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Macroeconomic Developments in Hungary and the Accession Process

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IIASA Interim Report
March 2000

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Interim Report **IR-00-013**

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Abstract

This paper evaluates the specific features of Hungary's macroeconomic performance since 1989 and draws up development scenarios for the future. The two scenarios assume accession and non-accession to the European Union in 2005. It is argued that the Hungarian economy's strong reliance on exports and inward FDI, its sensitivity to current account deficits, and the household sector's low propensity to save will persist in the coming years, although with some modification. It is envisaged that the most recent fast growth of exports and FDI will decelerate in the future; a modest revival is expected only if the country joins the EU in 2005. With accession, trade activities will be livelier, with more possibility for increasing investment and the accommodation of higher imports by larger current account deficits. The expected transfers from the Union will be utilized to prepare the ground for another boom in FDI and indigenous investment in the eastern and other backward parts of the country. Only following these will there be a sensible (i.e. more than one percentage point) difference in the growth rate of GDP between the non-accession and the accession scenarios.

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Macroeconomic Developments in Hungary and the Accession Process

János Gács (gacs@iiasa.ac.at)

Introduction

As ten transition countries prepare for membership in the European Union (EU), it is evident that incumbent members, particularly the most affected border states, are concerned with the likely impacts of the accession process on themselves. Precisely this interest has given rise to a comprehensive international research project known as PREPARITY[1], which is sponsored by the European Commission's INTERREG II C initiative. It is a collaborative research project between German, Italian, and Austrian research institutes.

Out of the 16 sub-projects of PREPARITY, the second in line was finished in late 1999 and its summary study published as Gács J. (Ed.), *Macroeconomic Developments in the Candidate Countries with Respect to the Accession Process*, December 1999, IIASA-WIFO-PREPARITY. The work was commissioned by the Austrian Institute of Economic Research (WIFO), and prepared by an international research team at the International Institute for Applied Systems Analysis (IIASA) in Laxenburg, Austria. Several country studies were elaborated to be used for the summary study and the present paper is the Hungarian country study.[2]

The aim of the research in the Hungarian study was to investigate likely macroeconomic developments in Hungary through 2010, based on two distinct scenarios: one that assumes accession for Hungary to the EU in 2005, and another that assumes that the country will not accede to the EU before 2010 (the status quo scenario).

In order to substantiate the prospects for economic performance in Hungary, section 1 of the paper presents the specificities and main patterns of macroeconomic development in Hungary since the start of the transition. Section 2 is devoted to the analysis of the existing calculations for Hungary's potential growth in the long run as well as to the likely development of the main factors of growth in Hungary. In order to delineate the framework of the projections section 3 deals with two crucial topics: the characteristics of foreign economic relations and savings. The next section begins with

[1] PREPARITY stands for Structural Policy and Spatial Planning in the Regions along the Borders of Central and East European Countries in Preparation for the Eastern Enlargement of the EU.

[2] The summary study is accessible at the PREPARITY web page (http://www.preparity.wsr.ac.at/), while the country studies and a study about the cost of environmental compliance are (or will be) readable and downloadable from the publication pages of IIASA's web-site (http://www.iiasa.ac.at/) in Publications, Publications Catalogue, Projects, ETI.

the general evaluation of the likely impacts of accession on the Central and East European Countries (CEECs) as new EU members and goes on presenting the scenario projections for Hungary. Finally, section 5 summarizes the results of the study.

Unless otherwise indicated, data used in this paper were taken from IMF (1997), KOPINT-DATORG, HCSO, NBH and WIIW.

1. Macroeconomic developments since 1989 - a Hungarian way?

From the start of the political and economic transition (1989-1990) the tasks of macroeconomic management in Hungary were partly similar to those in the other CEECs, and partly different. The early start of the Hungarian reforms is common knowledge, but it is less known that the reformed Hungarian economy could not show a good record in its macroeconomic management in the 1970s and 1980s. The growth performance was one of the worst in the CMEA, and that was combined with growing macroeconomic imbalances.

While, starting from 1968, the methods of macroeconomic control, and especially the framework of the operation of microeconomic units were different in Hungary from the traditional centrally planned system, they were at least as different from those applied in the market economies. The Hungarian goulash of macroeconomic control was a mixture of political command, licensing, ethical and political suasion, and the application of economic parameters in both transparent and non-transparent ways. In addition, the priorities of macroeconomic control were heavily influenced by the policy of the communist party and by Hungary's commitment to its communist allies.

Transition meant a break with the specific kind of Hungarian system, a break certainly less radical than in the case of more traditional centrally planned economies, such as, for instance, Bulgaria or Czechoslovakia. Nevertheless, it was a break. The country had to initiate similar institutional reforms as the other countries in the region, and introduce new tools to tackle its macroeconomic problems. These reform steps included liberalization (of prices, foreign trade, entry and exit to the market), the establishment of a two-tier banking system and other institutions that were prerequisites to an effective monetary policy, a tax reform and abolition of the bulk of government subsidies accompanied by restructuring both sides of the government's budget. Privatization of state-owned enterprises, apart from helping establish incentives of the market system, also freed business from party politics. The advantage of Hungary in many of these changes was an early start: price liberalization, for instance, got boosts already in 1968 and 1981; although trade liberalization started in 1989, liberalization of foreign trading, i.e. departure from the monopoly of foreign trading companies, evolved already from the middle of the 1980s.

The *specificities of Hungarian post-communist macroeconomic management and performance* to be described below can be partly traced back to the past.

The first specificity was that, due to its advance in reforms, the country escaped the initial inflationary shock (see Halpern and Wyplosz, 1998[3]). Repressed inflation had

[3] Many statements in this section originate from or correspond to findings in Halpern and Wyplosz's overview.

been relatively mild, as the Hungarian "goulash-communism" aimed at securing a satisfactory supply of goods and, simultaneously, tolerated moderate inflation. This meant that the buildup of a monetary overhang was moderate. Since the liberalization of foreign trade was not associated with a substantial devaluation of the forint (another specificity of Hungary's development), the country managed to avoid another initial push to inflation. Moreover, unlike in other transition economies, price liberalization in Hungary was a gradual process (see Swaan, 1998). As a consequence of these damping effects on price development, a stabilization package *per se* was not needed.[4]

A second specificity of the Hungarian macroeconomic development was the strong limitations of options available for macroeconomic management, due to the large initial external indebtedness of the country (see Tables 1.1 and 1.2). This starting position was combined with the decision of all the successive Hungarian governments in the 1980s and the 1990s to service the external debt rather than default on it and initiate negotiations over forgiveness and rescheduling with the creditors, as did several other countries in the region (such as Poland, Bulgaria, and Russia).

Table 1.1 The development of external debt levels in selected Central and East European countries, 1985-1990 (USD million)

	1985	1986	1987	1988	1989	1990
Bulgaria						
Gross Debt	3,852	5,866	8,266	8,944	10,137	10,890
Gross Debt/GNP, percent	22.0	29.1	29.4	84.7	114.2	239.7
Czechoslovakia						
Gross Debt	4,608	5,568	6,658	7,281	7,915	8,363
Gross Debt/GNP, percent	11.7	12.1	12.8	14.2	15.7	18.4
Hungary						
Gross Debt	13,955	16,907	19,585	19,609	20,397	21,277
Gross Debt/GNP, percent	70.6	74.3	78.1	71.4	73.4	67.2
Poland						
Gross Debt	33,336	36,670	42,603	42,103	43,077	49,162
Gross Debt/GNP, percent	48.7	51.5	69.8	63.9	54.5	88.4
Romania						
Gross Debt	7,008	6,983	6,580	2,960	1,087	1,173
Gross Debt/GNP, percent	..	..	17.4	7.3	2.6	3.1

Source: World Debt Tables 1996, The World Bank, Washington D.C.

[4] This explains why analysts find it difficult to date the start of Hungary's stabilization policy (see for instance Bruno (1992), and Fischer *et al* (1997).

Table 1.2 Hungary - Balances, debts, and FDI as percent of GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Gen. government balance budget[a]	-2.9	-2.4	-7.0	-6.7	-9.6	-7.4	-4.6	-4.8	-4.6*
Gen. government balance primary	-1.0	-0.1	0.3	-2.4	-1.6	1.7	4.5	3.1	1.8*
Operational balance					-5.5	-2.1	0.6	-0.4	
Gen. government debt		75.2	79.2	90.0	87.6	87.7	75.4	62.9	60.0
Trade balance	1.0	0.6	-0.6	-8.4	-8.7	-5.6	-5.6	-3.8	-4.5
Current account	0.4	0.8	0.9	-9.0	-9.4	-5.5	-3.7	-2.1	-4.8
FDI	0.9	4.4	3.9	6.1	2.8	10.2	4.1	2.7	5.0
Gross external debt	64.3	67.8	57.6	63.7	68.4	70.9	61.0	51.9	56.3
Net external debt	48.2	43.6	35.4	38.7	45.4	36.6	31.4	24.4	26.0

Source: Halpern and Wyplosz (1998) and own calculations.

[a] With accrual registration of interest payments

* Without the special measures carried out to solve Postabank Rt's difficulties including financial settlement of MFB Rt.(Hungarian Development Bank, Inc.), and provisions to compensate local governments for their shares in gas utilities privatized (altogether HUF 200 billion additional expenditure).

A third specificity was the continuation of the tradition of economic policymakers' preference towards muddling through reflected in naïve ideas about a smooth transformation *à la Hongroise* and resulted in delays in taking pressing radical measures (about this tradition see Kornai, 1996). This apparent attitude has made analysts routinely put Hungary into the bracket of the gradualists. However, the mechanical classification of Hungary as gradualist had to be changed at least twice in recent years: first in 1992, when the simultaneous introduction of strict regulations on bankruptcy, banking and corporate accounting caused a "legislative shock" (see Bonin and Schaffer, 1995), and in March 1995 when the austerity package named after the then minister of finance Lajos Bokros (the so called "Bokros package") led to radical changes in almost all the fields of macroeconomic policy. These shocks, while hampering a fast recovery and disinflation, triggered radical structural changes at the micro-level, which turned out to be fruitful for Hungary's development in the long run.

The last specificity is that Hungarian policy makers committed outright macroeconomic mistakes as well (see below).

In the following we survey the major spheres of macroeconomic development emphasizing Hungarian specialties.

1.1 Growth

In the early years of transition, Hungary's dismal growth performance astonished many external observers and the Hungarians themselves. The disappointment of Hungarians was even more understandable if we take into account that since the start of the open absorption of the effects of the first oil crisis, i.e. 1979, Hungary had to forget the fast growth characteristic of the early phase of central planing: between 1978

and 1989 the yearly growth rate surpassed 3 percent only once, and the average growth was a paltry 1.8 percent (see Figure 1.1). This growth performance was the worst in CMEA except Poland.

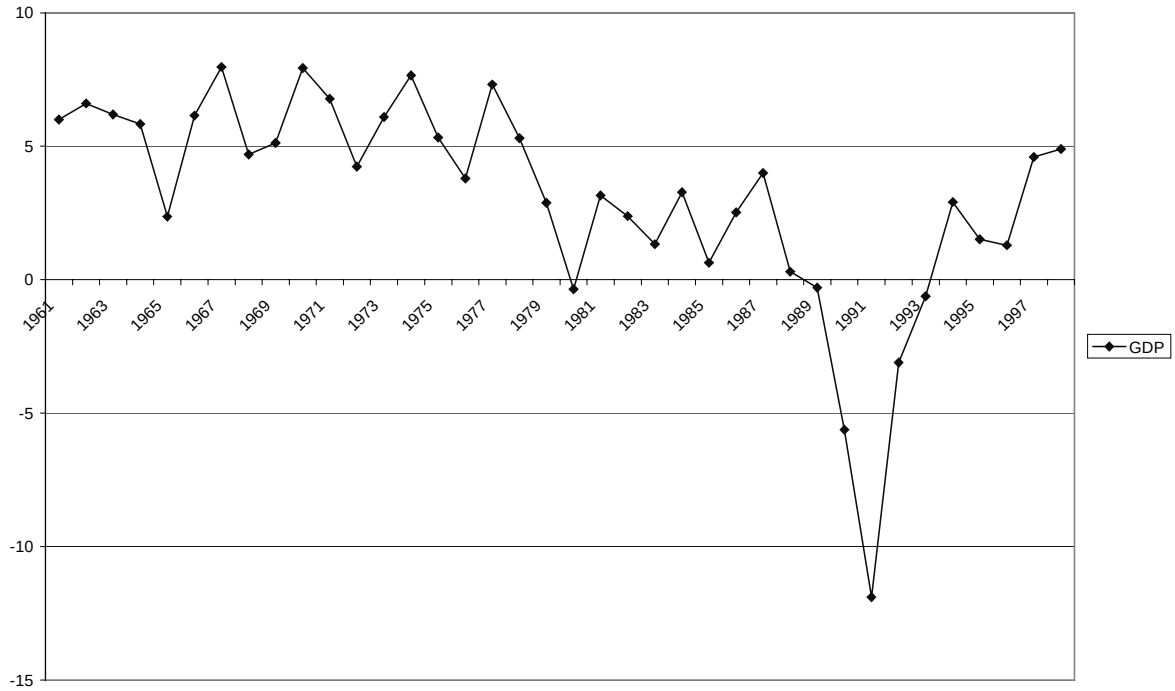

Figure 1.1 Hungary: Growth of real GDP, 1961-1998 (percent)

One of the reasons of the slow growth in the 1980s was that the Hungarian system, with its already relatively open economy, wanted to combine adjustments to the West and the East, but this did not turn out to be a winning combination. On the one hand, enterprises had to adjust to import prices that increasingly reflected world market prices and apply categories of the market system, and on the other, they had to play also according to the rules of the game in the CMEA. Market signals and political messages did not manage to give long term orientation for the enterprises. Politics wanted to cut with the low growth path, but artificial drives led to cyclical tensions in the trade balance, to a special investment cycle and increasing external indebtedness (see Bauer, 1981 and Lackó, 1980).

