that includes money. This approach is different with this of De Gregorio (1992), where inflation growth through investment and its productivity provides this link or with the approach of Roubini and Sala-i-Martin (1995), where financial repression provides the link between inflation and growth (this model is taken up later).

For self-evident reasons studying the interaction between inflation and growth in the CEECs is still at a tentative phase. Using econometric tests it is found that the CPI in Bulgaria can be explained by government borrowing, adaptive expectations of inflation, exchange rate movements and interest rates. In a less satisfactory equation describing the PPI, the most important variables are the exchange rate, interest rates, domestic credit and wages.

Miller (1997) studies an interesting aspect of the interaction between high inflation and declining industrial output typical of many CEECs in the early years of transition. In most countries the PPI is rising much more slowly than CPI. Miller explores the implications of this increasing divergence. The gap between the growth rate in producer prices and retail/consumer prices (calculated on the basis of the movement in the index over the previous 12 months) has been particularly sharp in Bulgaria (1.36), followed by Hungary (1.14), the Czech Republic (1.1), Poland (1.07). In Romania (and Russia) the reverse has occurred: the PPI has moved up more rapidly than the CPI. It turns out that some economic indicators like real exchange rate movements; real interest rates and real wage changes are very different when are viewed from the perspective of the PPI. Considering the price changes in this light, it is clear how state enterprises are experiencing a profit squeeze caused by high real interest rates and rapidly increasing real wages. Concerning the economic growth, this means that significant income in Bulgaria has been generated in the retail sector, including the new private sector.

2. Growth and the Role of Government

According to the endogenous innovation approach, the growth rate could increase by appropriate government intervention. When the government has not managed to reduce public expenditure as planned, it has nevertheless hampered the growth rate. Private and still more public consumption develops as a functions of the government decisions. In recent studies the effects of government consumption on the rate of economic growth have been examined, where it is shown that an increase in the share of government consumption in GDP has a negative effect on the rate of economic growth. The argument is that government consumption has no direct effect on private productivity, but lower saving and growth through distortionary effects from taxation (see Barro, 1990).

During the transition from centrally planed to a market economy, where the private productivity is not yet an important growth factor, total consumption, in particular public consumption tends to move in parallel with investment, as a result of monetary and fiscal policy. Formulating the monetary and fiscal policy at this stage of shrinking GDP, governments take into consideration the public mood in view of maintaining political stability. In Hungary, for example, social spending on unemployment, health education and pensions accounted for almost three-quarters of public spending. On the other hand, the people in these countries enjoyed generous social welfare benefits systems under the condition of centrally planning, such as transport and housing subsidies and extensive food price support measures. Since real wages in the period under review have been diminishing for self-evident reasons, curbs on public consumption could be politically dangerous. In this respect government policy varies from country to country.

The CEECs experience in the last eight years showed, that supply-side policy could be regarded in general successful, but in many cases ineffective and even sometimes harmful. As main reasons for this phenomenon could be pointed at least the following:

(a) The very hard initial conditions, and the severe crisis have caused a unique and difficult process of transition to a new type of economic relations. Under these circumstances there is constant need to improvise and the challenge is to do so while at the same time not giving up systematic rational thinking;

(b) In the capacity of en executive body the governments prefer to concentrate on subsidizing physical investment looking for a short-term effect than to consider the endogenous factors, links, consequences for the economic growth (Crafts, 1996, p. 35). Taking into account the severe economic crisis of the CEECs in the early 1990s, the governments' first priority in many cases was merely one of conducing "first aid" as they attempted to "save the state";

(c) During transition period political decision makers, more than usual, see votes to be lost rather than won by undertaking short-term pain from supply-side reform even when the long-term rewards could compensate or even benefit the possible losers. Moreover, it is known, that short-term macroeconomics performance has powerful effects on government popularity;

(d) There were (are) inevitably mistakes due to inexperience or policies which had (have) unintended consequences;

(e) The phenomenon corruption. The willingness to engage in corruption, in particular at the lower levels of officials' bureaucracy frequently receives an impetus from low and

often declining real value of public salaries. Officials in the transition countries could have a weaker aversion to corruption also because in many cases they have been catapulted (mainly for reasons of an ad hoc or short term policy) from the lower ranks into position of power and, therefore lack of sense of mission and social distance from those they deal with;

(f) The fact that the role of the government in the former centrally planned economy had overwhelming provided a fertile ground for the spread of corruption. By the time these regimes collapsed, the effect of corruption was felt through most economic activities. The process of reducing the role of the state in the economy (by price liberalization, privatization of state enterprises, etc.) itself produces enormous opportunities for bureaucratic corruption during the transition when the institutions necessary to limit it have not yet been developed while the habits developed in the previous period may not have changed. As a result the scale of "the trade within the state" was significantly extended.

