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**EU Enlargement:
Growth,
Competitiveness
and Some Challenges
Facing the Future
Member States**

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Executive summary

This paper provides an overview of the recent economic performance and an outlook for the EU accession countries of Central and Eastern Europe (CEECs), focusing on growth and productivity catching-up both at the macro level and in the manufacturing industry during the period 1995 to 2002. The observed impressive gains in the CEECs' labour productivity have been associated with stagnating (at macro level) and declining (manufacturing industry) employment, respectively. The expected catching-up after joining the EU in May 2004 will be challenged by the choice of macroeconomic policies prior to EMU accession. The paper discusses some of the dilemmas related to an early adoption of the euro, as well as the CEECs' readiness regarding the takeover of the acquis communautaire. A detailed statistical appendix provides an assessment of the CEECs' income and productivity levels, as well as selected indicators of competitiveness.

Keywords: *EU enlargement, CEE accession countries, productivity, catching-up, economic policy, competitiveness.*

JEL classification numbers: *E6, H6, O4, O52, P52*

EU Enlargement: Growth, Competitiveness and Some Challenges Facing the Future Member States

Introduction

The economies of the EU accession countries of Central and Eastern Europe (CEECs) have been growing faster than the present EU member states for a couple of years already. This is no mean achievement, especially taking into account the stagnation of the German economy, which represents the main trading partner for most CEECs. Compared to the present EU, the combined size of the CEECs' economies is still small – about 9% in real terms and less than 5% in nominal (at current exchange rates) terms – yet the higher dynamism of the CEECs will doubtlessly exert a positive impact on growth in the enlarged EU. At the same time, while inflation does no longer pose a threat, most CEECs are struggling with high unemployment, and they will need a long time for a marked catching-up with the productivity and income levels of the more advanced EU countries. Though generally taken for granted, the catching-up process will not come about automatically. The accession to the EU in May 2004 will bring additional challenges for the CEECs also in this respect. The present paper addresses some of the implications of EU enlargement for growth and competitiveness in Europe. It also discusses some issues related to the takeover of the *acquis communautaire* in the context of the new EU members' growth prospects.

1 GDP and productivity catching-up

GDP in the future EU member states from Central and Eastern Europe increased by 3% on average in the year 2002, about 2 percentage points more than in the Eurozone (0.9%). Were it not for Poland (which carries a large weight – about 40% – in all CEEC economic aggregates), the average GDP growth would have been even higher. Estonia, Latvia, Lithuania and the Slovak Republic (as well as the later entrants, Bulgaria and Romania) experienced the highest GDP growth (ranging between 4% and 7%) of the CEECs – see Appendix Table A/1. On the other hand, GDP growth decelerated in the Czech Republic (largely as a consequence of the floods) and in Hungary (owing to deteriorating competitiveness). Poland's economy has been recovering since the beginning of 2002 (see Appendix Table A/1 and Havlik et al., 2003 for more details). In 2003, the expected GDP growth of the CEECs will exceed 3% on average, compared with only 0.4% forecast in autumn 2003 for the Eurozone (European Commission, 2003c).

The cumulative GDP in the CEECs rose by almost 30% over the period 1995-2002. The former growth champion Poland, and even more so Bulgaria and Romania, have been

lagging behind; the three Baltic states, however, display higher than average growth dynamics. The GDP growth differential vis-à-vis the EU turned in favour of the CEECs after 1995: it reached 11.2 percentage points in cumulative terms up until 2002, and 1.3 percentage points per annum for the CEEC-8 over that period (Table 1). The rise in productivity (GDP per employed person) accelerated strongly, yet productivity growth was associated with a drop in employment levels. The cumulative 'productivity gain' of the CEEC-8 vis-à-vis the EU-15 over the period 1995-2002 exceeded 20 percentage points.¹

Table 1

**Long-term GDP growth and productivity catching-up
in the CEECs vis-à-vis the EU-15, 1990-2002**

Country groups	1990-1995				1995-2002				1990-2002			
	Growth rate in %		growth differential against EU in pp		growth rate in %		growth differential against EU in pp		Growth rate In %		Growth differential against EU in pp	
	cumu- lated	annual Average	cumu- lated	annual average	cumu- lated	annual average	cumu- lated	annual average	cumu- lated	annual average	cumu- lated	annual average
CEEC-8¹⁾												
GDP	-4.7	-1.0	-12.5	-2.5	28.0	3.6	11.2	1.3	22.0	1.7	-3.9	-0.3
Employment	-13.3	-2.8	-11.3	-2.4	-0.3	0.0	-9.1	-1.2	-13.5	-1.2	-20.1	-1.7
Productivity	9.9	1.9	-0.2	0.0	28.3	3.6	20.9	2.6	41.0	2.9	22.8	1.5
CEEC-8 plus BG, RO												
GDP	-6.4	-1.3	-14.2	-2.8	23.2	3.0	6.5	0.8	15.4	1.2	-10.6	-0.7
Employment	-13.2	-2.8	-11.2	-2.4	-2.7	-0.4	-11.5	-1.6	-15.6	-1.4	-22.1	-1.9
Productivity	7.9	1.5	-2.2	-0.4	26.7	3.4	19.3	2.4	36.7	2.6	18.5	1.2
EU-15												
GDP	7.9	1.5	-	-	16.8	2.2	-	-	26.0	1.9	-	-
Employment	-2.0	-0.4	-	-	8.8	1.2	-	-	6.6	0.5	-	-
Productivity	10.1	1.9	-	-	7.4	1.0	-	-	18.2	1.4	-	-

Notes: 1) Central and East European first-round accession countries, comprising the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia.

Remark: (Labour) Productivity is defined as GDP per employed person. See Appendix Table A/4, Indicators of Competitiveness, for details on individual countries.

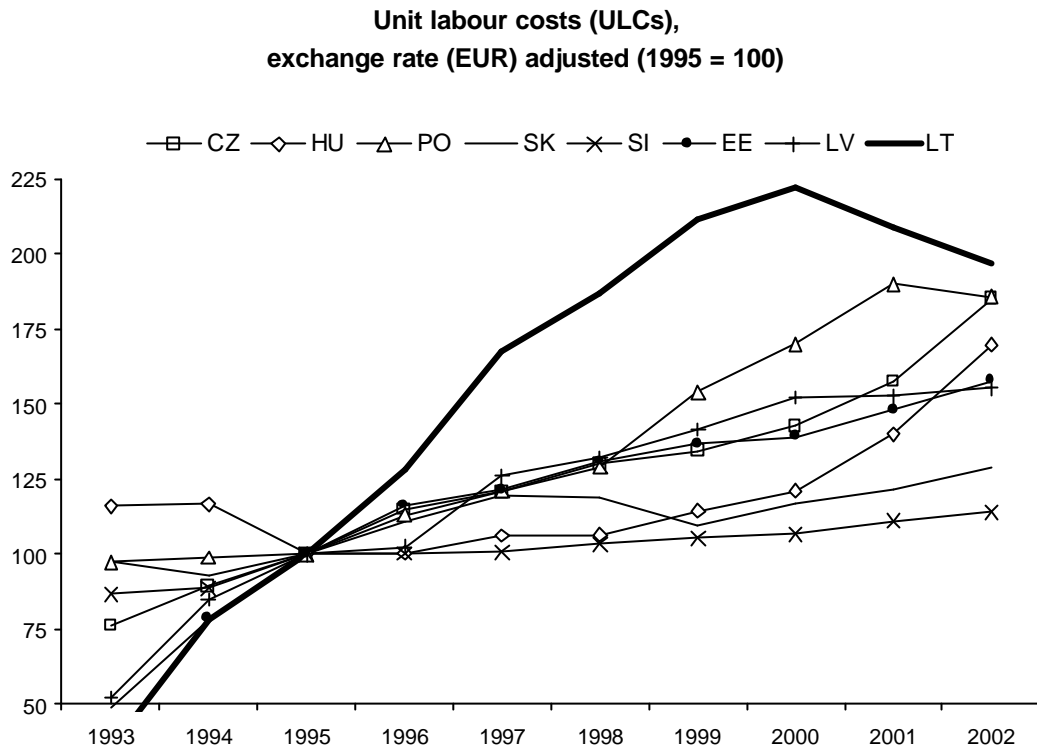
Source: wiiw Database incorporating national statistics, wiiw calculations using AMECO.