Although Hungary started its de-coupling from the CMEA somewhat earlier than the other CEECs (see Gács, 1994a), the demise of CMEA in 1991 and the collapse of the USSR in 1992 were felt there as shocks. As Gács (1994b) showed, out of the 18.9 percent drop of GDP in 1988-1992, 7.9 percent could be attributed to the direct and indirect impacts of the loss of export markets due to the disappearance of the CMEA and the USSR. Initially, reorientation of exports to Western markets was relatively fast, but much of these were distress exports that by 1992-1994 turned out not to be sustainable.

In recent years, analysts have identified various reasons for the deep output decline in CEECs in the 1990s (see for instance Rosati, 1994 and Holzmann *et al.*,

1995). Demand factors are usually mentioned as a primary reason, including the collapse of demand from former CMEA countries, especially from countries of the former Soviet Union (FSU), as well as the impact of the stabilization efforts following price liberalization. As indicated above, for Hungary, the former was important, while the latter had only a limited effect. The other frequently emphasized reason is the disruption of old distribution networks and supplier-user connections, as well as the slow development of new such connections. While this factor leading to output decline was more significant in traditional centrally planned economies, especially the FSU, Hungarian producers also suffered from it. One has to refer here to the situation when traditional domestic suppliers were crowded out by foreign ones, particularly with relation to newly acquired foreign owned multinational retail chains that stuck to their own foreign suppliers (see Lányi and Csermely, 1994).

A third reason for the output decline is "institutional": while in the course of restructuring the production of goods and services not needed anymore dropped instantaneously, the development of newly demanded indigenous supply needed time, especially if it had to compete with the imports that penetrated rapidly the domestic market. While Hungary was a forerunner in the region in building institutions of the market economy and that advantage really helped the supply response to develop, the above mentioned discrepancies in adjustment could not be avoided. In fact, some advances in institution building initially may have even aggravated the output decline: the legislative shock of 1992 (see above) was without doubt such a step driving non-viable (and sometimes even viable) companies out of the market rapidly and drastically.

After discussing the reasons for output decline it is worth looking at the economic indicators other than GDP that reflected the cumulatively 20 percent decline in total output.

The drop of output was substantial in industry: by 1992 real gross industrial production was 32 percent lower than in 1989 and only by 1998 has it recovered to its pre-transition level. Gross agricultural output fell cumulatively by 35 percent by 1993, but its recovery to the 1989 level is not expected in the near future. Housing construction suffered a 60 percent decline by 1994 and in 1998 it still stood at that level. Only in some, relatively limited, parts of the economy (namely "other services") showed up the positive side of the restructuring process, i.e. expansion, already from the beginning of the 1990s. Following the years of the deepest output decline, however, several sectors of manufacturing (particularly engineering) started to grow very rapidly.

Starting from zero, unemployment reached 13.3 percent in 1993 and has stayed around 10 percent in 1997-1999. The share of long-term unemployed had reached 45-50 percent by the second part of the 1990s. Similarly dramatic was the exit of about 17 percent of the previously employed from the labor force.

Among the macroeconomic indicators the smallest decline was recorded in aggregate trade figures (although these covered huge geographical and sectoral restructuring). Exports, for instance, stood at US$ 9.6 billion in 1989, the bottom was reached in 1993 with US$ 8.9 billion, while the ensuing recovery of exports led to a level of US$ 23 billion by 1998.

1.2 Inflation

Another source of disappointment with the Hungarian economic development in the 1990s was the slow and incoherent progress of the disinflation process. Single-digit inflation was achieved in the Czech Republic and Slovakia in 1995, in Slovenia in 1996, in Latvia and Lithuania in 1997; Bulgaria, Estonia and Poland reached it in 1999, while Hungary will attain it only in 2000.

The fact that in Hungary inflation has become customary before the start of systemic changes (in 1980-1984 and 1985-1989 consumer price inflation was at a yearly average 7 percent and 11 percent, respectively) could have had two, seemingly mutually exclusive, consequences. First, one could assume that the rearrangement of relative prices started earlier, so disinflation following the start of systemic reforms could have been an easier task. Second, the inflationary expectations and, consequently, inertia in wage and price setting developed early and became rooted in the behavior of the agents with the implication of a much longer and protracted disinflation process. As it turned out the two options were not mutually exclusive: rearrangement of relative prices started earlier, but especially in producer prices. Accordingly, in the field of regulated consumer prices much was left to the price liberalization starting in 1989-1990. While organized lobbies suffered losses when old institutions were disbanded in 1989-1990, the first democratically elected government itself wanted to continue the smooth transformation accustomed to during the goulash communism. Even without the pressure of lobbies it resisted initiating a radical disinflation process which could have threatened the standard of living of the population. While all transition countries suffered a shocking decline in real wages in one or in more years soon after transition started (27 percent decline in real wages in Poland in 1990, 26 percent, 28 percent and 16 percent in the Czech Republic, Slovakia, and Slovenia respectively in 1991, 19 percent and 37 percent in Romania and Lithuania, respectively in 1993, 22 percent in Bulgaria in 1994), the largest drop in real wages suffered by Hungarian wage earners in the early years was 7 percent in 1991.

Research is inconclusive with regard to the causes of Hungarian inflation (see Hamecz *et al.*, 1998 and Sahay, 1998). Nevertheless it seems that the stance of monetary policy was a major determinant of the developments. Monetary policy, however, was not formed independently of the government in the first years of the transition: direct financing of the budget was possible until the end of 1996, although to an increasingly limited extent. In addition, due to their inexperience, monetary policy makers could not easily solve the simultaneous tasks of going ahead with the disinflation policy, maintaining a real interest rate that encourages savings, and support a competitive real exchange rate.

While fighting several battles the policy makers committed also *outright mistakes*[5].

As it is clear by now, the relaxation of the policy stance in 1993-1994 was a mistake influenced by some early success in macroeconomic performance. By 1992, the current account showed some improvement and forecasts (wrongly) indicated a further expansion in the demand for Hungarian exports in western markets. At the same time, there was little understanding that through the bankruptcy of thousands of enterprises (a

[5] See especially Kovács (1998) and Halpern and Wyplosz (1998) about these issues.

consequence of the legislative shock of 1992) the firms making up the lion's share of the export capacity would be decimated. In 1993 it was decided that the decline of GDP should end. It was planned that the current account surplus, a reflection of total domestic investments falling short of total savings, should be reduced by encouraging capital investments, while the level of savings should be maintained. Monetary policy was eased through a lowering of interest rates. When exports started to fall (as a consequence of recession in Germany, the war in Yugoslavia, the decline in export capacities and the continuing real appreciation of the forint) and the current account surplus turned into a huge deficit, the government failed to correct its policies. It still expected that investments would grow to meet the increasing domestic demand triggered by the easier monetary policy stance. Liquidity was further increased by a temporary budget surplus and by the central bank's move to decrease the rate of mandatory reserves. Real yields on government securities under one year maturity and household's deposit rates turned negative and household savings started to fall.

Since domestic demand and imports grew fast, while exports declined, the current account and budgetary deficits became again a major problem, while the expected recovery of output did not occur. The policy mistakes and the adverse external development fuelled expectations for devaluation and inflation. Since lower interest rates directly improved the service of domestic debt, the resulting improvement in the governments' general borrowing requirement was misinterpreted as a positive development.

In March 1995 the newly appointed minister of finance and the governor of the central bank had to introduce a comprehensive package of austerity measures (the "Bokros package") to stop the expansion of the twin deficits (current account and general government) which became particularly dangerous from the point of view of the sustainability of servicing the external debt following the Mexican crisis.

While the austerity package established a policy direction which, especially through the newly introduced pre-announced crawling peg regime, limited the inflationary expectations, its major instrument to restrict and re-direct real expenditures to the preferred directions (from the population to that part of the enterprise sector that produced for exports and substituted imports) was inflation: this was the major reason for Hungary's relapse to higher inflation from 1995 (see Figure 1.2).

After the consolidation in 1995-1996 Hungarian policy-makers learned from their mistakes made in 1993-1994 and started a cautious disinflation process guided by the gradual decrease of the rate of the crawling peg. By 1998 the share of regulated prices made up 16.5 percent in the consumer price basket and the prices of these products and services already went through those corrections that were needed to adjust their profitability to the products and services in the unregulated sphere. This means that there is no accumulated tension in this field that could boost inflation in the future. In 1998-1999, the newly elected government made strong efforts to curb inflation inertia by eliminating explicit or implicit indexation in wages and other compensations.

In recent years Hungarian monetary policy managed to defend the macroeconomic balance in the face of increasing financial inflows in 1995-1997, basically by the instrument of sterilized intervention (see Oblath, 1999a). It also successfully protected the forint in the hectic weeks of September-October 1998 following the Russian financial crisis. While almost everybody realizes that, given Hungary's openness, as

well as the fairly liberal system of capital flows, including portfolio investments, the current band around the central rate of the forint (+/- 2.25 percent) is too narrow, until now the National Bank of Hungary has not been able to find the right moment to move to a broader band without threatening the credibility of the exchange rate and the rate of the announced crawl.

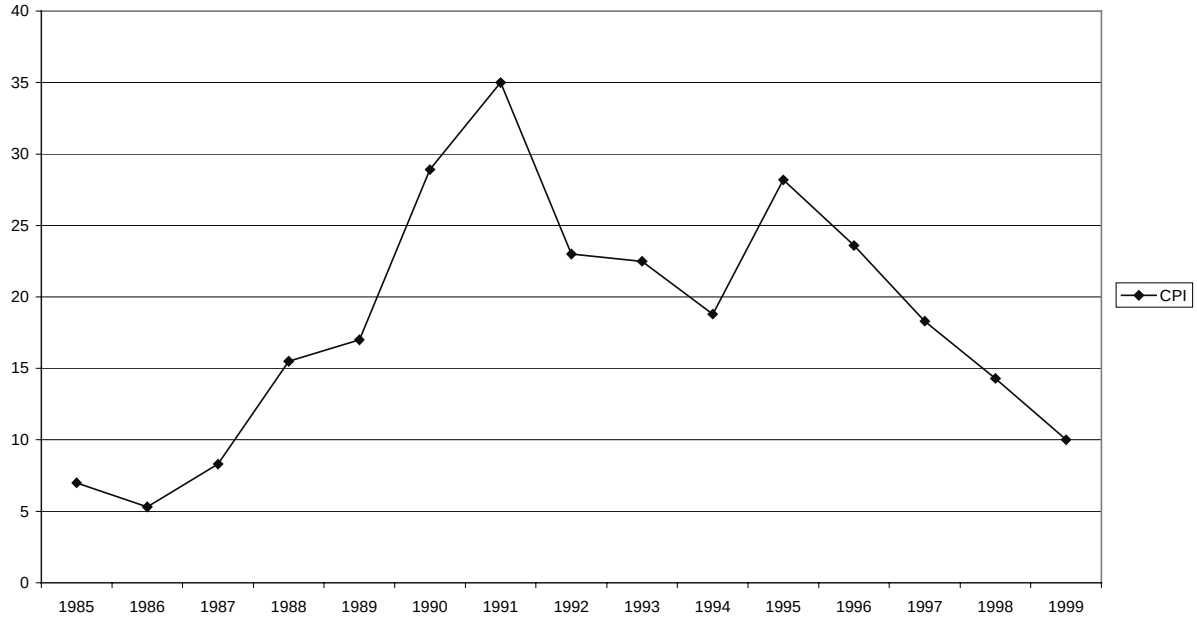

Figure 1.2 Hungary: Annual consumer price inflation, percent

1.3 External balance

One of the greatest successes of Hungarian development in the transition period is in its external economic relations. Following the reorientation of trade toward the West, Hungarian exports in 1994-1998 developed by a historically unprecedented 15 percent annually, while imports rose by 12 percent annually. There was, however, not only spectacular growth in the value and volume of trade (see Figure 1.3), but there were also substantial qualitative improvements: while earlier exports were dominated by agricultural and food products, certain unprocessed products, as well as light industry products (apparel, and footwear), by 1999 machinery exports gained a leading role. In 1998-1999, Hungary's major export products are combustible engines and parts thereof, passenger cars and parts thereof, office machines, electric parts and electric cables, video appliances, radio and television equipment, light bulbs and apparel.