The sources of corruption related to the extent of government intervention in the economy are, as follows: trade restrictions as the prime example of government-induced sources of rents; government subsidies (including tax expenditures) explain corruption as a function of industrial policy; low wages in the civil service relative to private sector wages or per capita GDP are also a potential source of (low-level) corruption, etc.

In fact, the former co-ordination mechanism in the CEECs was abolished, but a new market-type mechanism has been just emerging. As e result, in many aspects companies have no orientation. In particular, this caused discrepancies between the macro and micro economy, or rather the macro and micro levels of the economy which influences badly on the whole economic performance (Bartlett and Rangelova, 1997a, 1997b).

To develop the economy, an active role of the government is still needed; it should be the state together with the Parliament and the courts beyond government. As the Hungarian economist J. Kornai (1993) emphasizes:

> "A growth-oriented government programme is necessary to encourage investors and intervene in manufacturing parts of the market mechanism. The new role of the state should include making laws and sanctioning them, pursuing a fiscal and monetary policy and to create new institutions of the market."

3. Informal Economy and Economic Growth

The discussion of the impact of the informal economy (hidden, grey, second, underground, shadow, etc., the shades of these terms' meaning in this case does not matter) is centred on the effect on the level of GDP, respectively on the GDP growth rate. Does the inclusion or exclusion of hidden economy estimates in the transition countries markedly affect any conclusion about the economic growth? How could informal economy influence on the economic growth?

In general, the following factors are likely to determine the extent to which informal economy plays a significant role in a country:

(a) the role of the state and the range of instruments it uses to pursue that role: the more state influence in the economy, the more spread corruption;

(b) the social characteristics of the society, that means the extent to which arm's length relationships prevail in social and economic relations. There is evidence that public officials are more likely to do favors to their relatives in societies where family ties are strong;

(c) the nature of the political system;

(d) the penalty system for acts of corruption.

It is a general impression that the increasing size of the informal economy causes significant losses to the economy, insecurity, and disorder. Corruption, for example, is found to lower investment efficiency and to alter the composition of government expenditure, specifically by reducing the share of spending on education. The data in Table 9 give indications about existing positive correlation between corruption, rate of accumulation and rate of economic growth (e.g. Indonesia, China, Thailand, etc.). In general, the higher is the rate of accumulation, the more careful should be the government about the level of widespread corruption.

The erosion in a government's capacity to formulate and implement policies making for economic growth is an obstacle to economic progress. Corruption in general hinders the development of international trade and investment by rising transaction costs and distorting the operation of free market. Finally, in all its ramifications, corruption is likely to have negative implications for the stabilization role of the government (Rangelova, 1997b).

According to evidence, corruption makes lower the allocative efficiency, as follows:

(a) it might reduce the effectiveness of aid flows through the diversion of funds, which is of particular relevance to transition countries;

(b) it may bring about loss of tax revenue taking the form of tax evasion;

(c) by affecting tax collection or the level of public expenditure, it may lead to adverse budgetary consequence or it may affect the composition of government expenditure;

(d) it may worsen the allocation of talent;

(e) it may lead to lower quality of public infrastructure and services. For example, corrupt bureaucrats could allow the use of cheap materials in the construction of buildings or bridges that would subsequently collapse.

In the transition countries two sides of the informal economy could be defined. For the “participants” in the first side the black economy offers the only chance of a livelihood during the difficult period. The other, far larger and economically and socially more important part of the informal economy is related to the rich middle and upper strata, who operate in the most dynamic sectors of the economy (Ehrlich, 1996, p.13).

There are already available techniques for estimating the magnitude of the informal economy. In particular, there are known five basic approaches to estimating the extent of the informal economy based on, as follows: voluntary surveys and samples, tax auditing and

other compliance methods, discrepancies between income and expenditure, monetary approach, econometric analysis. All of them, however, are far from being perfect, i.e. still suffer from significant limitations.