Despite impressive productivity growth, the CEECs' international cost competitiveness (measured by unit labour costs) deteriorated during the period 1995-2002 as nominal wages (in EUR) increased even faster – at double-digit annual rates on average (with the exception of the Slovak Republic and Slovenia – see Appendix Table A/4).² As a result, the

¹ In Bulgaria and Romania, restructuring was delayed and productivity gains after 1995 were for the most part based on shedding labour; productivity growth remained below that of the EU in both countries. However, in Bulgaria a certain catching-up process in terms of macro-productivity vis-à-vis the EU started after the financial crisis in 1997/98.

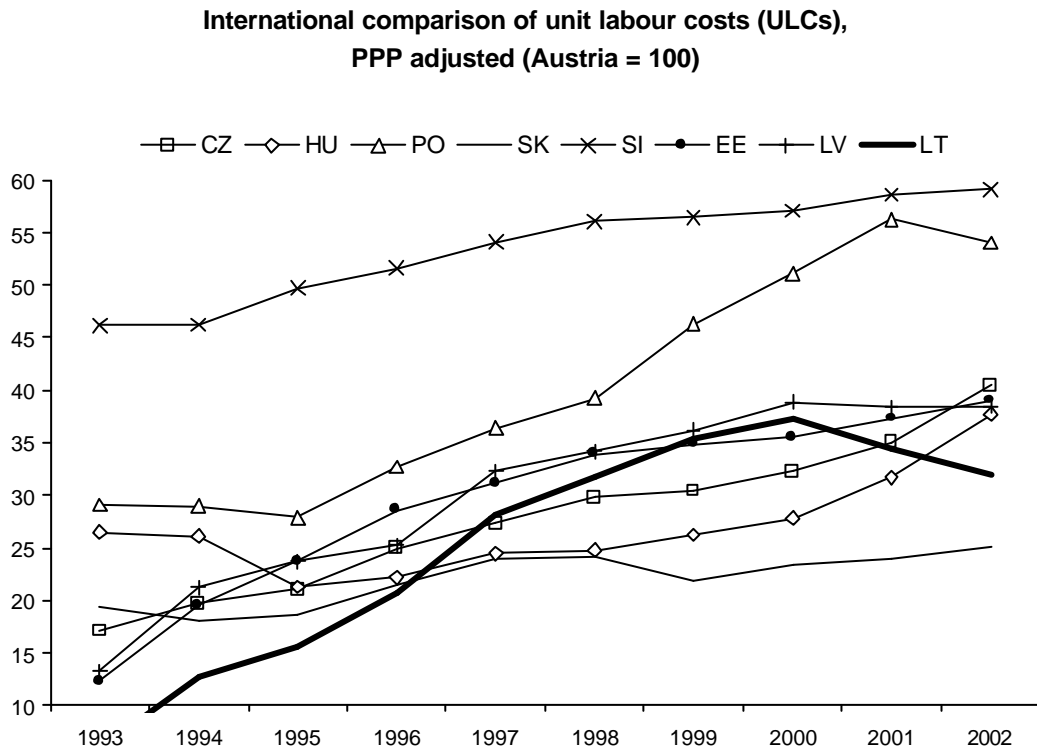
² In all CEECs, the growth of nominal wages in EUR has been accentuated by currency appreciations; the real wages (measured in domestic currency) increased much less – see Table A/4 in the Appendix.

Figure 1



Source: Appendix Table A/4.

Figure 2



Source: Appendix Table A/4.

increase of average unit labour costs (nominal wages in EUR relative to the increase in the real GDP per employed person) exceeded 50% in all CEECs, again except Slovakia and Slovenia, between 1995 and 2002 (Figure 1 and Appendix Table A/4). Nevertheless, the international unit labour cost *levels* are still rather low in the CEECs as their relative productivity levels (in real terms, GDP per employed person measured at purchasing power parity) are higher than their relative wage levels. Compared with Austria, for example, the estimated unit labour costs of the CEECs amounted to less than 40% in the year 2002 (except Slovenia and Poland – see Figure 2 and Appendix Table A/4).

2 Industry recovers despite sluggish external demand

Increasing industrial production, mainly driven by expanding exports, has been a major contributor to the growth of the CEECs' economies over the past couple of years. In 2002, growth in industrial output slowed down to around 3% in the CEECs, with Slovakia and Romania outperforming the rest. Developments during the first nine months of 2003 indicate an upturn in industrial output in most CEECs, the most impressive growth being recorded by the Czech Republic, Poland, Slovakia and Bulgaria. In several countries (in Hungary earlier on, now in the Czech and Slovak Republics and more recently also in Bulgaria and Romania), an FDI-driven tendency towards re-industrialization is clearly visible (cf. the experience of Ireland during the 1990s).

In nearly all CEECs, the recent growth in industrial output has been associated with even more remarkable improvements in labour productivity than was the case at the level of the whole GDP. In 2002, the growth in labour productivity in industry accelerated noticeably once again, and the upward trend has been maintained in the first half of 2003 as well. In retrospect, labour productivity in industry over the period 1995-2002 doubled in Hungary and rose by close to 80% in Poland. In the CEEC manufacturing industry, production rose much faster (6.4% per annum) than in the EU (2.1% per annum) over the same period. This translates into a growth differential in favour of the CEECs of 4.3 percentage points per year vis-à-vis the EU-15 (cumulated nearly 40% – see Table 2). On the other hand, manufacturing employment *declined* palpably in the CEECs (by 2.1% per annum) while remaining more or less constant in the EU-15. As a result, the impressive speed at which the CEECs had caught up in productivity at the GDP level was even more pronounced in manufacturing. However, this was associated with an even more pronounced drop in employment. Over the period 1995-2002, the cumulative productivity gain in manufacturing amounted to 80% in the CEEC-8 and 16% in the EU-15. The annual labour productivity growth differential was thus 6.5 percentage points in favour of the CEECs, exceeding by far the growth differential in terms of macro-productivity and indicating an impressive

strengthening of the CEECs' industrial base (and therefore mitigating the growth of unit labour costs).³

Table 2

**Labour productivity catching-up in the CEECs' manufacturing industry
vis-à-vis the EU-15, 1995-2002**

	Growth rate In %		CEECs' growth differential against EU-15 in pp		growth rate in %		
	cumu- lative	annual average	cumu- lative	annual average	cumu- lative	annual average	
CEEC-8¹⁾					EU-15		
Production	54.0	6.4	38.6	4.3	Production	15.4	2.1
Employment	-14.0	-2.1	-11.9	-2.1	Employment	-0.9	0.0
Productivity	79.1	8.7	62.7	6.5	Productivity	16.4	2.2

Notes: Gross production and productivity in real terms. - 1) Central and East European first-round accession countries, weighted averages.