Chief responsibility for these favorable developments can be credited to the activities of multinational companies which have made direct investments in Hungary. Due to Hungary's privatization stance, which has been characterized by a preference for strategic (mostly foreign) investors and the country's other appeals, a gradually increasing share of Hungary's enterprises has been partly or fully owned by foreign

investors. In 1997, the share of value-added produced in companies with foreign interest (in the value-added of all companies) stood at 49 percent, the share of company investment at 60 percent, and that of exports at 75 percent (Foreign Direct Investment, 1998). The importance of foreign investors has had favorable consequences for corporate governance, microeconomic restructuring, and increasing the companies' domestic and international competitiveness. In terms of the dominance of foreign-owned companies, Hungary had overtaken such prominent hosts of multinational companies as Canada, Austria, and Ireland (Hunya, 1998).

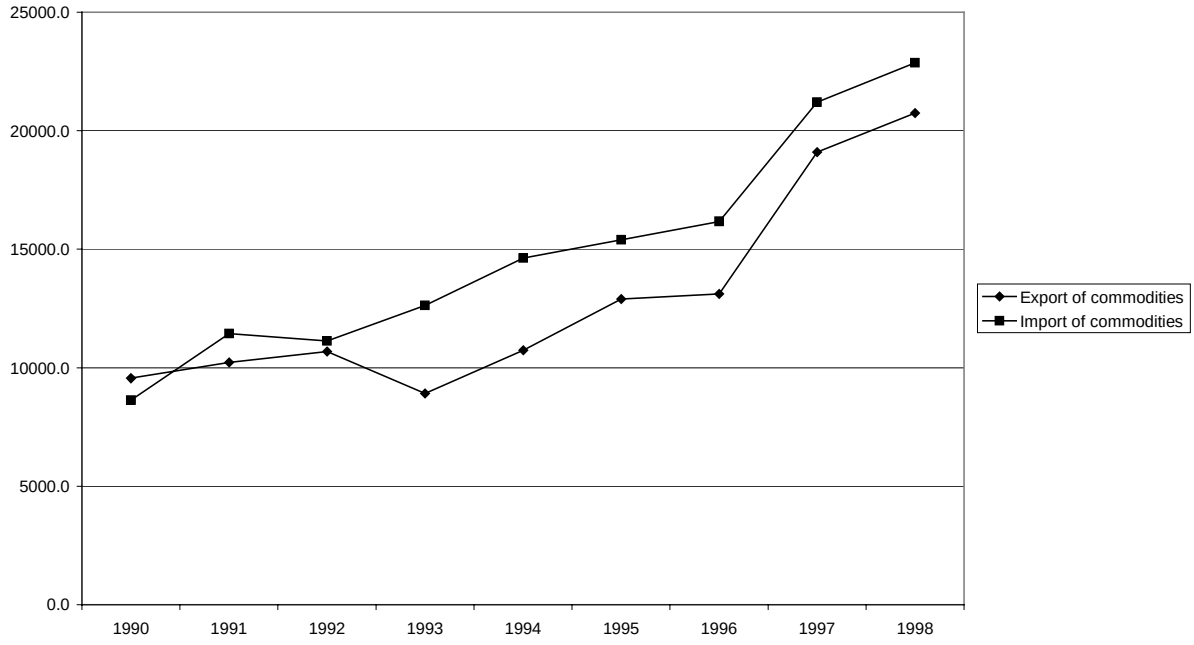

Figure 1.3 Hungary: Development of trade of commodities, million USD

In the past three decades, Hungary's economic history has been characterized by recurrent (sometimes particularly serious) deterioration in the trade and current account balances and ensuing stop-go economic policies. Before the 1990s, the unsatiable hunger for investments as an attribute of the communist system (see Kornai, 1992) and the specific investment cycles in centrally planned economies could explain this pattern of development. Following the systemic changes, if such external tensions show up regularly, then new factors have to play a role. In the case of the alarming deterioration of these external balances in 1993-1994 (see above) both external conditions (recession in Western Europe) and internal factors (the maintenance of the pegged exchange rate, the slow development of the institutional and human base of exporting capacities[6], the untimely easing of the monetary stance) played a role.

Here one has to mention an additional policy mistake of the early 1990s: the bad choice of the exchange rate regime. At the beginning of transition, Hungary waived the

[6] See Cooper and Gács (1997).

possibility of an initial devaluation, therefore the exporting enterprises had little cushion to protect them from the external shocks (loss of their major external markets, the implications of huge terms of trade losses) and adverse internal effects (lack of financing, the shock of the bankruptcy law) of the early phase of transition. A pegged exchange rate regime was applied with occasional adjustments that did not respond to major deteriorations in the real exchange rate. Between 1989 and 1993 the real effective exchange rate calculated on unit labor costs in manufacturing showed an 28 percent appreciation. The result was a massive loss of international competitiveness, increasing current account deficits, and occasionally strong devaluationary speculations. As in other fronts, here also various measures of the Bokros package brought a lasting, favorable change.

Based on some neoclassical assumptions, it is broadly understood that the prospective development of transition economies implies the attraction of foreign savings, which will inevitably lead to deficits in the current account. Nevertheless, it is not easy to determine the level of current account deficit which is sustainable, particularly in Hungary with its history of current account crises and sizable external debt. A cautious approach is reflected in the fact that in recent years all plans and forecasts in Hungary foresee a current account deficit as sustainable if it is matched by the inflow of foreign direct investments (FDI), i.e. the most obvious non-debt creating investments (or FDI plus other non-debt creating investments). Accordingly, further debt creation is not desirable. Table 1. 3 shows the working of this rule of thumb in Hungary, i.e. the coverage of current account deficits by FDI and non-debt creating portfolio investments in the past years. Since 1990, except for three years, FDI complemented by other non-debt generating investments, always covered the current account deficit, and maintained or reduced the country's net external debt. With regard to the unfavorable developments in 1998 analysts emphasize two concerns for the future: (a) foreign direct investments related to privatization of state owned enterprises is bound to be negligible in the future, and (b) profit repatriation is bound to become more sizable as earlier.

As for (a) it is worth noting that while the share of privatization revenues in FDI amounted to 2/3 in 1995 and 1/3 in 1996, it dropped to 16 percent in 1997 and to less than 1 percent in 1998. As for (b) one has to realize that while the net outflow of revenues from FDI amounted to about US$ 100 million in 1995 and US$ 200 million in 1996, it moved close to US$ 500 million in 1997 and US$ 1 billion in 1998. Even this latest amount is far from appalling, though, if we take into account that by the end of 1998 the sum of FDI and other non-debt creating investments in Hungary was US$ 20.5 billion.

Table 1.3 Hungary: Current account and its financing from non-debt generating investments (USD million)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Current account (A)	-807	-1437	127	267	324	-3455	-3911	-2480	-1678	-981	-2298
Net FDI (B)	14	187	311	1459	1471	2328	1097	4410	1987	1653	1453
Net non-debt generating porfolio investments (C)									343	971	508
Total non-debt generating investments D=B+C	14	187	311	1459	1471	2328	1097	4410	2330	2624	1961
Difference (A-D)	-793	-1250	438	1726	1795	-1127	-2814	1930	652	1643	-337
Memorandum item: Net external debt with credits from the owner (year end)	13846	14025	14779	13487	12256	14239	18384	16134	14229	11157	12344

Source: National Bank of Hungary Annual and Monthly Reports (various years) and own calculations

1.4 Fiscal balance

No transition country may claim having achieved a satisfactory structure of its budget and a sustainable fiscal situation by 1998. Nevertheless, some countries go ahead in solving the enormous task of restructuring their inherited budget with a more or less satisfactory fiscal balance and limited amount of accumulation of domestic debt. Hungary does not belong to these. As Table 1.2 shows the country inherited a large general government debt from the 1980s. Its hidden dangerous implications have become clear soon: a large part of the debt had been held with zero or non-market interest rate, and this was to be gradually replaced by debt with market rates. Also a large part of the debt was in foreign currency, vulnerable to exchange rate variations. According to Halpern and Wyplosz (1998) out of the 6.7 percentage increase in the debt/GDP ratio in 1993-1995, 4 percentage points were explained by the depreciation of the forint in this period.

Following a cautious management of the primary balance in 1989-1992 the deficit soared in 1992, due to higher interest rates and continuous devaluations. This situation was aggravated by the policy mistakes of ill-timed relaxation in 1993-1994. The turn in 1995, following the introduction of the Bokros package was spectacular, although very painful in terms of real wage loss for state employees and cuts in traditional budgetary categories. In addition to structural changes, improving the balance and containing the size of the debt, the new policy stance also achieved to reduce the ratio of redistribution through the budget: primary expenditures, excluding interest payments, declined from 52 percent of GDP in 1994 to 36 percent by 1997.

The literature of fiscal deficits has shown that nominal indicators of fiscal balance/GDP are misleading if they are applied to economies (or different states of the same economy) with substantially divergent inflationary rates. In economies with higher

inflation and with non-negligible debt one has to filter out the inflationary component of the balance (i.e. that part of the interest payment on the debt which is compensation for the amortization of the deficit due to the inflation). The so-called operational balance (see Table 1.2) already deducts this inflationary component from the budget balance and gives a more realistic picture about the stance of the fiscal policy (see Oblath, 1999b).

Another specific, potentially misleading factor in the interpretation of the budgetary deficit is the presence of fiscal expenditures that Hungary used for the sterilization of massive financial inflows, particularly in 1996-1997. Oblath (1999b) emphasizes that while these expenditures put a burden on the budget, they do not represent additional demand, rather they intend to prevent too much liquidity in the market. The nominal cumulative costs of sterilization was about 1.6 percent and 1.5 percent of the GDP in 1996 and 1997, respectively, however, the effective costs (including savings of exchange rate losses on external debt repaid earlier) were only about one tenth of these (see Oblath, 1999a, 1999b).

Acceptable budget balances may hide delays in radical rearrangements in the tasks and liabilities of the public sector. Such tasks may be the radical restructuring of loss- making state owned enterprises, of banks suffering under the burden of non-performing loans, or the reform of public pension and health systems. Compared to other transition countries Hungary addressed the first three of these tasks quite early, and that was duly reflected in its unfavorable budgetary balance since 1993. The burden that has emerged most recently has to do with the reform of the pension system. This reform implied a gradual shift from the pay-as-you-go system to the three pillar system dominated by the second pillar (i.e. the mandatory fully funded pillar). Oblath (1999b) calculates that the direct effect of the reform was a deterioration of the budget balance by 0.35 percent and 0.7-0.8 percent of GDP in 1998 and 1999, respectively.

2. Forecasts for Hungary's potential growth in the long run

In recent years, in the literature of transition economies numerous growth forecasts were prepared about the long-term development of transition countries, including Hungary. The most famous ones were made by Fischer et al. (1997 and 1998) with the application of cross section based growth functions of Barro (1991) and Levine and Renelt (1992). EBRD (1997) also made calculations applying the growth equations by Levine and Renelt (1992), Knack (1996) and a growth accounting framework with the assumption of balanced growth. Table 2.1 summarizes the results of these calculations for Hungary's long-term development of per capita GDP. One can see that there is a substantial variation in the growth rates between 3.00 percent and 5.28 percent. The former implies that Hungary would need 65 years to reach the level of per capita income of the average of the poorest countries of the EU (Greece, Ireland and Portugal), assuming that the latter would grow by a yearly 2 percent, while the latter implies a 20 year catch-up period.

Table 2.1 Various forecasts for Hungary's growth of per capita GDP in the long run

	Percent	No. of years to catch up*	Details of underlying equation
Fischer et al. (1998)			
Barro	5.28	20	dY=0.0302-0.0075*Y1960+0.025*PRIM+0.0305*SEC-0.119*GOV
Levine - Renelt	5.02	22	dY=-0.083-0.35Y1960-0.38POP+3.17SEC+17.5INV
EBRD (1997) - Levine Renelt version	5.10	21	Explanatory variables for Hungary from the middle of 1990s, except for Y1960
EBRD (1997) - Knack	4.30	28	dY=-6.602-1.208logY1960+1.273SEC+2.296PRIM+12.086INV+8.122LFG+0.058ICRG
EBRD (1997) - growth accounting with balanced growth path	3.00	65	

Variables:

dY= annual growth of per capita GDP
Y1960 = the level of GDP in 1960 on PPP basis
PRIM = gross primary school enrollment rate
SEC = gross secondary school enrollment rate
GOV= share of government consumptio expenditure in GDP
POP = growth rate of population
INV = share of investment expenditutes in GDP
LFG= labor force growth rate
ICRG = index of security of property rights and contract enforcement

* From initial per capita income at PPP to the average income of the three lowest income EU members (Greece, Ireland and Portugal) assuming that hey will grow by and average 2% anually.