There are not yet available data on informal economy in the transition countries over time. Since the SNA'93 version is implemented in these countries, however, which version for the first time includes accounting of the informal economy contribution, there are already some experimental data for the last years. This practice will be developed in the future. Until now, on the ground of indirect estimates we could conclude that during the past several years the proportion of the hidden economy to Bulgaria's GDP is at least 25-30%. This proportion for Hungary is estimated to 30% in 1992, for Poland 17-18% in 1995, etc. (Rangelova, 1996). According to other studies in Bulgaria the proportion of informal sector in 1997-1998 is about 40% in agriculture, 50% in transport and trade, 54% in service sector.

Tax evasion (TE) is a worldwide phenomenon and the dominating activity among the others forming hidden economy. It seems likely that the level of informal economy income is closely connected with tax evaded income.

TE became increasingly popular in the transition countries, in particular among newly created private firms. For example, according to official data for 1994, the private sector in Bulgaria generated nearly 40% of GDP, employed were 36% of the labour force, but paid only 3-5% of the taxes (Table 5).

There are publications using the modern growth theory and trying to integrate TE in models of economic growth. We will discussed shortly two models related to the topic concerned. In the case of East Asian economic growth a simple one-sector model of endogenous growth is used, deriving the necessary and sufficient condition under which an economy with TE obtains a larger rate of economic growth than an otherwise identical economy without TE (Chen, 1997). The author's initial assumptions are the following. When TE exists, tax revenue is reduced and therefore government expenditure services shrink. On the other hand, taxation of income harms economic growth hurting the incentives to form capital. It could be considered that TE increases disposable income of households, which in turn augments capital formation and thereby raises economic growth. The net effect depends upon whether the effect through increasing disposable income due to TE dominates the effect through shrinking government services and increasing the cost of TE and tax investigation. In the case where the effect of rising disposable income dominates, the rate of economic growth goes up.

The second model (Roubini and Sala-i-Martin, 1995) is rather different in comparison with the above-presented. In the former model the size of the government is allowed to alter, whereas in the latter a constant size of the government is specified. The results are different. The authors of the second model find that in a developing economy where the size of the government is constant and TE exists, the government will optimally choose to repress the financial sector in order to increase seigniorage taxation. This reduces the growth rate of the economy. Let us remind that according to the first model described in an economy where the size of the government is variable and distortionary income taxation exists, TE raises individuals' disposable income and shrinks the size of the government. As a consequence, economic growth could be promoted. Thus the first model try to break the general

impression that TE is at any rate detrimental to an economy. The results, however, should be interpreted with caution and need further development.

Concluding Comments

About the Modern Growth Theory:

Although there is a growing number of new empirical studies, some supporting Solow and more of them trying to support the new theory, we cannot yet say that there is a sharp distinction between the two alternatives. This could partly due to the fact that the existing tests are not yet powerful enough. For this reason authors like Helpman (1992) regard the neo-classical theory and the new one as "compliments rather than substitutes". Or, as Crafts (1996, p. 36) says, "it is the spirit than the letter of the well-known models which is applicable".

Actually, the modern growth theory has always been implicit in historical research and recent progress in economic theory formalizes some of these ideas and makes them more testable. In this aspect, better measurement and analysis of TFP growth stands out as a key requirement for adequately evaluating the contribution of endogenous growth models.

Many important issues like: international transfer of technology and growth, personal income distribution and growth, business cycles and long-term growth, economic infrastructure developments and growth, and so on are unexplored and wait for further research.

The state of knowledge concerning economic growth, in particular technical progress change has been predetermined more or less by the data available for studying and analysis. The increasing number of the empirical studies on the endogenous growth theory based on modern statistical techniques and accumulating statistical data over time are conducive factors for its further development.

The experience of the transition CEECs' economic performance until now outlines the great importance of the issues considered by the endogenous growth theory, i.e. a variety of determinants of the economic growth. The different views of these countries about the appropriate speed or ways of transition process implemented in different policies as well as their practical experience would help the subsequent development of theory. Meanwhile, a rich database (long-time series) for empirical studies will be created.

About the CEECs' Economic Growth:

There are increasingly encouraging signs that the process of transition in the CEECs is working and successful, and the next step will be actively promotion of economic growth there. In this aspect the modern growth theory could be very helpful tools.