Source: wiiw Database, incorporating national statistics, wiiw calculations using AMECO.

3 Unwelcome side-effect of productivity growth: stubbornly high unemployment

But for a few exceptions (Hungary and Slovenia), unemployment in the transition countries remains stubbornly high. The present rates of economic growth are obviously too low to permit the creation of additional jobs. Efficiency reserves and productivity gaps in these countries are still high and one can speak of a 'jobless growth' in the CEECs. This applies not only to industry, where labour productivity growth has been most impressive. The services sector, though still less developed than in advanced market economies, is currently undergoing restructuring as well and not many new jobs are being created. On the contrary, the financial services and retail trade sectors in particular are presently shedding labour (partly due to the restructuring and concentration processes initiated by foreign investors). In some CEECs (mainly in Poland and Romania) hidden unemployment is high in agriculture.

According to labour force surveys (LFS), the average rate of unemployment in the CEEC region equalled 15% in 2002, much more than in the EU (8.3%). With unemployment rates close to 20%, the labour market situation is critical especially in Poland, Slovakia and Bulgaria (Appendix Table A/1). Moreover, the concentration of unemployed in the peripheral eastern regions and the high incidence of unemployment among the young, minorities and long-term jobless are giving rise to major social and political problems.

³ In Hungary, unit labour costs in manufacturing industry even declined during this period – see wiiw (2003).

In most CEECs, there is little hope for improvement in the near future since economic restructuring is not yet complete and efficiency reserves in the economy are generally still high. The new EU member states (and the other transition countries as well) will require specific employment strategies (support of small and medium-sized enterprises, regional policies, training, etc.) in order to: (i) stabilize the labour market situation; (ii) maintain employment levels in manufacturing; and (iii) create new employment opportunities in other sectors, while simultaneously maintaining the recent pace of productivity improvements.⁴ Otherwise there is every danger of the present high rate of unemployment increasing even further. Needless to say, achieving productivity improvements in tandem with increasing employment during a period of sluggish global economic growth (in addition to the domestic fiscal consolidation requirements) is no mean task. One possibility would be to focus on creating low capital-intensive jobs (e.g. by supporting the construction of affordable housing). The latter approach could also help to alleviate the present housing shortages, which often constitute one of the main barriers to increased labour mobility, the latter contributing to the large differences in regional unemployment rates in most CEECs.

4 Inflation under control

There has been a persistent trend towards disinflation over the past few years. In several CEECs, especially in the Czech Republic and Poland, price increases have recently been even lower than in the Eurozone. Double-digit (annual) inflation persists only in Romania; producer price inflation was even negative in several CEECs. As a rule, the recent and expected price increases (if any) result solely from adjustments in administered prices for utilities and services, and from adjustments to tax and excise rates prior to EU accession. The increases in VAT rates on certain services and the rise in excise duty on tobacco and alcohol in the wake of EU accession will be the main reason for temporarily higher inflation in the CEECs over the period 2003-2004; their core inflation is as a rule very low.

In any case, it appears that inflation is no longer a threat. On the contrary, in some CEECs (the Czech Republic, Hungary, Poland) deflationary tendencies are currently a cause for concern – as is the case in Germany, Japan and the USA. The frequently claimed link between inflation and fiscal deficits has gone missing: despite the incidence of high (and recently even growing) budget deficits in several CEECs, inflation has been dropping. This missing link is forcibly illustrated by the recent developments in the Czech Republic, Hungary, Poland and Slovakia, all of which suffer from high and growing budget deficits (attaining 6-9% of GDP in 2002 – see Table 3 below), while inflation is dropping. The ongoing public finance reforms are therefore motivated mainly by efforts to secure the medium- and long-term sustainability of government budgets (including pension, health and social security systems) and to create a favourable business climate for investments

⁴ For more on employment strategies in the CEECs, see Celin (2003).

(by lowering the corporate tax rates), rather than being predominantly focused on taming inflationary pressures. Needless to say, these reforms are – just as everywhere else in Western Europe – politically controversial and difficult to implement.

5 Macroeconomic policy challenges related to EU and EMU accession

For the immediate future, the conduct of monetary policy and the choice of the exchange rate regime will be of crucial importance to the CEECs. As is well known, economists' opinion is split over the desirability of the CEECs achieving a rapid entry into the European Monetary Union (EMU), given that the minimum obligatory requirement is two years' 'successful' membership in the Exchange Rate Mechanism (ERM) framework.⁵ Secondly, and more importantly, the monetary authorities (central banks, monetary councils) in the CEECs which determine monetary and exchange rate policies are of a different opinion to the EU Commission and the European Central Bank (ECB). Frequently, different views are also held by the Central Banks and Finance Ministries in the CEECs. The monetary authorities are, to varying degrees, very much in favour of rapid entry into the EMU, while the EU Commission and the ECB are more cautious in this respect, preferring a period in which nominal (inflation, interest rates) and real (GDP level) convergence is gradually achieved in line with the conditions for EMU entry as laid down in the Maastricht Treaty.⁶ The likely outcome of these divergent views could be that most CEECs will give overriding priority to swift EMU entry and subordinate most other economic policy goals to that target.

However, both strategies, be it staying out of the EMU for a longer period of time after EU accession or attempting to join very quickly, are hazardous. In short, staying out for a longer time means that CEEC currencies will continue to be subject to exchange rate instability, partly as a reflection of their 'structural' current accounts deficits and partly as an obligation under the *acquis communautaire* to provide for complete capital account liberalization, with every possibility of speculative exchange rate attacks.⁷ The swift entry strategy requires a period of almost complete nominal exchange rate stability in relation to the euro,⁸ together with sustained disinflation (during the past couple of years, most CEECs' currencies fluctuated widely – see Figure 3). Using monetary policy tools both to achieve exchange rate stability and to lower inflation (i.e. by temporarily relatively high interest rates) may further heighten a country's vulnerability to speculative attacks on its

⁵ See the contributions by D. Begg et al. (2002), Coricelli and Jazbeg (2001) and Halpern and Wyplosz (2001).

⁶ The more reserved view of the ECB regarding CEECs' early EMU accession may be partly driven by 'institutional' issues such as voting rights in the ECB Council – see Rostowski (2003).

⁷ There are no derogations in the Accession Treaties in the area of capital flows liberalization for CEECs and no 'opt-outs' from EMU accession.