The mentioned growth equations were originally calculated on data of a large number of – mostly developing – countries for the years 1960-1985, and now they are applied to predict the expected long-term development (starting 1997-1998) of the transition economies. This exercise implies many problems, as emphasized, among others, by Campos (1999). First, some of these equations, such as the Barro and Levine-Renelt functions, were not correctly cited and applied by Fischer et al. and EBRD (1997). Second, the choice of the value of current or projected variables (whether state or policy variables) in the equations for the transition economies inevitably adds arbitrary elements to the calculations. For various options for the choice of these variables in the case of the Levine-Renelt equation and the ensuing large variation of the forecasts of growth rates for the 10 candidate countries see Table 2.2. Third, one has to acknowledge that in several East European countries the special period of transition is not yet over at the start of the forecast period, so the application of generic growth patterns for the forecast is not really justified. And lastly, there is a high chance that the growth pattern of transition economies in the next decades, possibly characterized by increasing globalization, expansion of integrations, spread of information technology in the world economy, will not follow the very patterns that were found in another group of countries 20-50 years before.

Given the multiplicity of uncertainties associated with the use of growth equations no new calculations were made for the purpose of our projections in this paper. We accept the opinion of Temple (1999) that in fact few of the findings of the cross section growth literature would offer much insight for the former communist economies.

In the following we rather give a short overview about the expected development of the most common factors of growth in Hungary.

Hungary, as all candidate countries, except Poland and Slovakia, has experienced a shrinking *population* in recent years. The average annual decline was 0.29 percent in 1990-1998. Since the overwhelming reason behind this decline was the decline in fertility, it is not probable that the tendency of decline will change soon.[7]

Despite this tendency in population growth the Ministry of Finance (1999) calculates a moderate - 1-2 percent annual - growth of *employment* until 2002, due to a gradual increase of the statutory retirement age and the return of some of the inactives that left the labor market in the first part of the 1990s (a substantial decrease of the unemployed is not forecasted). As for the whole period of 1998-2010, nevertheless, one can not realistically calculate more than 0.5-1 percent annual increase in the employment.

The increase of *investments into physical capital* is crucial both in the phases of recovery and continuous growth, especially if one takes into account the loss of capital in the phase of output decline. Borensztein and Montiel (1991) emphasize that much of the amount of physical capital established during the time of central planning was over-investment or misallocated investments that could not be converted to other productive activities in the new system. According to their assessment, in Hungary's case 75 percent(!) of the registered physical fixed capital was superfluous due to changes in

[7] Although the current Hungarian government is committed to introduce and maintain measures to support, and thus encourage the establishment of, large families.

relative prices and the emergence of international competition. Even if the share of unusable capital did not represent such a dominant share, we have to accept that a substantial part of the capital inherited from the period of central planning simply had to be written off and, consequently, much of the new investments could be considered as replacement.

Table 2.2 Projected growth rates of per capita GDP by variations of a growth equation

Equation of Levine-Renelt (1992) applied by Fischer et al. (1998)
y= - 0.083 - 0.35 Y1960 - 0.38 POP + 3.17 SEC + 17.5 INV

GROWTH RATES							
	1	2	3	4	5	6	7
Variable values	INV=30 Fischer et al.	INV=25	INV=20	INV=1994-97 (WDI, 1998)	POP=1994-97 (WDI, 1998)	SEC=1994-1996 (UNESCO, 1998)	Y1960=1960 level, 1996-97 ratio (EBRD, 1997, WDI, 1998)
Bulgaria	5.01	4.13	3.26	2.37	2.50	2.59	4.01
Czech Rep.	4.40	3.53	2.65	4.37	4.38	4.31	6.23
Estonia	4.93	4.06	3.18	4.51	4.99	4.71	6.78
Hungary	5.02	4.14	3.27	3.70	3.61	3.80	5.34
Latvia	5.79	4.91	4.04	4.56	4.79	4.38	5.79
Lithuania	6.22	5.34	4.47	4.83	4.91	4.53	5.22
Poland	4.75	3.87	3.00	2.68	2.84	2.87	4.52
Romania	5.64	4.77	3.89	5.00	5.22	5.00	5.84
Slovakia	5.00	4.12	3.25	5.08	5.12	4.86	6.50
Slovenia	4.58	3.71	2.83	2.92	3.11	3.33	4.50
Average	5.13	4.26	3.38	4.00	4.15	4.04	5.47
DIFFERENCE IN THE VALUES OF THE INDEPENDENT VARIABLES							
				INV Diff	POP Diff	SEC Diff	Y1960 Diff
							%
Bulgaria				-15.11	-0.35	0.03	-79.16
Czech Rep.				-0.17	-0.02	-0.02	-67.02
Estonia				-2.43	-0.75	-0.09	-82.24
Hungary				-7.55	0.24	0.06	-70.82
Latvia				-6.95	-0.60	-0.13	-80.42
Lithuania				-7.92	-0.20	-0.12	-65.06
Poland				-11.75	0.00	0.01	-74.40
Romania				-3.70	-0.59	-0.07	-67.55
Slovakia				0.47	-0.09	-0.08	-70.25
Slovenia				-9.55	-0.50	0.07	-52.94

Source: Fischer et al. (1998), World Development Indicators (1998), Unesco Statistical Yearbook (1998), own calculations.

As for the size of investments there are many factors that play a role (some of which are considered below in Sections 3.1 and 3.2). Two crucial factors are mentioned here.

One of the major sources of investments is self-financing. In Hungary, in the course of output contraction and the liquidation and reorganization of thousands of enterprises, the business sector, and particularly large enterprises operated at losses. Since 1995, however, profits before taxes in the business sector have been positive and

gradually growing[8]. This means that the by the end of the 1990s the business sector has got sources for self-financing its investments.

As for other sources of financing one has to mention the emergence of a capital market, including the Budapest Stock Exchange, which in recent years has become one of the most vigorous stock exchanges in the region. Its capitalization was 30 percent of the GDP, and its turnover 34 percent of GDP during 1998. However, given the limited and stagnating number of companies introduced to the stock exchange, much the activity of the capital market is taking place outside the stock exchange. In this respect one has to mention the sustained interest of foreign investors towards the country as testified by the considerable size of cumulative stock of FDI. Given the relatively large growth rates of aggregate output in 1997-1999 - a base for acceleration effects - one can substantiate a good growth potential from the side of investments.

The high level of *human capital* is a stereotype used for CEECs and is usually represented by primary and secondary school enrollment ratios. The usefulness of these proxies is questionable here, though, because they do not indicate a characteristic feature crucial in transition, i.e., that how adaptive the undoubtedly high stock of human capital is to the need of the market economy. Moreover, some countries, such as Hungary, are lagging behind in terms of enrollment to tertiary education (from the relevant cohort of the population). This ratio in Hungary was 17 percent in the early 1990s as opposed to 28 percent in Slovenia and 38 percent in Poland. Strong governmental and private efforts have, however, been made recently to improve the situation, and by 1999 the ratio was already 24 percent, and by 2010 a 50 percent rate is planned to be achieved.

Of the numerous factors that may contribute to the development of total factor productivity, here we only refer to the size of *research and development base*. R&D efforts and efficiency are not easy to identify in transition economies. What is clear is that in Hungary, as in all other East European countries, total expenditures on research and development substantially declined in the 1990s (the Hungarian data are 1.6 percent of GDP in 1990, and 0.8 percent in 1998). Based on indicators of research output (such as the number of scientific journal articles, and the number of patent applications in the USA) Hungary has inherited and still has a leading position in the East Central European region (Inzelt, 1998). Maintaining this performance, however, is only possible by continuing strong R&D efforts, now in the framework of a market economy. Anecdotal evidence indicates increasing R&D efforts by the multinational companies in Hungary. While advancement of original, applied research in the country needs time, based on the recent reorientation and restructuring of Hungary's foreign trade and the pattern of corporate ownership, it seems plausible even in the absence of strong empirical evidence, that the spillover of knowledge stock from abroad through international trade and the operation of multinational companies in the country has started early and goes on continuously.

[8] In large enterprises, profits as a percentage of turnover increased from 2.5% to 6% from 1995 to 1997, in medium size enterprises from 2.5% to 4.1%, while in the group of small enterprises from 1.3% to 2.8%, respectively (NBH, 1999).

3. Framework for the projection of GDP

The forecast of aggregate growth takes as a point of departure two base conditions: (1) the primary importance of foreign economic relations for the growth path (and the development of the components of GDP); and (2) the limited propensity to save in Hungary and the resulting necessity of attracting foreign savings.

3.1 Foreign economic relations

Hungary's growth in 1990-1999 was, as its small country status suggests, critically influenced by its trade performance. Recovery from the transformational recession in 1992-1994 was driven by the growth of exports (already reoriented toward Western Europe). Moreover, the slowdown of growth in 1995-1996 was overcome by austerity measures, many of which supported exports and encouraged import substitution. Here one should mention the substantial real devaluation of the forint in 1995 accompanied by a switch to a pre-announced crawling peg system, and the introduction of temporary import surcharges. Attempts in the 1990s to support output growth by stimulating domestic demand have always had a tendency to increase the current account deficit.

A simple regression of the rate of volume growth of GDP (*rGDP*) on that of exports (*rEXP*)[9] for 1990-1999 shows the following close relationship (t statistics of the coefficients are in parenthesis):

$$rGDP = \underset{(-1.906)}{-1.99} + \underset{(4.346)}{0.340 * rEXP} \qquad (1)$$

adjusted $R^2 = 0.6653$

Hungary's export performance was heavily influenced by demand conditions in the EU, and particularly Germany, and by the recovery of supply, particularly with the help of inward FDI. Figure 3.1 shows the responsiveness of Hungarian exports to various indicators of the demand for those exports in Western Europe. The negative constant term in equation (1) emphasizes Hungary's strong reliance in foreign trade: it suggests that without substantially expanding exports GDP growth could not be realized in 1990-1999 (i.e. with a possible expansion of domestic demand alone, brakes should have been applied to prevent a deterioration of the current account).

In the 1990s, Hungary was a leading target country for FDI among the CEECs: in 1991-1998 the economy received an average 4.9 percent of GDP annually in FDI. This investment was increasingly oriented toward exports. Without such investment, the country could not have achieved an export expansion of 26 percent in 1997, followed by one of 16 percent in 1998, to mention only performance in the last two years for which final data are available.

[9] Here and throughout the whole analysis exports and imports mean the categories in the GDP classification, i.e., trade of goods and non-factor services.

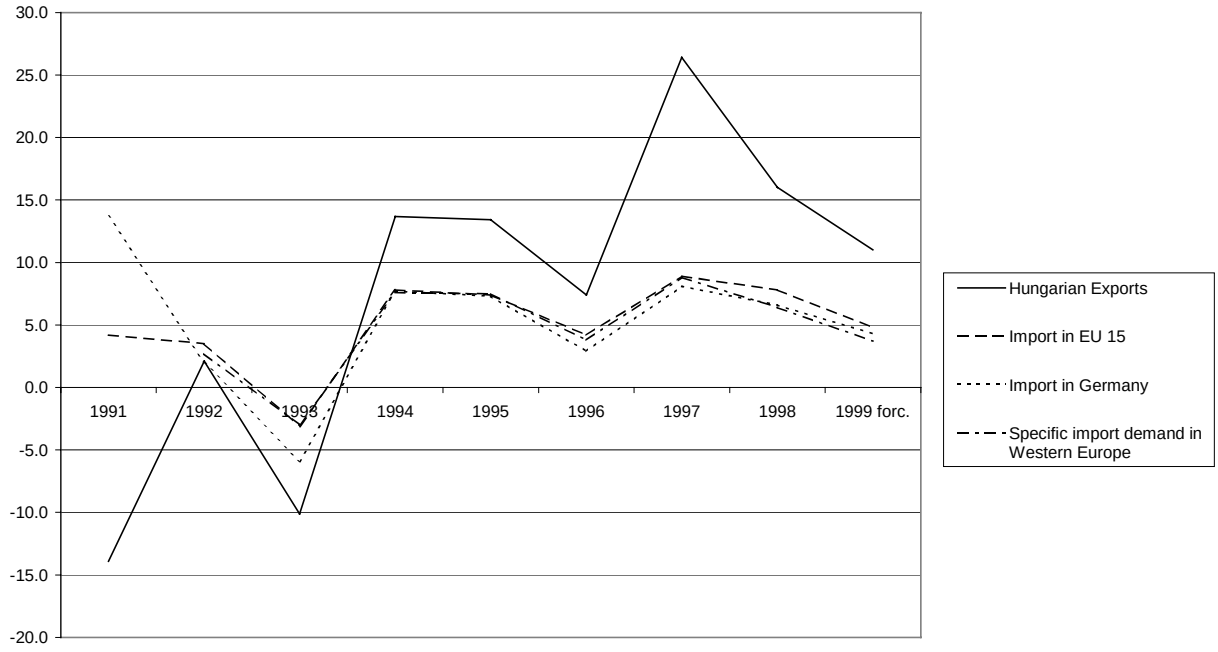

Figure 3.1. Annual real growth of Hungarian exports and various kinds of demand for these exports (percent)

The following regression explains the growth of exports in terms of the development of import demand in the EU 15 (*rEUIMP*) and the last three years' cumulative FDI as a percentage of GDP (*CFDI*).

rEXP =	-26.374	+	2.452* *rEUIMP* +	1.452* *CFDI*	(2)
	(-3.610)		(4.383)	2.968)	

adjusted $R^2 = 0.8059$

A simple regression explaining exports solely in terms of EU imports is as follows:

rEXP =	1.847* *rEUIMP*	(3)
	(3.876)	

adjusted $R^2 = 0.4063$

These calculations can easily be criticized both for the short sample on which they are based and the heterogeneity of the period that they cover. It is immediately clear that the estimated parameters can provide us with only general guidance for the long run. For instance, if we take equation (1) and expect the Hungarian economy to grow by a modest yearly 4 percent in the coming period, the required export growth would be 17.5 percent a year, a pretty ambitious target for a sustained period.