Not only macroeconomic stability and privatization should be fulfilled, but also the social institutions of entrepreneurship have to be rebuilt because of the crucial importance of entrepreneurial activity in the process of growth and development in these countries. Together with the disadvantage to build these institutions from the very beginning, i.e. on "a plain field", the CEECs have the unique opportunity to build them and to create an economic environment that provides incentives for investment and growth, taking into account the experience of the advanced countries already gained.

The ultimate success of the adjustment and growth promoting efforts in the CEECs depends on their capacity to develop all market economy institutions necessary to support a market economy, as well as to establish a credible new framework for economic decision-making, including efficient coordination among them. Further progress is also needed to put in place the framework of instruments and institutions through which monetary policy can operate in a market economy.

These countries have to create the adequate environment for realizing to a higher degree their potential "social capability" in the efforts to achieve economic progress.

Applied theoretical and empirical economic research has to be an important component in economic policy realization in the transition countries. This will help to achieve both better governments and politics and better economics.

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Table 1: Real GDP and Real Gross Industrial Output, 1990-1997 (Indices, 1989=100)

Year	Czech Republic	Slovakia	Hungary	Poland	Bulgaria	Romania
Real GDP						
1990	98.8	97.5	96.5	88.4	90.9	94.4
1991	87.4	83.3	85.0	82.2	80.2	82.2
1992	84.5	77.9	82.4	84.3	74.4	75.0
1993	85.0	75.1	81.9	87.6	73.3	76.2
1994	87.3	78.7	84.3	92.1	74.6	79.2

1995	92.9	84.2	85.5	98.6	76.7	84.8
1996	96.5	89.7	86.6	104.6	69.0	88.2
1997	97.5	95.6	90.4	111.8	64.2	82.3
Real gross industrial output						
1990	96.5	96.0	90.7	75.8	83.2	81.9
1991	73.0	77.4	74.1	66.8	66.4	63.3
1992	67.2	70.3	66.9	69.4	54.2	49.4
1993	63.6	67.6	69.6	73.8	48.8	50.1
1994	65.0	70.9	76.2	82.8	54.0	51.7
1995	70.6	76.8	79.7	90.8	56.4	56.6
1996	72.0	78.7	82.4	98.3	58.6	62.2
1997	75.3	80.8	91.5	109.0	54.5	58.5

Source: Economic Survey of Europe, 1998. Economic Commission for Europe, United Nations, New York and Geneva, No 2, pp. 146 and 148.

Table 2: Basic Economic Indicators, 1990-1997 (Annual percentage change)

Year	Czech Rep.	Slovakia	Hungary	Poland	Bulgaria	Romania
Real GDP						
1980-89	..	..	1.5	0.5	3.6	1.7
1990	-1.2	-2.5	-3.5	-11.6	-9.1	-5.6
1991	-14.2	-14.5	-11.9	-7.0	-11.7	-12.9
1992	-6.4	-6.5	-3.1	2.6	-7.3	-8.8
1993	0.6	-3.7	-0.6	3.8	-1.5	1.5
1994	2.7	4.6	2.9	5.2	1.8	3.9
1995	5.9	6.8	1.5	7.0	2.1	6.9
1996	4.1	7.0	1.3	6.1	-10.9	3.9
1997	1.2	5.7	4.0	6.9	-7.4	-6.6
1998*	2.2	4.0	4.8	5.7	4.5	2.0
Industrial production						
1993	-5.0	-14.0	4.0	6.4	-2.2	1.3
1994	2.4	6.4	6.0	12.1	6.0	3.3
1995	9.2	8.3	4.8	9.7	1.7	8.9
1996	0.5	2.5	2.3	8.5	-6.0	8.5
1997	0.5	3.7	7.9	10.7	-15.4	-10.7
Agricultural output						
1990	-2.3	-7.2	-3.8	-2.2	-6.0	-2.9
1991	-8.9	-7.4	-6.2	-1.6	-0.3	0.8
1992	-12.1	-13.9	-20.0	-12.7	-12.0	-13.3
1993	-2.3	-14.1	-9.7	6.8	-18.3	12.8
1994	-6.0	13.7	3.2	-9.3	7.1	0.2
1995	5.0	4.4	2.6	11.7	16.0	4.9
1996	..	..	4.9	0.3	-13.3	1.8
Fixed capital formation						
1990	6.5	5.2	-7.1	-10.6	-18.5	-35.6
1991	-26.8	-28.1	-11.6	-4.5	-19.9	-26.0
1992	8.9	-3.6	-2.7	-2.3	-7.3	11.0
1993	-7.7	-16.0	1.7	2.9	-17.5	8.3
1994	17.3	-4.0	12.2	9.2	1.1	20.1
1995	16.1	5.8	1.1	9.2	..	13.1
Unemployment rate						
1990	0.7	1.6	1.7	6.1	1.8	1.3
1991	4.1	11.8	7.4	11.8	6.7	3.1
1992	3.1	11.3	10.7	12.9	13.2	6.2
1993	3.5	14.4	12.1	16.7	15.7	11.5
1994	3.3	14.6	11.4	16.5	12.8	11.0
1995	3.0	13.8	10.6	15.2	11.1	9.9
1996	3.1	12.6	11.0	14.3	12.5	7.5