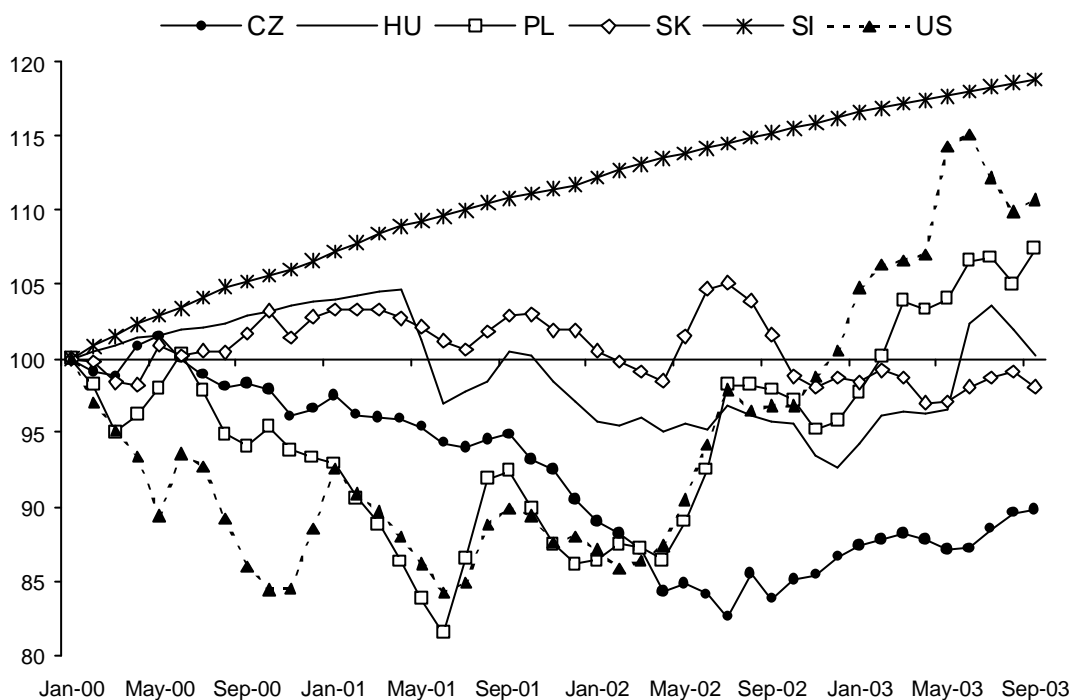
⁸ Possibly even within a narrow $\pm 2.25\%$ corridor around the central parity, originally stipulated in the Maastricht Treaty; not a broader corridor of $\pm 15\%$ set up after exchange rate crises by the Amsterdam Council in 1997 for the new ERM-2 mechanism.

exchange rate. One way to solve this dilemma would be early accession to the EMU, or no obligation to join the ERM at all (see Wyplosz, 2003).⁹ The latter, however, would require a change in the Accession Treaties.

Figure 3

Nominal exchange rate movements, 2000-2003 (January 2000 = 100)

(national currency vis-à-vis EUR)



Source: wiiw Monthly Database incorporating national statistics.

Apart from a focused use of monetary policy to achieve rapid EMU entry, the Maastricht criteria require, of course, the achievement of fiscal targets that are currently violated in the majority of the CEECs (Table 3).¹⁰ Once more, the overriding desire for swift EMU entry will call for rather dramatic adjustments in this respect – even if the rules of the Stability and Growth Pact were changed. Moreover, in the event of a conflict between fiscal and monetary authorities, the latter can attempt to impose their will on the former. This tussle has been symptomatic of developments in Hungary and Poland over the past few years and explains much of the rather unstable and volatile macroeconomic experience of the two economies. In any case, first and foremost an attempt to secure relatively swift entry into the EMU flies in the face of the generally accepted logic of the Balassa-Samuelson

⁹ This argument has been developed in more detail in a recent paper by B. Eichengreen (2003).

¹⁰ There are strong arguments that the application of the Maastricht criteria to the (structurally and otherwise different) CEECs is misplaced – see, for instance, Buiter and Grafe (2002).

Table 3

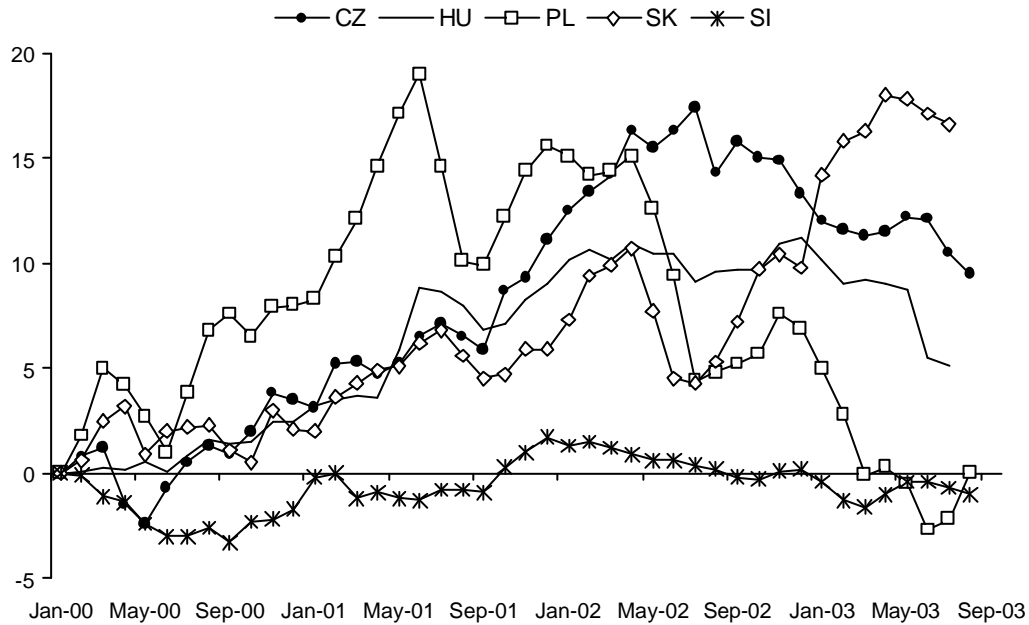
General government net borrowing (-) / lending (+)
% of GDP

Year	1999	2000	2001	2002	2003	2004	2005
Czech Republic	-3.7	-4.0	-5.5	-6.7	-7.6	-5.9	-4.8
Estonia	-4.0	-0.4	0.2	1.3	-0.3	0.0	0.0
Hungary	-5.6	-3.0	-4.7	-9.2	-4.8	-3.8	-2.8
Latvia	-5.3	-2.7	-1.6	-3.0	-2.9	-2.4	-2.2
Lithuania	-5.7	-2.6	-2.2	-2.0	-2.4	-2.9	-2.5
Poland	-1.5	-1.8	-3.0	-4.1	-4.1	-5.0	-4.0
Slovakia	-6.4	-10.4	-7.3	-7.2	-4.9	-3.9	-3.4
Slovenia	-2.2	-3.3	-2.8	-2.6	-2.0	-1.6	-1.6

Source: European Commission, September 2003 and Pre-Accession Economic Programmes, August 2003.

Figure 4

Real currency appreciation, 2000-2003 (January 2000 = 100)
(EUR vis-à-vis national currency, PPI deflated)



Remark: An increasing line means real appreciation against Euro.