Or based on equation (2), if Hungary would like to increase its exports by 8 percent annually and faced 5 percent growth of imports of the EU, the required three-

year cumulative FDI would amount to 15.3 percent, which would require a yearly FDI equivalent to 5.1 percent of GDP, again an ambitious target for the long run.

The implication of this exercise is that in recent years Hungary has achieved a modest rate of investment, to which FDI contributed an unusually high share. The result was spectacular growth of exports and relatively modest growth of GDP. One reason for this peculiar development was the assembly type of operations of the foreign-owned companies which drove exports (and imports), and the low domestic value-added content of these export products. It is clear that this tendency cannot go on forever. The efficiency of investment (including FDI) in terms of GDP must increase.

Many indications, in fact, show that the process of increasing efficiency of investments has already started. Table 3.1 presents the development of two year average ICORs (incremental capital income ratios) for two (narrower and broader) categories of investments in the 1990s. While the ratios for 1997-1998 are probably too favorable to be sustained in the long run, we may expect that by the end of the forecast period this efficiency index will approach the EU 15 average which (in the case of gross fixed capital formation) varied between 6 and 14, but mostly centered around 6-7, during 1986-1996.

Table 3.1 Hungary: Two year average ICOR indices

	1994-1995	1995-1996	1996-1997	1997-1998
ICOR – gross investment	11.7	18.3	13.4	5.9
ICOR – gross fixed capital formation	10.1	14.9	10.7	4.5

Source: Own calculations

One specific aspect of foreign-owned business in Hungary should be mentioned here, because it will be taken into account in the forecasts. FDI, the operation of multinational companies, and the development of their export activities in Hungary have caused a certain segmentation of the economy in several respects. Most of the thriving foreign businesses are located in western Hungary and the agglomeration around Budapest. Regions in eastern Hungary, most of which were hit hard by the transformational recession, have received only minimal FDI. Most of the foreign-owned manufacturing firms that target export markets are located in customs-free areas (there are currently about 130 such zones). Finally, attempts at integrating non-multinational, domestic suppliers into the subcontracting network of multinationals operating in Hungary have largely been unsuccessful in recent years. Domestic businesses have not been able to build up the forward linkages that would allow them to benefit from the

economic, technological, and managerial supremacy of the foreign-owned manufacturing firms in the country.

Since Hungary's external debt is still substantial, even taking into account its reduction since 1995 (see Table 1.2), the maintenance of a modest current account deficit is crucial to the management of the Hungarian growth process. Recent currency crises around the world have proved that large external debt and current account deficits make even solid economies vulnerable to sudden shifts in financial flows. This makes it inevitable that the current level of indebtedness (which is still above average for investment-grade, middle-income countries) is at least maintained, and possibly gradually reduced.[10]

In sum, when forecasting developments of the Hungarian economy for the next decade, three foreign economic considerations are crucial: the extent to which Hungary is able to expand further its exporting capacities; the degree to which FDI can contribute to these capacities; and finally, the extent to which FDI and other non-debt generating inflows can help finance Hungary's current account deficit, a source of financing likely to remain in the range of 2.5-5 percent of GDP.

3.2 Saving, investment and consumption - Past and expected future developments

Figure 3.2 shows the development of the most important constituents of GDP as provided by the Penn World Tables version 5.6 (PENN)[11] and the National Account of Hungary (NAH).[12]

As the figure indicates, until about 1983 gross investments used to take a high share of GDP (25-40 percent in NAH, and 25-35 percent in PENN), and after a gradual decrease a substantial drop occurred in 1991-1992. Both household and government consumption, however, maintained fairly stable shares until the last two years of the time series. Figure 3.3 shows data for an extended period and in a more detailed distribution according to the NAH. Here we see a continuous decline in the share of fixed capital investments which, in the last ten years, have approached 20 percent of GDP. This was accompanied by a shoot-up in the share of household consumption starting 1991. Given the extensive decline in GDP in the 1990s, this increase in the share of household consumption was not felt as improvement by the population. Evidence for this is given in Figure 3.4 which shows the development of three indicators of real income in recent years, each with a 15-20 percent decline in 1989-1997.

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[10] The importance and indicators of sustainability of external and internal indebtedness in CEECs from the point of view of fulfilling the requirements of a coming EU accession is extensively discussed in Breuss *et al.* (1998), particularly in chapter 11. Sustainability calculations for Hungary were performed by Oblath (1998).

[11] See Heston and Summers (1991) and the web site http://datacentre2.chass.utoronto.ca/pwt/index.html.

[12] Differences between the two statistics may appear because PENN is based on international prices (from the year 1985), while NAH on constant Hungarian prices (fixed for certain years selected generally every five year). Another source of the difference may be the slight divergence of the content of each of the three aggregate categories in the two publications.

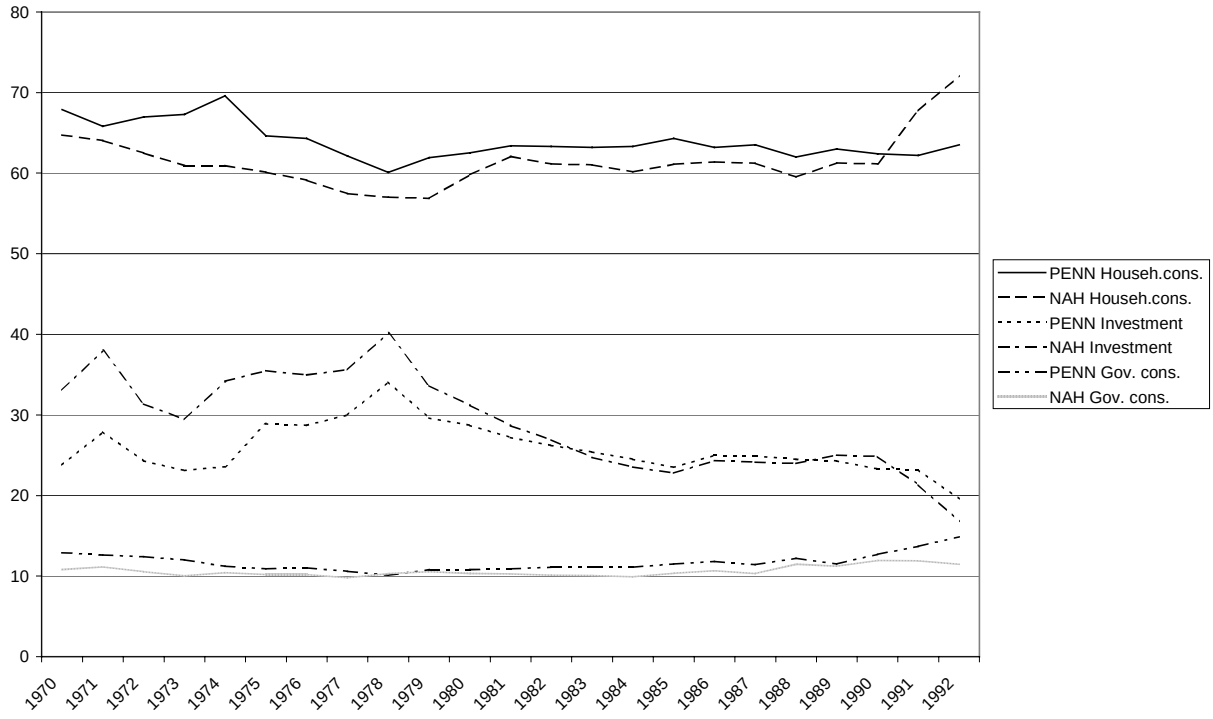

Figure 3.2 Hungary: Household consumption, government consumption and gross investments as percent of GDP, Penn World Tables (PENN) and National Accounts of Hungary (NAH)

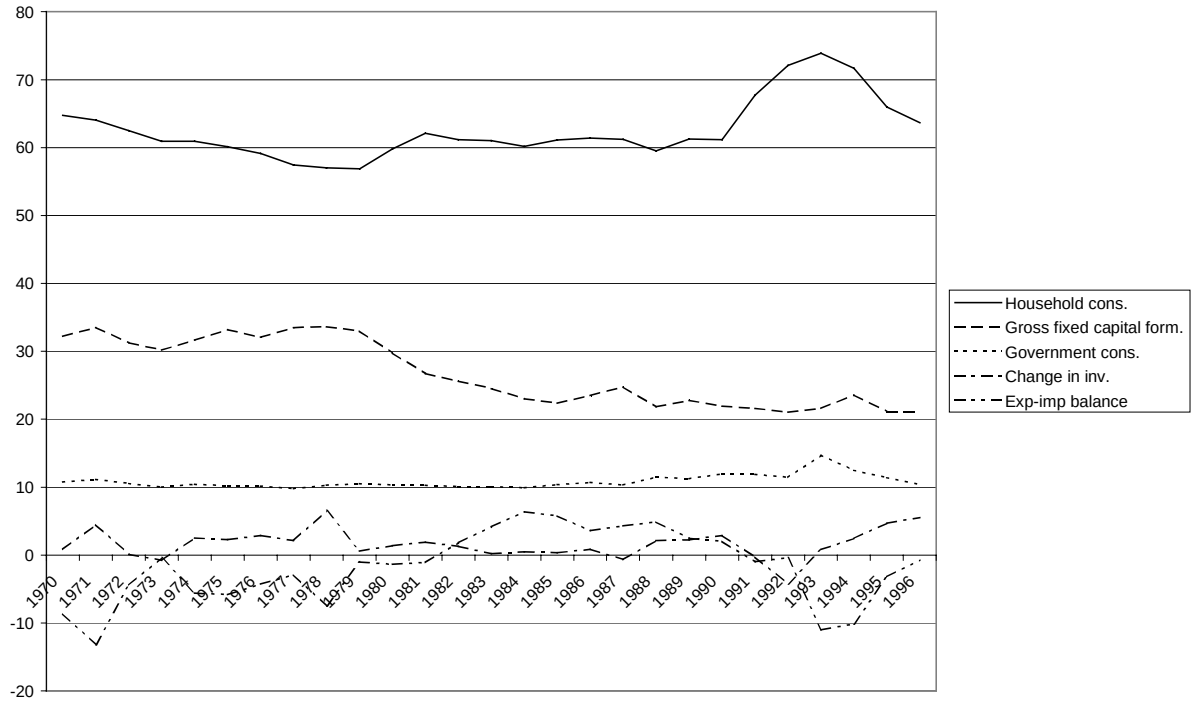

Figure 3.3 Hungary: Detailed distribution of GDP by final use (in constant prices)

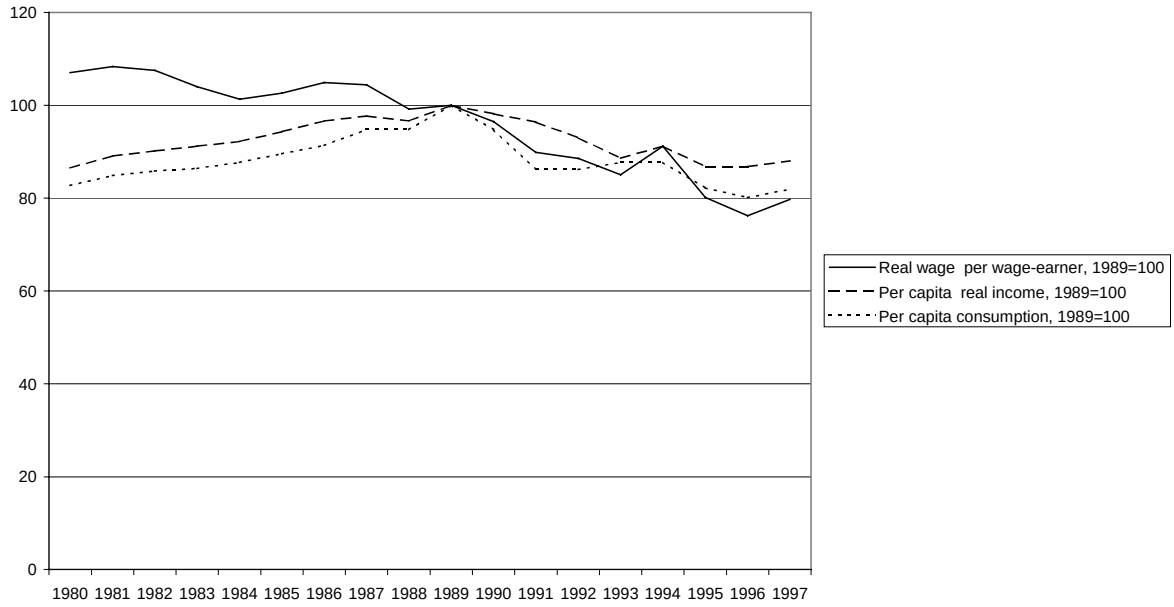

Figure 3.4 Hungary: Indicators of income and consumption.