1997	4.0	13.0	10.7	12.3	13.7	6.7

* Estimates of the International Monetary Fund.
Sources: World Economic Report, 1998. International Monetary Fund, Washington, D. C.; OECD CEECs database and Economic Survey of Europe in 1995-1996, pp. 77, 88 and 184; European Economy. European Commission. Supplement C. Economic Reform Monitor, No. 3 - September 1997 p. 2; National Statistical Institute in Sofia, Bulgaria.

Table 3: Inflation and Wages in CEECs, (Annual percentage change)

Year	Czech Republic	Slovakia	Hungary	Poland	Bulgaria	Romania
Consumer price increase						
1980-89	..	..	8.9	43.0	2.5	2.9
1990	9.7	10.4	28.6	585.8	23.9	127.9
1991	56.7	61.2	34.8	70.3	333.5	161.1
1992	11.1	10.0	22.8	43.0	82.0	210.4
1993	20.8	23.0	22.4	35.3	72.8	256.1
1994	10.0	13.4	18.8	32.2	96.0	136.7
1995	9.1	9.9	28.3	27.9	62.1	32.3
1996	8.8	5.8	23.5	19.9	123.0	38.8
1997	8.4	6.2	18.3	15.0	1089.4	154.8
1998*	11.0	5.0	13.0	11.0	35.0	5.4
Real wages						
1990	..	..	-3.7	-24.4	6.9	5.5
1991	-24.5	..	-4.0	-0.3	-39.4	-16.6
1992	10.1	..	-4.0	-2.7	19.2	-13.2
1993	3.7	-3.9	-0.5	-0.4	-8.7	-13.5
1994	7.7	3.2	3.1	3.2	-23.9	-2.0
1995	7.7	4.4	-12.2	4.5	-9.1	16.7

* Estimates of the International Monetary Fund.
Source: Economic Survey of Europe in 1995-1996 (1996), pp. 185 and 187; European Economy. Supplement C. Economic Reform Monitor. European Commission. No. 3 - September 1997, p. 3.

Table 4: Trade Balance of the CEECs, 1994-1998, (% of GDP)

	1994	1995	1996	1997*	1998*
Czech Republic	-1.5	-0.8	-11.5	-12.0	-12.4
Slovakia	0.6	-1.1	-11.1	-13.4	-14.9
Hungary	-8.7	-5.8	- 6.1	-6.3	-6.6
Poland	1.4	-1.6	- 6.2	-7.8	-9.5
Bulgaria	-0.2	0.9	1.6	1.2	1.1
Romania	-1.7	-4.6	-4.6	-4.2	-1.4

* Estimates of the EC.
Source: European Economy. European Situation and Economic Reform in Central and Eastern Europe. Supplement C, Economic Reform Monitor. European Commission , No 2, June 1997, p. 2.

Table 5: Private Sector Contribution to GDP and Employment (in %)

	Czech Rep.		Hungary		Poland		Bulgaria		Romania	
	GDP	Empl.	GDP	Empl.	GDP	Empl.	GDP	Empl.	GDP	Empl.
1990	12	..	25	..	31	..	9	6	16	..
1991	17	..	30	..	42	..	12	10	24	..
1992	28	31	42	48	45	56	16	19	26	41

1993	45	47	50	53	48	59	35	28	32	44
1994	56	53	60	..	70	..	39	36	39	..
1995	64	..	68	..	75	..	48	41	45	..
1996	74	..	75	..	78	..	52	47	50	..
1997	..	..	..	..	..	..	59	53	..	..