Source: wiiw Monthly Database incorporating national statistics.

process of a higher trend inflation and the necessary real currency appreciation in catching-up economies such as the CEECs (see Halpern and Wyplosz, 2001).¹¹ Secondly, it might cause instability in the macroeconomic growth processes due to either over-restrictive monetary policy and/or speculative attacks on the exchange rates and/or undue speed in the fiscal consolidation process. We hence speak here of potential 'EMU dips' in the growth processes of the CEECs over the coming years.¹²

Table 4

General government gross debt							
% of GDP							
Year	1999	2000	2001	2002	2003	2004	2005
Czech Republic	14.3	16.6	23.3	27.1	30.5	34.2	37.7
Estonia	6.5	5.1	4.8	5.8	5.5	5.2	4.9
Hungary	61.2	55.5	53.4	56.3	57.5	57.2	55.3
Latvia	13.7	13.9	15.7	15.2	16.0	17.0	16.0
Lithuania	23.4	24.3	23.4	22.7	22.9	22.7	23.2
Poland	42.7	37.2	37.3	47.4	50.8	54.5	57.1
Slovakia	43.8	46.9	48.1	44.3	45.0	45.7	47.4
Slovenia	26.4	27.6	27.5	28.3	27.8	27.7	26.9

Source: European Commission, September 2003 and Pre-Accession Economic Programmes, August 2003.

The greater volatility of the business cycle and the possibility of the CEECs being structurally more prone to react to internal and external shocks also establishes a greater need for counter-cyclical policy.¹³ Moreover, the levels of public debt are in most cases (except Hungary) much below the required Maastricht criterion (60% of GDP – see Table 4). This may also justify a (temporarily) higher fiscal deficit target than the figure of 3% of GDP currently stipulated in the Stability and Growth Pact, as it will also automatically apply to the CEECs after their EU accession in May 2004. In general, the CEECs will continue to undergo structural adjustment processes, and the use of rigid fiscal policy guidelines that ignore the specific situation of the CEECs will not be conducive to their income catching-up (real convergence) process. The present requirements of EMU membership thus clearly conflict with a significant Balassa-Samuelson catching-up process. Apart from the 'classical' Balassa-Samuelson argument regarding a higher trend inflation in catching-up economies there is another point relevant in this context, namely

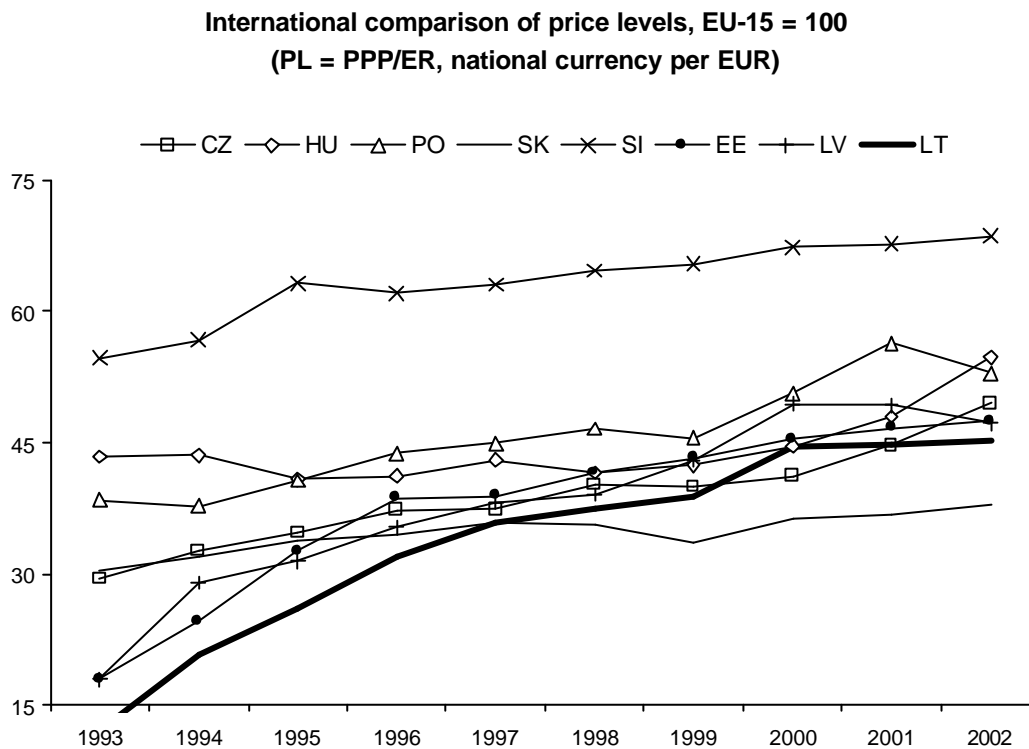
¹¹ Indeed, a tendency towards real appreciation has been common to all CEECs (except Slovenia – see Figure 4). It has been interrupted in 2003 as nominal exchange rates depreciated (mainly in Poland and Hungary).

¹² There are also opposing views which argue that before EMU accession risks of currency crises increase and the CEECs' real growth would be sub-optimal – see Rostowski (2003).

¹³ There is some evidence for higher degrees of concentration and specialization of industry in the CEECs as compared with present EU member states – see wiiw (2003).

the still very low price levels in the majority of the CEECs as compared to the EU average. The process (even if slow) of price convergence will continue after accession; however, with more or less stable nominal exchange rates this will only be possible with some inflation differential in favour of the CEECs (and thus of a continuing real appreciation of their currencies). Maintaining price levels which are lower than half the EU average (as is presently the case in all CEECs except Slovenia – see Figure 5) long after accession, and even less than that compared with neighbouring Austria, Germany, Italy and Finland, would most likely create various frictions in an integrated European economy. Hence, as long as the EMU accession rules are not adjusted, a significant catching-up process would not allow EMU entry any time soon.

Figure 5



Source: Appendix Table A/4.

The current debates concerning the reform of the Stability and Growth Pact will no doubt take on a new dimension after the CEECs' accession to the EU, as the range of countries with different structural characteristics and income levels, inter-temporal and inter-generational trade-offs and trend growth rates will widen sharply. A last point to be mentioned in the context of this brief discussion of macroeconomic policy dilemmas related to EU/ERM/EMU accession is the inconsistency between the goal of early EMU entry and the transitory stipulations imposed on labour flows between some present EU members (mainly Austria and Germany) and the acceding CEECs. These restrictions on labour flows for a period of up to seven years after EU accession obviously violate one of the key

criteria for the 'optimum currency area' set up by Robert Mundell for countries participating in a currency union (see Mundell, 2000).¹⁴

6 Takeover of the *acquis* and some implications for the CEECs

While EU accession will not bring about any dramatic changes for industry (owing to the already existing high degree of integration in this area) in either 'old' or 'new' EU member states, there will be some sectors (e.g. steel in several CEECs) and areas (SMEs and border regions in both 'old' and 'new' member states) that might be adversely affected. For the CEECs' manufacturing sector as a whole, and from a strictly business point of view, complying with the *acquis communautaire* will require considerable additional investments, increases in direct and indirect charges for public services, and it is likely to 'crowd out' other investments (wiiw, 2001). For most sectors the additional costs will be dominated by adherence to the Union's environmental regulations, both through the upgrading of production facilities and through increased charges for waste management. Other kinds of horizontal legislation that are likely to affect future investment requirements of individual firms are occupational health and safety requirements, and employment legislation. In addition, industry will be affected by Single Market standards covering individual product specifications. Many industries in the CEECs have already gone through restructuring and modernization programmes and are well-prepared for these legal requirements. However, this applies mostly to industries which display high FDI penetration whereas the domestically owned companies are in a much worse shape. Recent surveys show that only half the companies in the CEECs have started preparations for the Single Market and less than 10% of respondents claim to be fully informed about current EU legislation (Eurochambres, 2003). The level of compliance with existing EU legislation is generally low. More concerted institutional and administrative efforts are urgently needed in order to improve the CEEC companies' readiness for the EU market.