In order to see clearly the developments of investments and consumption following the start of transition let us have a look at Figures 3.5 and 3.6. One can see that after nine years of transition household consumption is still more than 11 percent below its pre-transition level (and total final consumption is not much higher either), while capital formation in 1998 already substantially surpassed its 1989 level. When evaluating this comparatively high level of capital formation one has to take into account that, as mentioned above, much of these new investments have only replaced shed, unusable physical capital from the old system.

Since investments are financed from savings, it is worth looking at tendencies in the development of domestic savings. Figure 3.7 shows the development of household savings with high rates at the beginning of transition due to increased precautionary savings related to the outburst of inflation and the uncertainties citizens had to face in those hectic times. This was followed by a drop and then a recovery to 12 percent for household savings as a ratio of GDP and 16 percent as a ratio to adjusted disposable income. Given the problems of international comparability of household savings, unfortunately it is impossible to establish whether this level of savings is high enough for an emerging market economy with high catching-up potential. Taking into account the results in Figure 3.5 we can, however, suspect that income in 1998-1999 is perceived by the population to be significantly below permanent or long-term income and savings rates will not increase substantially in the near future.

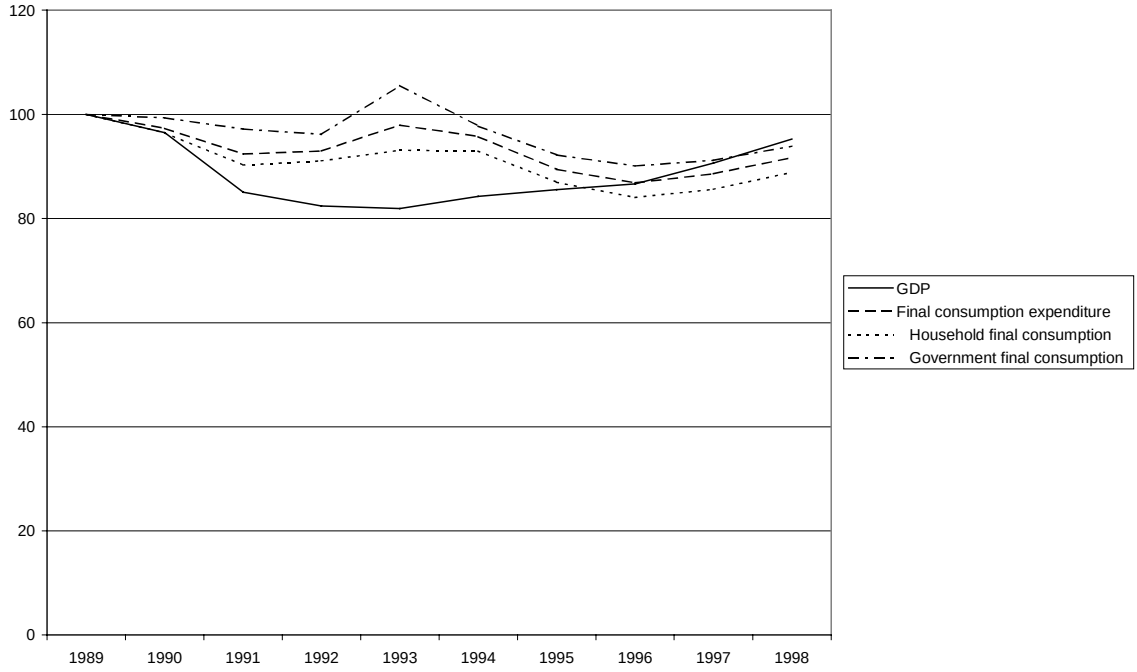

Figure 3.5 Hungary: Volume indices of GDP and consumption (1989=100)

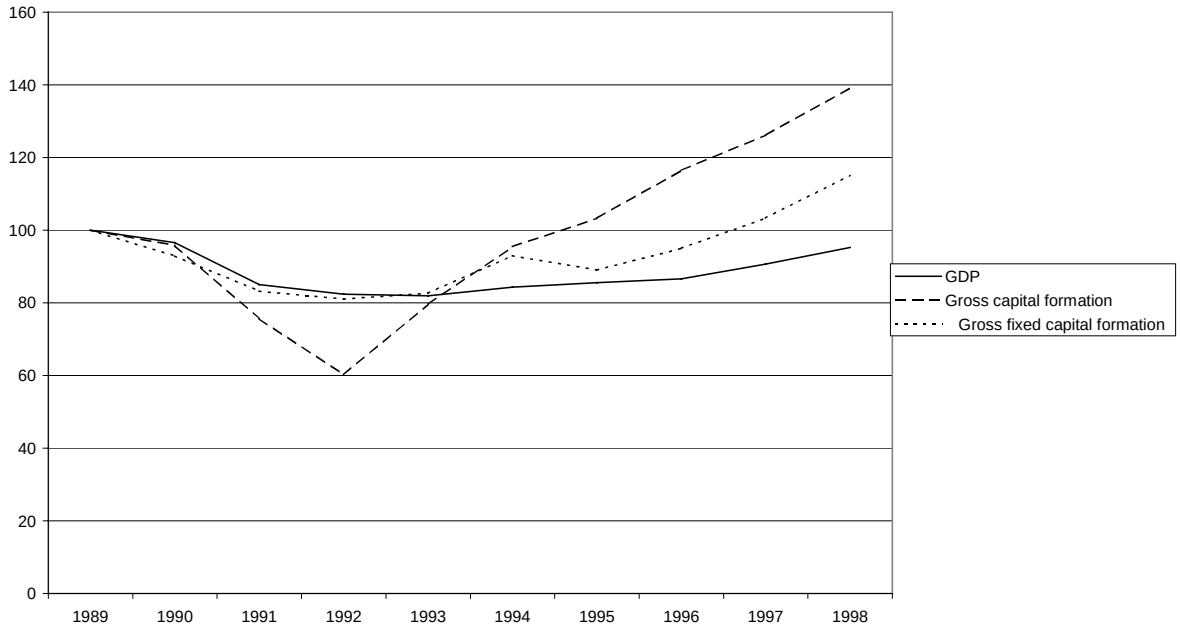

Figure 3.6 Hungary: Volume indices of GDP and capital formation (1989=100)

Figure 3.7 Hungary: Saving rates of the household sector (calculated from current price values)

Figure 3.8 shows gross savings and the development of sectoral savings. A strong tendency of increasing share of enterprise savings shows the rearrangement of incomes among the main sectors and the consolidation of Hungarian firms that, by the end of the 1990s, can increasingly finance their investments from their own resources.

Taken all these tendencies together one may expect that the household sector, which remains to be the major net saver in the economy (even if there is a tendency for the share of enterprise savings to increase), will not be able to finance sufficient investment to support sustained rapid economic growth. The implication of this is that the external capital flowing into the country either through FDI (or other non-debt generating flows) or as transfers will be crucial for supporting the growth process.[13]

Due to Hungary's high level of openness and attractiveness to FDI during the 1990s a gradually increasing share of Hungary's enterprises have become partly or fully owned by foreign investors. Already in 1992 foreign-owned enterprises represented a relatively high percentage of total company investments (26 percent) and this increased to 60 percent by 1997 (Foreign Direct Investment, 1998). The importance of foreign investors has several implications for the future development of investments: First, in order to maintain a sufficient growth of investments, the investment climate should be favorable not only in the national but also in the international perspective. Second, the domestic saving-investment gap should be expected to be filled less by foreign loans

[13] An alternative scenario is analyzed in Darvas and Simon (1999) which asserts that a rapid growth in Hungary can only be feasible with a substantial size of fiscal savings used for financing private investments.

taken or guaranteed by the government or bonds issued by the government, but increasingly by loans taken by companies, or foreign investments into shares and bonds issued by Hungarian companies.[14]

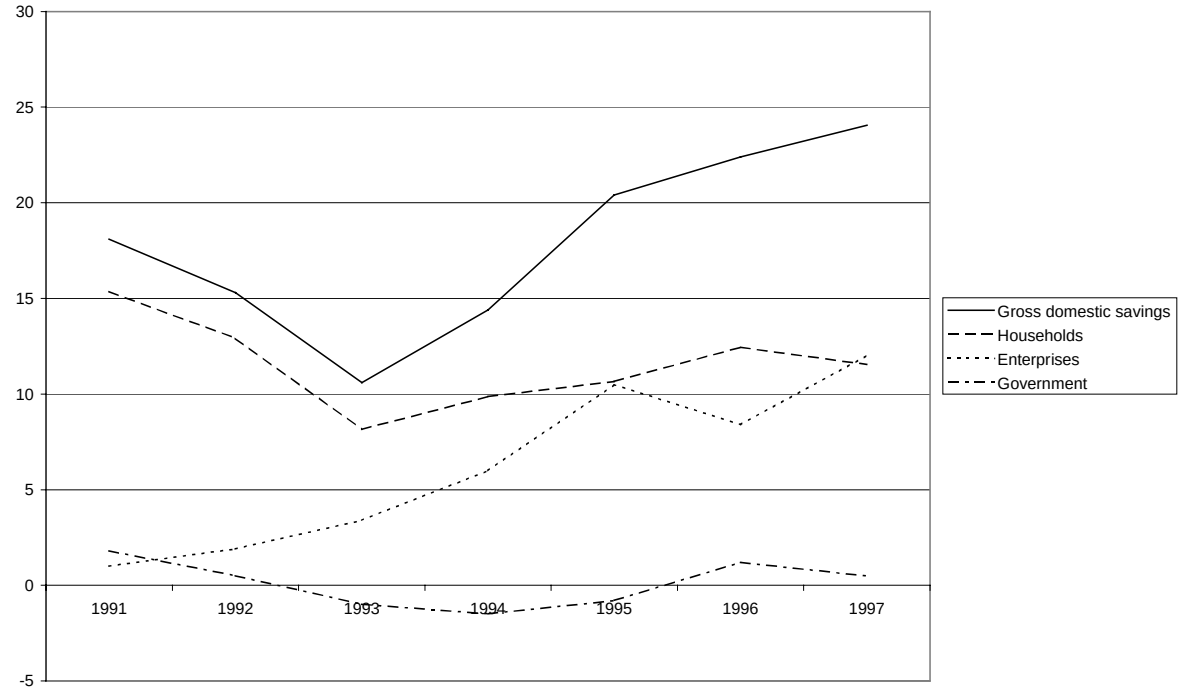

Figure 3.8 Hungary: Saving rates by sectors, and gross domestic savings (percent of GDP)

4. Projections: growth led by export and FDI

In the following two scenarios are developed for Hungary's development until 2010: the non-accession scenario which assumes that (for reasons not analyzed here) Hungary would not join the European Union until 2010, and the accession scenario that assumes that accession will take place in 2005.

4.1 Major differences between the scenarios

The difference in general between the two scenarios can be delineated according to the propositions of the theory of integrations. This says that joining integrations benefit a country by removing barriers to trade and resource flows, and by expanding its markets. These developments lead to static and dynamic efficiency gains.

EU enlargement means, *inter alia*, the removal of all trade barriers between EU-15 and new members. Static effects of the accession of the CEECs are bound to be limited because by 2000-2002 (i.e., the years before the date of accession), a free trade

[14] While in 1994 80% of Hungary's net external debt was held by the government or the Hungarian National Bank, by the end of 1998 this share was reduced to 37%.

area for industrial products will be established between the EU and the individual candidate countries. In addition, the candidate countries and the EU are part of the broad system of Pan-European cumulation. These two developments indicate that, with accession in 2005, the candidate countries would not feel a shock of trade creation since by that time the mutual reduction of customs tariffs and non-tariff barriers between the EU and the CEECs will have already been completed.

If the CEECs have lower tariffs vis-a-vis third countries than the Common External Tariff, trade diversion could occur in the time of accession. This is, however, as a rule, not the case. As Drábek has shown (cited in Gács and Wyzan, 1998), MFN tariff rates vis-a-vis third countries are usually higher in CEECs than the relevant MFN tariffs in the EU. For instance, in 1998 in Hungary 50.0 percent of the MFN tariff sectors had rates 1.75 times higher than the relevant EU rates, and 77.9 percent of the sectors had rates 1.25 times higher than the EU rates. (A further complication is the differences between GSP rates.)

Joining the Single Market will bring changes in the form of lower trade costs, efficiency gains through common standards, and increasing competition in services. Given the currently unsettled plans of the EU for reforming the Common Agricultural Policy (CAP), the impact of accession on agriculture for the new member states is highly uncertain. Due to this uncertainty and the complexity of agricultural issues, in the forecasts below no explicit calculations are presented for the agriculture.

Recently, gravity models have become one of the most popular tools for forecasting trade effects of institutional changes. Early calculations based on gravity models estimated for data of the mid-1980s for former communist countries (such as Hamilton and Winters, 1992, and Winters and Wang, 1994) indicated a huge potential for trade expansion. According to Winters and Wang (1994), for instance, to achieve their potential trade levels, five CEECs (Bulgaria, Czechoslovakia, Hungary, Poland, and Romania) were expected to increase their trade with the EU by five to twelve times, with EFTA more than three times, and with other industrial countries more than 10 times. However, their trade with other East European partners was bound to be cut by a quarter. As for total trade, the potential level of trade was to increase four times (at the income levels of 1985).