Sources: Czech Republic 1996, Basic Socio-economic Indicators, ed. by F. Turnovec, Center for Economic Research and Graduate Education of Charles University & Economics Institute of the Academy of Sciences of the Czech Republic, Prague, 1997, p. 5. The data source for Bulgaria is the National Statistical Institute in Sofia.

Table 6: Debt Indicators for CEECs (%)

Country	Ratios of		
	External debt		Debt service
		to exports	to exports
Former Czechoslovakia			
1985	12.8	34.7	8.3
1989	17.5	48.9	9.5
1990	20.2	59.8	9.8
1991	29.5	71.1	11.2
1992	23.8	44.5	9.5
1993	27.5	88.4	13.0
1994	30.7	96.6	18.0
Czech Republic			
1992	20.7	..	..
1993	27.2	..	..
1994	29.7	55.0	..
1995	35.8	77.0	..
1996	40.3	94.0	..
1997	..	94.0	..
Slovakia			
1994	..	47.9	..
1995	..	53.1	..
1996	..	71.6	..
1997	..	73.0	..
Hungary			
1985	70.6	139.4	36.8
1989	73.4	159.4	27.9
1990	67.2	186.3	37.0
1991	71.2	185.6	32.8
1992	62.3	171.5	38.7
1993	67.1	227.9	40.8
1994	75.7	219.8	35.9
1994	..	375.0	..
1995	..	250.0	..
1996	..	185.0	..
Poland			
1985	48.7	278.7	17.1
1989	54.5	292.1	10.4
1990	83.8	265.6	5.2
1991	70.0	351.9	9.3
1992	59.2	300.2	9.3

1993	52.7	283.0	10.6
1994	48.0	218.9	10.1
1994	..	249.0	..
1995	..	192.0	..
1996	..	166.0	..
1997	..	150.0	..
Bulgaria			
1985	22.0	32.3	9.9
1989	48.0	114.1	29.9
1990	57.0	239.3	30.4
1991	124.3	330.7	7.5
1992	118.3	281.8	9.6
1993	124.9	235.6	5.7
1994	106.8	194.6	7.1
1994	..	220.0	..
1995	..	151.0	..
1996	..	159.0	..
1997	106.0	212.4	22.6
Romania			
1985	14.9	63.5	18.7
1989	2.6	9.4	16.3
1990	3.1	17.5	0.1
1991	7.5	42.6	2.2
1992	14.9	71.5	9.0
1993	18.1	78.1	6.2
1994	22.6	94.0	11.1
1994	..	54.0	..
1995	..	59.0	..
1996	..	90.0	..

Sources: World Economic and Social Survey 1995 (1996), p. 336. Data for 1994 are estimates; European Economy. Economic situation and economic reform in Central and Eastern Europe. Supplement C, Economic Reform Monitor. European Commission. No. 3 - September 1997.

Table 7: Labor Productivity in CEECs Transition Countries, 1989 = 100 (Real GDP per employee)

	Czech Republic	Slovakia	Hungary	Poland	Bulgaria	Romania
1990	99.7	99.3	99.6	92.3	96.8	95.4
1991	93.4	97.0	96.9	91.2	98.3	83.4
1992	92.6	89.7	103.6	97.7	99.2	78.5
1993	94.8	88.8	108.3	103.9	99.3	82.9
1994	96.6	99.0	114.1	108.2	100.4	86.6
1995	100.1	98.2	117.8	113.7	102.0	97.8
1996	103.3	102.3	119.3	118.4	91.6	102.9
1997	105.5	..	..	..	76.7	..

Source: Calculated on the database in Economic Survey of Europe, 1998. Economic Commission for Europe, United Nations, New York and Geneva, No 2, pp. 146 and 148.