The takeover of the environmental *acquis* will be costly (the investments required are estimated to range between EUR 80 to 100 billion in the CEECs – see Commission of the European Communities, 2003), and the ability of domestically owned enterprises to cope with increased competition is low. Small companies and companies operating only on the domestic market are generally less prepared for the Single Market. The present dichotomy between modern, foreign-dominated industries (and companies) and domestically owned enterprises could even increase (see Hunya, 2002). Promotion of SMEs, networking and cross-border cooperation, as well as improved institutional and administrative capacities, will be crucial for overcoming potential problems arising in the enlarged European market.

¹⁴ This argument, just as the above-mentioned large gaps in price levels, is usually overlooked by the proponents of rapid EMU entry for the CEECs (for example, Rostowski, 2003, argues in this context only with a high degree of CEECs' trade integration).

In the present EU member states, *acquis* compliance of the CEECs will open new opportunities for investment and cost-optimizing strategies, and will further strengthen the creation of more complex production networks that draw on complementary production factors, thus making it possible to enhance the competitiveness of European companies in the global context.

7 Summary conclusions

Western Europe is currently experiencing an unprecedentedly long period of slow growth; several EU countries are even on the brink of recession. Relative to other slow-growth periods, employment in the EU-15 has been surprisingly robust: 2.6 million jobs have been added in 2001 and 2002 combined, and in 2003 employment is expected to decline only marginally (European Commission, 2003c). A large share of the new jobs are part-time, with hours per worker decreasing. The other side of the ability to create jobs in a slow-growth period is the meagre increase in productivity. In the past two years, productivity per person employed in the EU-15 increased only by half a percentage point, and per hour productivity consequently by 0.9%, per year (WFO-CEPII, 2003).

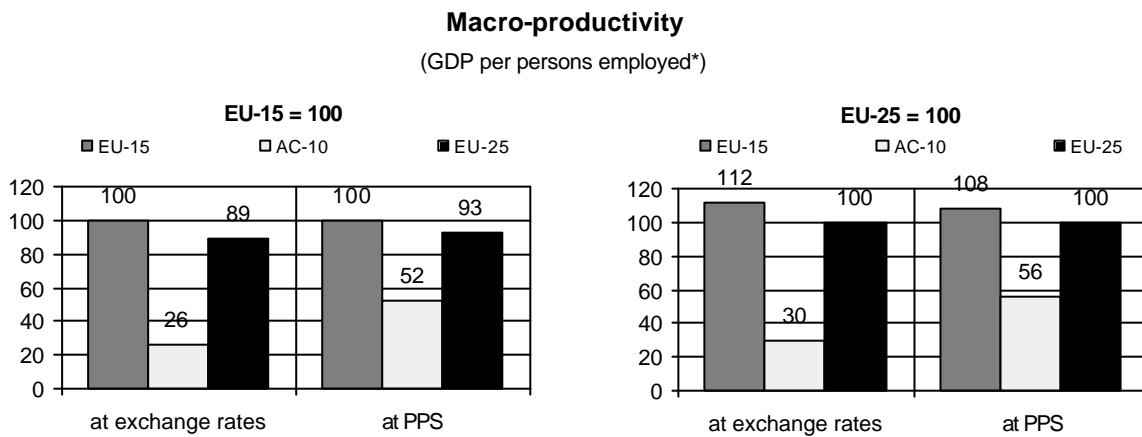
In contrast, productivity growth in the CEECs has been much higher, yet employment was stagnant. During the period 1995-2002, the CEEC-8 have managed to increase productivity (GDP per employed person) by nearly 30%: this implies that they have been catching up fast both to the EU-15 and the USA. However, GDP and productivity growth has been 'jobless' in the sense that it did not help to create additional employment – a worrying development in the context of the EU Lisbon strategy. The CEECs' accession to the EU will considerably widen the gap between the rich and the poor EU member states; it will lower the average productivity level in the EU-25 by about 7 percentage points (Figure 6), but it will also significantly add to the growth dynamism in an enlarged EU – especially in industry. At the same time, the average rate of unemployment in the EU-25 will increase due to the much higher unemployment rates in several CEECs.

Overall, there are still question marks with respect to how the changes in the conduct of macroeconomic policies in the course of accession are going to impinge on the overall growth performance of the new EU members, to which extent the undoubted initial costs and future benefits of the takeover and implementation of the *acquis* are going to affect branch developments at the detailed level, and whether countries that have fallen behind in the qualitative nature of their catching-up processes are going to continue to experience a widening gap or whether they will follow, with a lag, the qualitative performance of the more advanced CEECs. However, as structural developments are rather slow and persistent, we are confident that the patterns outlined in this paper provide a good guide for the tendencies likely to be observed also in the period following EU enlargement in 2004.

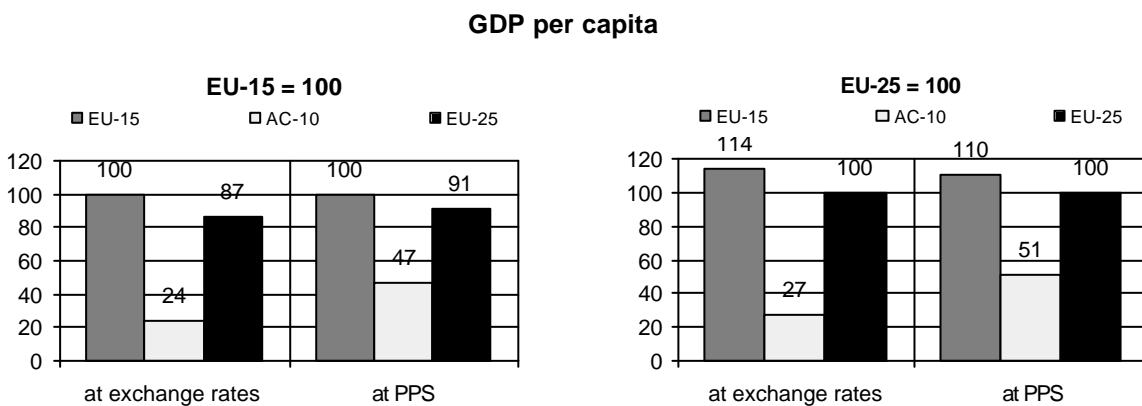
In view of the challenges ahead, the EU economic system should be reconfigured in order to deliver higher growth. The recent report of an independent high-level study group set up by the President of the EU Commission, Romano Prodi, puts forward a number of proposals in this area (Sapir et al., 2003). These include reforms of both micro- and macroeconomic policies at both the EU and national levels, and changes in the governance methods and budgets. Giving priority to growth requires more spending on R&D and education. Within a constant EU budget this implies reduced spending in other areas, especially on agriculture. In addition, labour mobility should be encouraged and more attention paid to the reduction of cross-country income disparities. Although some of these proposals are highly controversial – as witnessed by the initial reactions of several EU representatives – there is no doubt that with enlargement the quest for reforms in the EU system will get a new and urgent dimension.