More recent and more sophisticated gravity models (such as Gros and Gonciarz, 1996; Breuss and Egger, 1997) indicate, however, that by the middle of the 1990s the CEECs were close to or even beyond their potential trade, particularly in their trade with the EU 15. Brenton and Di Mauro (1998) show that even in the field of sensitive products - the class of products where the EU has maintained the strictest protection of its market – one can not expect a surge in EU imports following an additional step of integration of the CEECs with the EU.

The implication is that in principle no surge in the aggregate export of the candidate countries to the EU should be expected after their accession to the EU. In Table 4.1 we present the development of export shares in the candidate countries and the relevant shares in the EU member countries in 1998. One can see that in 1998 the candidate countries already exported a high share of their products to the EU (61.3 percent), which was close to the average of the current EU members (64.5 percent). Given that the CEEC 10 are on average smaller than the EU 15, as well as the concept of real convergence (i.e., the expectation of faster increase in GDP in poorer countries), we can expect higher trade shares with the already developed EU countries (as is in fact

suggested by the gravity model framework), particularly after accession. However, the potential for a rise in trade shares with the EU is not large. After accession, the individual countries may (and will) naturally experience changes in their trade shares with the individual members of EU 15, and across industries. Nevertheless, in 1998 the aggregate shares seem to be at "normal" levels: associate status has drawn the CEEC 10 close to membership status in terms of integration through trade.

Table 4.1 The share of exports in total exports to EU 15 and CEEC 10, percent

	EU15			CEEC10			Total		
	1990	1995	1998	1990*	1995	1998	1990*	1995	1998
Bulgaria	5.6	37.7	49.7	12.1	3.2	4.9	17.7	40.9	54.6
Czech R.	38.4	60.9	64.2	12.6	21.1	19.8	51.0	82.0	84.0
Estonia		55.0	69.0		13.1	11.5	0.0	68.1	80.5
Hungary	42.1	62.7	73.0	7.9	9.5	8.0	50.0	72.2	81.0
Latvia		44.0	57.0		12.5	10.6	0.0	56.5	67.6
Lithuania		36.4	46.0		14.7	12.4	0.0	51.1	58.4
Poland	52.7	70.0	68.3	6.4	7.1	9.5	59.1	77.1	77.8
Romania	33.9	54.2	64.5	9.1	4.1	5.0	43.0	58.3	69.5
Slovak R.	40.8	37.4	55.8	13.8	45.2	31.6	54.6	82.6	87.4
Slovenia	64.8	67.0	65.5	5.5	5.5	6.9	70.3	72.5	72.4
CEEC 10 Average	**39.8**	**52.5**	**61.3**	**9.6**	**13.6**	**12.0**	**49.4**	**66.1**	**73.3**
Austria			62.8			15.6			78.4
Belg./Lux.			75.8			2.6			78.4
Denmark			67.3			4.3			71.7
Finland			55.9			8.1			64.0
France			62.3			2.7			65.1
Germany			56.4			8.7			65.0
Greece			49.4			15.1			64.6
Ireland			69.9			1.0			70.9
Italy			56.2			6.4			62.6
Netherlands			78.8			2.6			81.4
Portugal			81.5			0.9			82.4
Spain			70.5			2.2			72.8
Sweden			58.0			4.2			62.2
UK			57.9			2.1			59.9
EU 15 average			**64.5**			**5.5**			**70.0**

Source: WIIW (1999), IMF Direction of Trade Statistics, Eurostatistics (1999), and own calculations

* Without trade with Estonia, Latvia and Lithuania

The table also shows the share of CEEC 10 trade within the CEEC 10 group. The largest shares are achieved by those countries (the Czech and Slovak Republics and the Baltic countries) that have fellow countries in the CEEC 10 with which they belonged to the same union or federal republic before 1992-1993. If the EU 15 and CEEC 10 are viewed as a single group, the CEEC 10 countries show higher shares,

meaning that if the CEEC 10 joined the EU today, the CEEC 10 as a group would at the start be more integrated within the EU than the current EU members as a group.

New EU members are certain to gain from increased inflows of capital, in particular in the form of FDI. Investors will perceive lower transaction costs as well as reduced investment risk in the new member states (due to political and economic integration). Almost all previous experience of EU enlargements shows that EU accession was associated with a substantial increase in FDI inflows. This was true both in value terms and as shares in total inflows to EU; in fact, capital inflows picked up even several years before actual accession.

One clear benefit from EU enlargement for new members is that they will become eligible for a whole range of structural assistance programmes, involving large transfers of resources from the EU. The overall magnitude and structure of these transfers has been outlined only recently at the EU summit in March 1999 (Presidency Conclusions, 1999). The underlying assumptions of the Financial Perspective for 2000-2006 adopted at the summit are that the first six new members will already join the EU in 2002 (probably five CEECs and Cyprus), and that there will be a cap on the amount of financial transfers to new members equal to 4 percent of their GDPs. Table 4.2 presents calculated contributions and transfers on the assumptions that the five new CEEC members from 2002 are those in the first round of negotiations, and that GDP in the new members will grow by an annual 4 percent from 1999 onward.

Table 4.2 Calculated contributions and transfers for 6 new members, million 1999 EUR and percent

	Avergage	2002	2003	2004	2005	2006
Contribution	2534	2310	2320	2720	2760	2560
Contribution as% of GDP	0.71	0.70	0.68	0.76	0.75	0.67
Net transfer	7302	4140	6710	8890	11440	14220
Net transfer as % of GDP	3.08	2.04	2.60	3.22	3.84	3.70

Source: Presidency Conclusions (1999), and own calculations based on an average GDP growth of 4% per year from 1999 on for the new members.

As the numbers in Table 4.2 indicate, when all the assumptions are realized, the new members will pay 0.7-0.8 percent of their GDP as contributions to the EU budget and will receive increasingly large transfers that approach the cap of 4 percent of GDP. The actual amounts, however, can be lower because of the limited absorptive capacities of CEECs.

As far as preparatory costs for EU membership are concerned, the specific investments or sacrifices made in the pre-accession period by the CEECs in order to comply with EU membership criteria are usually not to be considered costs. This is

because most of the preparations in this stage are part of building up the social infrastructure necessary for a well functioning market economy. Accordingly, they contribute to, rather then reduce, growth in the long run. Nevertheless, it is clear that if investments, such as those needed for compliance with EU environmental requirements or with the Schengen agreement, have to be effected in a short period of time and without the financial assistance of the EU, then other productive investments may have to be postponed. In any event, in the case of these investments EU financial assistance will be substantial before accession and for complying with the environmental criteria the candidate countries will most probably be allowed substantial transition periods.

4.2 Non-accession scenario

In Section 3.1 evidence was given to the primary importance of international relations for the growth process in Hungary. Therefore, to forecast Hungary's growth in the case of non-accession, we must first of all predict the development of total Hungarian exports. In order to do so, one must take into account the expected growth and the demand for imports in the EU in general and Germany in particular.[15] To forecast the EU's total imports in 2000-2010, we take WEFA's (Wharton Econometric Forecasting Associates) forecast available until 2004; for 2005-2010 we estimate total EU imports on the basis of WEFA's forecast for German imports and applying a multiplier coefficient (1.15) calculated from past data.

To calculate Hungarian exports we start from equation (3). Its predicted values are quite far from the actual ones, particularly at the end of the base period 1991-1999. In order to obtain realistic values, we modify the relationship to $rEXp = 1.7*rEUimp$, and assume that the coefficient on *rEUimp* will gradually decrease to 1.2 by 2006 and then remain at that level. This assumes that Hungarian exports will be sufficiently stable so that they are less vulnerable over time to fluctuations in the demand for imports in the EU; it also assumes that, since there will be no accession, investors will direct their activities less toward export markets.

Nevertheless, based on past experience, the estimation of GDP should rely on the growth of exports. We take equation (1) as a starting point. Here again, the parameter of the equation is increasingly less characteristic of the most recent developments in the base period. Taking the last three years, a more realistic modified relationship would be the following: $rGDP = 0.5 + 0.34*rEXP$. Even this relationship would probably not hold for the whole period of 2001-2010. We may assume that the constant term (i.e., the portion of GDP growth independent of export performance) would increase; however, the coefficient of *rEXP* is also likely to increase to reflect Hungary's continuing reliance on export possibilities. We assume that the equation gradually reaches the form $rGDP = 1 + 0.5*rEXP$ by 2006, and than retains that specification. The resulting export and GDP growth rates are found in Table 4.3. Data for 1991-1998 are past actual data, for 1999-2000 data are from forecasts of KOPINT-DATORG and WEFA, while data for 2001-2010 are forecasts according to the equations described above.

[15] In 1998, 73 percent of Hungarian exports went to the EU and another 9 percent to CEFTA countries, which are increasingly integrated with EU markets. Hungary's main trading partner is Germany (37 percent), where developments have a strong influence on Austria (12 percent), Hungary's second largest partner.

Table 4.3 Forecasts for the growth of imports of the EU, Hungarian exports and GDP, percent

	EU imports	Exports Non-accesion	GDP Non-accesion	Exports Accession.	GDP Accession.
1991	4.20	-13.90	-11.89	-13.90	-11.89
1992	3.50	2.09	-3.10	2.09	-3.10
1993	-3.10	-10.13	-0.62	-10.13	-0.62
1994	7.80	13.67	2.91	13.67	2.91
1995	7.40	13.43	1.51	13.43	1.51
1996	4.20	7.40	1.29	7.40	1.29
1997	8.90	26.41	4.60	26.41	4.60
1998	7.80	16.00	5.10	16.00	5.10
1999	4.80	9.00	3.70	9.00	3.70
2000	5.00	10.00	4.00	10.00	4.00
2001	4.80	8.16	3.76	8.40	3.86
2002	4.60	7.36	3.69	7.82	3.88
2003	4.70	7.05	3.80	7.76	4.11
2004	4.80	6.72	3.89	7.68	4.33
2005	5.06	6.58	4.06	7.84	4.66
2006	5.06	6.07	4.04	7.59	4.80
2007	5.06	6.07	4.04	7.59	4.95
2008	5.06	6.07	4.04	7.59	5.10
2009	4.95	5.93	3.97	7.42	5.15
2010	4.95	5.93	3.97	7.42	5.30

Source: actual data, forecasts and own calculations (see text)

The next step is the estimation of the rest of the components of GDP with the help of a number of assumptions and constraints. We assume that (i) the sources of financing for the current account deficit are limited, particularly by a 3.5 percent of GDP net inflow of FDI (this ratio is commonly foreseen by both Hungarian analysts and IMF experts; see The World and Hungary, 1998, and IMF, 1999); (ii) net transfers from abroad will increase from 2000 by 1 percent of GDP (by assuming increasing utilization of EU transfers, this seems to be a realistic estimate for Hungary's share in the EU's pre-accession aid of EUR bn 3.12; see Presidency Conclusions, 1999); (iii) due to households' low propensity to save and the limited amount of foreign saving attracted under this scenario, the share of gross fixed capital formation in GDP (in 1997 prices) will not surpass 27 percent, while the share of gross investment will not surpass 32 percent. Under these (and a number of less important constraints) the components of GDP can be estimated in a spreadsheet model. The development of consumption is a residual, which is further split into private consumption and (slower growing) public consumption. The slower growth rate of public consumption is based on the

government's commitment to continue to reduce the share of GDP redistributed through the budget.[16]

For the resulting non-accession scenario see Table 4.4. One can see that in this scenario GDP growth rates are moderate (around 4 percent). In order to maintain a financeable current account deficit of 4.5 percent, imports must be reduced to the same rate of growth as exports until 2004, and beyond that year to a rate below the growth rate of exports. In 2001-2004, the rate of growth of investment substantially decelerates, and in 2005-2010 it no longer surpasses the rate of growth of GDP. Nevertheless, the ratio of gross fixed capital formation to GDP will remain at 27 percent from 2003 onward.

Under this scenario, the export/GDP ratio will increase from 50 percent in 1998 to 72 percent in 2010.[17] ICOR indices for gross fixed capital formation will stay mostly in the range of 6.6-7.2, which reflects the high efficiency of investments due to the presence of multinational companies through past and ongoing foreign investment.

4.3 Accession scenario

Accession would bring several changes to be reflected in the structure of our forecasts. We assume that positive news about a coming accession in 2005 will be known from 2001, so the effects of accession will already begin to manifest themselves in that year.

First, there are trade-related effects. We assume that, in view of the expectation of accession, exports will remain responsive to demand conditions in Western Europe, which means that the coefficient in our base equation (3) will decrease less rapidly than in the non-accession scenario, and will remain at 1.5 from 2006 onward. As for the GDP equation, we assume that the regression coefficient in the equation $rGDP = 1+ 0.5*rEXP$, which in the non-accession scenario determines the rate of growth of GDP in 2006-2010, will increase to 0.58 by 2010 in the accession scenario, indicating the beneficial effects of economies of scale achieved through exports to the large single market. The resulting growth rates are shown in Table 4.3.