Table 8: The CEECs: Selected Macroeconomic Indicators, 1991-1996

	1991	1992	1993	1994	1995	1996
Real interest rates (in percent a month)						
Czech Republic	..	..	-0.5	-0.1	0.1	0.2
Slovakia	..	..	-0.8	0.1	0.3	0.1
Hungary	..	0.1	0.2	0.4	0.3	0.7
Poland	..	-0.1	-0.2	0.2	0.7	0.5
Bulgaria	..	-0.6	-0.2	-0.7	1.8	-0.9
Romania	..	..	..	1.6	1.5	-0.5
*Growth rate of broad money (in percent)**						
Czech Republic	..	..	..	19.9	19.8	9.2
Slovakia	..	..	..	17.4	18.4	16.2
Hungary	29.4	27.3	16.8	13.0	18.5	20.9
Poland	37.0	57.4	35.9	38.3	34.7	29.3
Bulgaria	..	50.4	53.5	77.9	39.6	124.3
Romania	101.2	79.6	141.0	138.1	71.6	66.0
*Dolarisation ratios***						
Czech Republic	7.9	9.3	8.1	7.2	6.4	7.6
Slovakia	3.1	6.3	11.5	13.0	11.1	10.0
Hungary	16.5	14.3	18.7	20.4	26.6	24.2
Poland	24.7	24.8	28.8	28.6	20.4	17.3
Bulgaria	33.4	23.4	20.3	32.6	27.2	50.5
Romania	3.9	17.9	29.0	22.1	22.6	23.4
*Net capital inflows (in percent of GDP)****						
Czech Republic	..	-1.3	6.8	6.1	17.8	6.6
Slovakia	..	-5.0	2.0	7.4	6.7	7.4
Hungary	..	1.2	15.7	8.2	17.3	0.5
Poland	..	-1.7	-0.9	-0.6	4.1	2.3
Bulgaria	..	-5.7	-2.5	1.1	3.9	-8.9
Romania	..	..	5.8	4.3	3.7	4.3

* Broad money (currency outside banks, demand deposits, and time and savings deposits) including foreign currency deposits.

** The dolarisation ratio is the ratio of foreign exchange deposits to broad money, including foreign currency deposits.

*** Net capital inflows are defined as the balance on financial account in the balance of payments, excluding changes in international reserves, plus net errors, and omissions.

Source: World Economic Outlook, October 1997. World Economic and Financial Surveys. International Monetary Fund, pp. 101, 100, 112, 113.

Table 9: The TI Corruption Index Number for 1997, Rate of Accumulation (investment/GDP ratio) and Real GDP Growth, 1990-1997 for Selected Countries

Country	Corruption index	Rate of accumulation	Real GDP growth rate
Denmark	9.94	18.6	2.7
Finland	9.48	16.9	1.5
Sweden	9.35	15.6	0.5
New Zealand	9.23	18.8	3.5
Canada	9.10	18.2	2.4
The Netherlands	9.03	19.8	2.4
Norway	8.92	20.8	4.0
Australia	8.86	20.4	3.8

Singapore	8.66	34.6	8.6
Switzerland	8.61	21.9	0.2
Ireland	8.28	16.6	6.4
Great Britain	8.28	15.5	2.3
Germany	8.23	21.7	1.5
USA	7.61	13.5	2.8
Austria	7.61	24.8	1.8
Hong Kong	7.28	29.7	5.3
Portugal	6.97	24.3	3.8
France	6.66	18.7	1.4
Japan	6.57	29.5	1.4
Hungary	5.90	20.3	0.2
Greece	5.35	20.2	0.3
Belgium	5.25	17.9	1.5
Czech Republic	5.20	30.8	2.9
Poland	5.08	17.9	3.5
Italy	5.03	17.8	1.0
South Africa	4.95	17.0	1.7
Spain	4.35	20.9	1.7
South Korea	4.29	36.5	6.8
Brazil	3.56	20.0	3.4
Turkey	3.21	24.0	4.5
Thailand	3.06	39.8	6.5
The Philippines	3.05	22.6	3.7
China	2.88	33.3	12.7
Argentina	2.81	17.6	5.4
Venezuela	2.77	17.9	2.0
India	2.75	22.6	6.6
Indonesia	2.72	32.3	6.9
Mexico	2.66	18.5	1.7
Pakistan	2.53	17.6	4.4
Russia	2.27	21.4	-7.0
Bangladesh	1.80	14.4	4.8
Nigeria	1.76	10.7	2.2

Note: The Transparency International elaborates The TI corruption indices. A scale is used from 0 to 10, where 10 means total absence of corruption. The good position of Singapore along with the developed countries could be explained by this country's experience simply to ban companies and businessmen guilty of corruption. This index for Bulgaria in 1998 is 2.9.

Sources: Tanzi, V. (1998) Corruption Around the World: Causes, Consequences, Scope, and Cures. International Monetary Fund. Working Papers, No 63, WP/98/63; International Financial Statistics Yearbook, 1998. International Monetary Fund, Washington, D.C.