Figure 6

Levels of macro-productivity and of GDP per capita in the ACs and in the EU, 2001



*) employees and self-employed.- PPS = Purchasing Power Standards



Source: wiiw calculations using national statistics and Eurostat (2001).

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Appendix

Table A/1

CEECs: Overview developments 2001-2002 and outlook 2003-2004

	GDP				Consumer prices				Unemployment, based on LFS¹⁾				Current account			
	Real change in % against previous year				change in % against previous year				rate in %, annual average				in % of GDP			
	2001	2002	2003 forecast	2004 forecast	2001	2002	2003 forecast	2004 forecast	2001	2002	2003 forecast	2004 forecast	2001	2002	2003 forecast	2004 forecast
Czech Republic	3,1	2,0	2,3	2,8	4,7	1,8	0,2	3,5	8,1	7,3	7,6	7,5	-5,7	-6,5	-6,5	-6,6
Hungary	3,8	3,3	2,9	3,2	9,2	5,3	5,3	6,3	5,7	5,8	6,2	6,2	-3,4	-4,0	-5,3	-4,4
Poland	1,0	1,4	3,0	3,5	5,5	1,9	2	3	18,2	19,9	20	20	-3,9	-3,6	-3,4	-3,7
Slovak Republic	3,3	4,4	4	5	7,1	3,3	8	7	19,2	18,5	17	16	-8,5	-8,2	-2,3	-2,4
Slovenia	2,9	3,2	2,5	3,5	8,4	7,5	5,5	4,5	6,4	6,4	6,5	6	0,2	1,7	-0,2	-0,2
CEEC-5	2,2	2,2	2,9	3,4					14,5	15,3	15,7	15,5	-4,2	-4,2	-4,2	-4,3
Bulgaria	4,1	4,8	4,0	4,5	7,4	5,8	3	4	19,7	17,8	18	17	-6,2	-4,4	-3,4	-2,6
Romania	5,7	4,9	4,2	4,5	34,5	22,5	15	11	6,6	8,4	8	9	-5,5	-3,4	-2,7	-4,1
CEEC-7	2,8	2,7	3,2	3,9					12,9	13,8	13,9	14,1	-4,4	-4,1	-3,8	-4,0
Estonia	6,5	6,0	4,4	5,6	5,8	3,6	1,6	3,9	12,6	10,3	10,5	9	-6,0	-12,3	-15,2	-12,2
Latvia	7,9	6,1	6,0	5,2	2,5	1,9	2,5	3	13,1	12,0	11	10,5	-9,6	-7,8	-8,6	-9,5
Lithuania	6,5	6,7	6,6	5,7	1,3	0,3	-0,9	2,3	17,4	13,8	12,9	12	-4,8	-5,4	-5,7	-5,8
CEEC-10	3,0	3,0	3,2	3,9					13,0	13,7	13,8	13,9	-4,7	-4,5	-4,6	-4,8

1) LFS - Labour Force Survey, refers to ILO definition.

Source: wiiw (October 2003); Baltic states: European Commission (2003c).

Table A/2

Level of GDP per capita in the accession countries (AC) and in the EU, 2001

	GDP at current PPP	Population total	EUR	GDP per capita at current PPP			
	EUR mn	1000 persons		EU-15=100	EU-25=100	EU-25=100	EU-27=100
	2001	2001		2001	(MT+CY)	(BG+RO)	2001
Cyprus	12514	675	18553	80.2	88.0	92.1	92.1
Czech Republic	144182	10224	14102	61.0	66.9	70.0	70.0
Estonia	13328	1364	9771	42.3	46.3	48.5	48.5
Hungary	121830	10188	11959	51.7	56.7	59.4	59.4
Latvia	17548	2355	7451	32.2	35.3	37.0	37.0
Lithuania	29708	3481	8534	36.9	40.5	42.4	42.4
Malta	5032	392	12825	55.5	60.8	63.7	63.7
Poland	366457	38641	9484	41.0	45.0	47.1	47.1
Slovak Republic	62697	5380	11654	50.4	55.3	57.8	57.9
Slovenia	32550	1992	16340	70.7	77.5	81.1	81.1
Bulgaria	56766	8020	7078	30.6	33.6	35.1	35.1
Romania	127702	22409	5699	24.6	27.0	28.3	28.3
AC-10	805846	74692	10789	46.7	51.2	53.5	53.6
AC-8 + BG+RO	972768	104054	9349	40.4	44.3	46.4	46.4
AC-10 + BG+RO	990314	105121	9421	40.7	44.7	46.8	46.8
EU-15	8727087	377384	23125	100.0	109.7	114.8	114.8
EU-25 (MT+CY)	9532933	452076	21087	91.2	100.0	104.7	104.7
EU-25 (BG+RO)	9699855	481438	20148	87.1	95.5	100.0	100.0
EU-27	9717401	482505	20139	87.1	95.5	100.0	100.0

	GDP at current ER	Population total	EUR	GDP per capita at current ER			
	EUR mn	1000 persons		EU-15=100	EU-25=100	EU-25=100	EU-27=100
	2001	2001		2001	(MT+CY)	(BG+RO)	2001
Cyprus	10212	675	15140	64.7	74.0	78.4	78.5
Czech Republic	63822	10224	6242	26.7	30.5	32.3	32.4
Estonia	6172	1364	4525	19.3	22.1	23.4	23.5
Hungary	57752	10188	5669	24.2	27.7	29.4	29.4
Latria	8553	2355	3632	15.5	17.8	18.8	18.8
Lithuania	13249	3481	3806	16.3	18.6	19.7	19.7
Malta	4038	392	10292	44.0	50.3	53.3	53.4
Poland	204255	38641	5286	22.6	25.8	27.4	27.4
Slovak Republic	22843	5380	4246	18.1	20.8	22.0	22.0
Slovenia	21829	1992	10958	46.8	53.6	56.8	56.8
Bulgaria	15190	8020	1894	8.1	9.3	9.8	9.8
Romania	44344	22409	1979	8.5	9.7	10.3	10.3
AC-10	412726	74692	5526	23.6	27.0	28.6	28.7
AC-8 + BG+RO	458010	104054	4402	18.8	21.5	22.8	22.8
AC-10 + BG+RO	472260	105121	4493	19.2	22.0	23.3	23.3
EU-15	8833114	377384	23406	100.0	114.4	121.3	121.4
EU-25 (MT+CY)	9245840	452076	20452	87.4	100.0	106.0	106.0
EU-25 (BG+RO)	9291124	481438	19299	82.5	94.4	100.0	100.1
EU-27	9305374	482505	19286	82.4	94.3	99.9	100.0

Source: Accession countries: wiiw Annual Database incorporating national statistics; Cyprus and Malta: AMECO; EU-15: Economic Outlook, OECD.