[16] According to the latest medium-term draft budget, the government intends to reduce the share of primary government expenditures in GDP from 39.6 percent in 1997 to 36-37 percent by 2002; this reduction will be accompanied by a similar decline in primary revenue (see Ministry of Finance, 1999).

[17] Since the projection of all variables is based on 1997 constant prices, one should not except ratios of the projected variables without qualification. The export/GDP ratio, for example, will most probably be substantially smaller due to the fall in the ratio of prices of tradable goods and non-tradable goods. I thank Dariusz Rosati for drawing my attention to this interpretation.

Table 4.4 Hungary: Non-accession Scenario, growth rates in 1997 constant prices, percent (unless otherwise indicated)

															Period averages			
	1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**1998-2000**	**2001-2004**	**2005-2010**	**1998-2010**
GDP	4.60	5.10	3.70	4.00	3.76	3.69	3.80	3.89	4.06	4.04	4.04	4.04	3.97	3.97	4.20	3.79	4.02	3.99
Private consumtion	2.00	4.30	3.80	3.70	3.60	3.50	3.70	4.50	4.50	4.40	4.00	3.80	3.80	3.80	3.93	3.82	4.05	3.95
Public consumption	1.80	2.60	1.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.03	3.80	2.50	2.39
Total consumption	2.30	4.05	3.80	3.53	3.45	3.36	3.54	4.23	4.23	4.15	3.81	3.64	3.64	3.64	3.66	3.64	3.85	3.74
Gross fixed cap. Form.	8.80	11.40	7.00	7.50	6.50	6.30	5.00	4.25	4.00	4.00	4.00	4.00	4.00	4.00	8.62	5.51	4.00	5.51
Gross investment	8.60	16.10	4.87	5.05	4.59	5.50	4.44	3.54	3.91	3.36	4.16	4.12	4.32	4.16	8.55	4.51	4.00	5.19
Domest. Demand	3.70	7.37	3.84	3.99	3.79	4.02	3.82	4.01	4.13	3.91	3.91	3.79	3.85	3.80	5.05	3.91	3.90	4.17
Exports (goods and NFS)	26.41	16.00	9.00	10.00	8.16	7.36	7.05	6.72	6.58	6.07	6.07	6.07	5.93	5.93	11.62	7.32	6.11	7.73
Imports (goods and NFS)	25.50	22.20	10.00	9.00	8.16	7.36	7.05	6.72	6.58	5.77	5.77	5.77	5.63	5.53	13.58	7.32	5.84	8.04
Net exports (% of GDP)	-0.46	-3.23	-3.91	-3.59	-3.74	-3.87	-3.99	-4.10	-4.20	-4.08	-3.96	-3.83	-3.69	-3.47	-3.58	-3.93	-3.87	-3.82
Balance of payments items as % of GDP																		
Merch. trade and NFS	-1.22	-3.08	-3.91	-3.59	-3.74	-3.87	-3.99	-4.10	-4.20	-4.08	-3.96	-3.83	-3.69	-3.47				
Incomes, net	-3.11	-3.99	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50				
Transfers, net	2.18	2.17	2.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20				
Current account	-2.15	-4.90	-5.21	-3.89	-4.04	-4.17	-4.29	-4.40	-4.50	-4.38	-4.26	-4.13	-3.99	-3.77				
FDI, net	3.61	3.10	3.20	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50				
Other variables																		
CPI, %	18.3	14.3	9.9	8	7.7	6.50	5.5	4.5	4	4	3.5	3.5	3.5	3.5				
Employment, % change	0	0.7	1	1	0.7	0.60	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
Unemployment rate	10.4	9.1	9.5	8.8	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8	7.9	7.8				
Population, million on 1, Jan.	10.174	10.135	10.092	10.052	10.021	9.991	9.971	9.951	9.942	9.932	9.922	9.912	9.902	9.892				

Source: own calculations

Second, we expect increasing transfers from 2005 onward: total net transfers from abroad equivalent to 3.2 percent of GDP in 2004 will gradually increase to 5.2 percent in 2010, broadly in accordance with the figures in Table 4.2. Technically, these transfers will decrease the (otherwise larger) current account deficit, while physically they will be used mostly to finance infrastructural and environmental investments, as well as supporting and restructuring the agricultural sector.

Third, FDI will increase due to reduced risk of investment in the country and better access to larger markets. As in earlier instances of accession, FDI will start increasing (as a percentage of GDP) two years before accession. However, the pace of this increase will be relatively slow compared to the international experience and to that of other CEECs. The reasons for this are numerous. Hungary has already benefited a great deal from FDI in recent years and, with a simultaneous accession of several CEECs in 2005, there is a chance that Hungary will lose some of its appeal. In particular, the country must abandon the tax breaks that it has offered to investors and develop other forms of support, which will take time and be costly (at least in the short term). The country must also close its customs-free zones (unless it is allowed to keep some of them open during transition periods achieved in membership negotiations).

Another reason for the slow growth of FDI around the accession date is that most of the western part of the country is already "well-endowed" with FDI, while foreign capital seems to be reluctant to move to most of the less developed eastern regions of the country. We calculate that much of the structural transfers from the Union will be used to improve the infrastructure in eastern Hungary. Since this process takes time, FDI will move in larger amounts to these regions only by the end of the forecast period.[18].

In the accession scenario foreign saving (transfers and FDI) will complement domestic savings to finance investment. Gross fixed capital formation will develop much faster than in the non-accession scenario, and will reach 33 percent of GDP (in 1997 prices) at the end of the period. ICOR indices under this scenario will fall mostly in the 6-6.5 range, a good level in international comparison, with a slightly higher efficiency of investment than under the non-accession scenario.

FDI will also finance larger net trade deficits and current account deficits: under this scenario, imports will develop faster than exports since both increased FDI and transfers will tend to increase the imports. Private consumption will not grow appreciably faster than in the non-accession scenario (this fact may loosely be interpreted as the effect of stronger competition on real wages), but the growth of public consumption will gradually accelerate, reflecting the run-up to membership and the use of transfers for public projects after accession.

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[18] Our cautious approach is also supported by the results of Brenton and Di Mauro (1997), who point out that by 1995 advanced transition economies, including Hungary, have already attracted more FDI than a relevant gravity model would forecast, particularly from Germany, the traditional foreign investor in Hungary. It is true, however, that in case of EU membership, an additional factor, the preferential relationship with EU members, would play a role, so that a higher FDI than that explained by the normal factors of the gravity model (i.e., particularly the growth of GDP in Hungary) would be consistent with international experience.

The results are presented in Table 4.5. As the table shows, in 2000-2004 exports will develop annually at only about 0.6 percentage points faster than under the non-accession scenario. However, in 2005-2010, the difference will already be 1.5 percentage points annually. Similarly, in the case of GDP, the difference in the first period would be negligible, while in the second period it would grow to 1 percent. The results reflect the fact that, following Hungary's strong integration into the EU through trade in the pre-accession phase, we do not expect an export boom, but only a modest acceleration of exports. However, membership will bring benefits through higher investment (8 percent growth of gross fixed capital formation in 2005-2010 in the accession scenario as against 4 percent in the case of non-accession) and the affordability of higher imports (2.2 percentage points difference annually in 2005-2010).

4.4 Other variables

Since inflation in 1999 has not precisely followed the path planned by the government early 1999, the plans formulated at the same time by the Ministry of Finance (1999) for achieving 3.5-4.5 percent inflation by 2002 may be too optimistic. It is more likely that Hungary will achieve this target by 2004-2005, irrespective of the scenarios. By that time, the crawling peg exchange rate system will be abolished, but the inflation rate will remain in the 3-4 percent range because the real restructuring of the economy and the relative increase of the prices of non-tradable products will demand such a range to accommodate wage claims.

Employment will show only a moderate increase, particularly through 2002, due to longer schooling and the gradual introduction of a higher pension age. A portion of those forced to leave the labor market in the 1990s will probably return to it, but the reduction in unemployment will be very slow due to hysteresis and the country's regional split. Under the accession scenario, particularly in view of the forecast infrastructural and productive investments in the eastern part of the country, the employment/unemployment situation will improve more rapidly.

We have not produced alternative scenarios for population growth. The gradual decline of the Hungarian population will continue, as will the immigration of foreign citizens, particularly ethnic Hungarians from neighboring countries. It is probable that the country's appeal to immigrants will increase due to accession. On the other hand, accession will most likely not provide for the CEECs' inclusion in the free flow of labor within the EU during a transition period. In any case, surveys indicate that Hungarian workers would probably avail themselves of such an opportunity to a much lesser extent than their counterparts from other candidate countries.

Table 4.5 Hungary: Accession Scenario, growth rates in 1997 constant prices, percent (unless otherwise indicated)

															Period averages			
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	1998-2000	2001-2004	2005-2010	1998-2010
GDP	4.60	5.10	3.70	4.00	3.86	3.88	4.11	4.33	4.66	4.80	4.95	5.10	5.15	5.30	4.20	4.05	4.99	4.52
Private consumtion	2.00	4.30	3.80	3.70	3.70	3.40	3.90	4.50	4.60	4.50	4.40	4.60	4.80	4.50	3.93	3.87	4.57	4.21
Public consumption	1.80	2.60	1.00	2.50	3.00	3.20	3.20	3.50	3.50	4.00	4.00	4.00	4.00	4.00	2.03	3.22	3.92	3.27
Total consumption	2.30	4.05	3.80	3.53	3.60	3.37	3.80	4.36	4.45	4.43	4.35	4.52	4.69	4.43	3.66	3.78	4.48	4.08
Gross fixed cap. Form.	8.80	11.40	7.00	7.50	6.80	6.50	6.50	6.30	6.30	7.50	8.00	8.50	8.70	9.00	8.62	6.52	8.00	7.68
Gross investment	8.60	16.10	4.87	5.05	4.50	6.00	5.69	5.26	6.12	7.35	7.48	7.67	7.86	8.15	8.55	5.36	7.44	7.05
Domest. Demand	3.70	7.37	3.84	3.99	3.87	4.18	4.39	4.65	4.98	5.37	5.37	5.57	5.77	5.72	5.05	4.27	5.46	5.00
Exports (goods and NFS)	26.41	16.00	9.00	10.00	8.40	7.82	7.76	7.68	7.84	7.59	7.59	7.59	7.42	7.42	11.62	7.91	7.57	8.60
Imports (goods and NFS)	25.50	22.20	10.00	9.00	8.40	8.02	7.96	7.88	8.04	8.09	8.09	8.09	7.92	7.92	13.58	8.06	8.02	9.29
Net exports (% of GDP)	-0.46	-3.23	-3.91	-3.59	-3.75	-4.01	-4.27	-4.54	-4.81	-5.28	-5.76	-6.26	-6.76	-7.28	-3.58	-4.14	-6.02	-4.88
Balance of payments items as % of GDP																		
Merch. trade and NFS	-1.22	-3.08	-3.91	-3.59	-3.75	-4.01	-4.27	-4.54	-4.81	-5.28	-5.76	-6.26	-6.76	-7.28				
Incomes, net	-3.11	-3.99	-3.50	-3.50	-3.50	-3.50	-3.50	-3.50	-3.60	-3.70	-3.80	-3.90	-4.00	-4.10				
Transfers, net	2.18	2.17	2.20	3.20	3.20	3.20	3.20	3.20	3.60	4.00	4.80	5.20	5.20	5.20				
Current account	-2.15	-4.90	-5.21	-3.89	-4.05	-4.31	-4.57	-4.84	-4.81	-4.98	-4.76	-4.96	-5.56	-6.18				
FDI, net	3.61	3.10	3.20	3.50	3.50	3.50	3.60	3.80	4.00	4.00	4.00	4.50	5.00	5.00				
Other variables																		
CPI, %	18.3	14.3	9.9	8	7.7	6.50	5.5	4.5	4	4	3.5	3.5	3.5	3.5				
Employment, % change	0	0.7	1	1	0.7	0.60	0.5	0.5	0.6	0.8	0.8	1	1	1				
Unemployment rate	10.4	9.1	9.5	8.8	8.7	8.6	8.5	8.4	8.1	7.8	7.5	7.2	6.9	6.6				
Population, million on 1, Jan.	10.174	10.135	10.092	10.052	10.021	9.991	9.971	9.951	9.942	9.932	9.922	9.912	9.902	9.892				

Source: own calculations

5. Summary

In view of the Hungarian economy's strong reliance on exports and inward FDI, and its sensitivity to current account deficits, the outcome of this forecasting exercise is determined by our assumptions about these variables. It is envisaged that the most recent fast growth of exports will decelerate, but the growth of GDP will continue to be crucially determined by the utilization of export opportunities, particularly in the EU. Without accession, inward FDI will stabilize at 3.5 percent of GDP, and GDP will grow by around 4 percent annually. With accession, trade activities will be livelier, with more possibility for increasing investment and the accommodation of higher imports by larger current account deficits. The expected transfers from the European Union will be utilized to prepare the ground for another boom in FDI and indigenous investment in the eastern and other backward parts of the country, which will raise the growth rate of GDP to 5 percent and beyond.

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