Table A/3

Level of macro-productivity in the accession countries and in the EU, 2001

	GDP at current PPP		Employment total		GDP per employed at current PPP			
	EUR mn	1000 persons	EUR	EU-15=100	EU-25=100 (MT+CY)	EU-25=100 (BG+RO)	EU-27=100	
	2001	2001	2001	2001	2001	2001	2001	
Cyprus	12514	308	40682	78.9	85.0	88.2	88.2	
Czech Republic	144182	4750	30353	58.8	63.4	65.8	65.8	
Estonia	13328	578	23071	44.7	48.2	50.0	50.0	
Hungary	121830	3868	31494	61.1	65.8	68.3	68.3	
Latvia	17548	962	18241	35.4	38.1	39.5	39.5	
Lithuania	29708	1522	19522	37.8	40.8	42.3	42.3	
Malta	5032	137	36600	71.0	76.5	79.3	79.4	
Poland	366457	14924	24556	47.6	51.3	53.2	53.2	
Slovak Republic	62697	2124	29522	57.2	61.7	64.0	64.0	
Slovenia	32550	779	41782	81.0	87.3	90.6	90.6	
Bulgaria	56766	2940	19306	37.4	40.3	41.8	41.9	
Romania	127702	8581	14882	28.9	31.1	32.3	32.3	
AC-10	805846	29951	26905	52.2	56.2	58.3	58.3	
AC-8 + BG+RO	972768	41028	23710	46.0	49.5	51.4	51.4	
AC-10 + BG+RO	990314	41473	23879	46.3	49.9	51.8	51.8	
EU-15	8727087	169205	51577	100.0	107.8	111.8	111.8	
EU-25 (MT+CY)	9532933	199157	47866	92.8	100.0	103.7	103.8	
EU-25 (BG+RO)	9699855	210233	46139	89.5	96.4	100.0	100.0	
EU-27	9717401	210678	46124	89.4	96.4	100.0	100.0	

	GDP at current ER		Employment total		GDP per employed at current ER			
	EUR mn	1000 persons	EUR	EU-15=100	EU-25=100 (MT+CY)	EU-25=100 (BG+RO)	EU-27=100	
	2001	2001	2001	2001	2001	2001	2001	
Cyprus	10212	308	33198	63.6	71.5	75.1	75.2	
Czech Republic	63822	4750	13436	25.7	28.9	30.4	30.4	
Estonia	6172	578	10684	20.5	23.0	24.2	24.2	
Hungary	57752	3868	14930	28.6	32.2	33.8	33.8	
Latvia	8553	962	8891	17.0	19.2	20.1	20.1	
Lithuania	13249	1522	8706	16.7	18.8	19.7	19.7	
Malta	4038	137	29372	56.3	63.3	66.5	66.5	
Poland	204255	14924	13687	26.2	29.5	31.0	31.0	
Slovak Republic	22843	2124	10756	20.6	23.2	24.3	24.4	
Slovenia	21829	779	28021	53.7	60.4	63.4	63.4	
Bulgaria	15190	2940	5166	9.9	11.1	11.7	11.7	
Romania	44344	8581	5168	9.9	11.1	11.7	11.7	
AC-10	412726	29951	13780	26.4	29.7	31.2	31.2	
AC-8 + BG+RO	458010	41028	11163	21.4	24.0	25.3	25.3	
AC-10 + BG+RO	472260	41473	11387	21.8	24.5	25.8	25.8	
EU-15	8833114	169205	52204	100.0	112.4	118.1	118.2	
EU-25 (MT+CY)	9245841	199157	46425	88.9	100.0	105.0	105.1	
EU-25 (BG+RO)	9291124	210233	44194	84.7	95.2	100.0	100.1	
EU-27	9305375	210678	44169	84.6	95.1	99.9	100.0	

Source: Accession countries: wiiw Annual Database incorporating national statistics; Cyprus and Malta: AMECO; EU-15: Economic Outlook, OECD.

Table A/4

Indicators of macro-competitiveness for the CEECs, 1995-2002

	annual changes in %								
	1995	1996	1997	1998	1999	2000	2001	2002 Prelim.	1996-02 Average
Czech Republic									
GDP deflator	10.2	8.8	8.0	10.6	2.9	1.0	6.3	2.6	6.7
Exchange rate (ER), CZK/EUR	0.7	-0.9	5.3	1.0	2.0	-3.4	-4.3	-9.6	-1.8
Real ER (CPI-based)	-4.9	-6.6	-1.0	-7.1	1.2	-4.9	-6.4	-9.4	-5.7
Real ER (PPI-based)	-2.2	-4.7	1.2	-4.0	1.0	-3.7	-5.8	-9.0	-4.2
Average gross wages, CZK	18.5	18.4	10.5	9.4	8.3	6.6	8.5	7.3	11.5
Average gross wages, real (PPI based)	10.2	13.1	5.3	4.3	7.2	1.6	5.4	7.8	7.4
Average gross wages, real (CPI based)	8.6	8.8	1.8	-1.2	6.1	2.6	3.6	5.4	4.5
Average gross wages, EUR (ER)	17.7	19.5	4.9	8.3	6.2	10.4	13.3	18.7	13.5
Employment total	0.7	0.2	-0.7	-1.4	-2.1	-0.7	0.4	1.0	-0.6
GDP per empl. person, CZK at 1999 pr.	5.2	4.1	0.0	0.4	2.7	4.0	2.7	1.0	2.5
Unit labour costs, CZK at 1999 prices	12.7	13.8	10.5	8.9	5.5	2.5	5.6	6.2	8.8
Unit labour costs, ER (EUR) adjusted	11.9	14.8	5.0	7.9	3.5	6.1	10.3	17.5	10.8
Hungary									
GDP deflator	25.5	21.2	18.5	12.6	8.4	9.9	8.6	10.7	15.0
Exchange rate (ER), HUF/EUR	30.3	17.5	10.3	14.2	4.9	2.9	-1.3	-5.3	6.9
Real ER (CPI-based)	4.8	-2.5	-4.8	1.7	-3.4	-4.2	-7.4	-8.2	-4.8
Real ER (PPI-based)	5.6	-2.8	-7.6	2.3	-0.2	-3.5	-4.9	-3.4	-3.4
Average gross wages, HUF	16.8	20.4	22.3	18.3	13.9	13.5	18.2	18.3	21.1
Average gross wages, real (PPI based)	-9.4	-1.1	1.6	6.3	8.4	1.7	12.3	20.4	8.1
Average gross wages, real (CPI based)	-8.9	-2.6	3.4	3.5	3.6	3.4	8.2	12.3	5.2
Average gross wages, EUR (ER)	-10.4	2.5	10.8	3.6	8.6	10.4	19.7	24.9	13.2
Employment total	-1.9	-0.8	0.0	1.4	3.1	1.0	0.3	0.3	0.9
GDP per empl. person, HUF at 1999 pr.	4.5	2.2	4.6	3.4	1.1	4.2	3.5	3.0	3.7
Unit labour costs, HUF at 1999 prices	11.7	17.8	16.9	14.4	12.7	9.0	14.1	14.8	16.8
Unit labour costs, ER (EUR) adjusted	-14.3	0.3	5.9	0.1	7.4	6.0	15.6	21.3	9.2
Poland									
GDP deflator	28.6	18.8	14.0	11.8	6.7	7.1	4.2	1.3	10.6
Exchange rate (ER), PLN/EUR	16.3	7.7	9.7	5.9	7.7	-5.1	-8.5	5.1	3.5
Real ER (CPI-based)	-6.2	-7.9	-2.6	-3.6	1.7	-11.8	-11.2	5.3	-5.2
Real ER (PPI-based)	-3.1	-3.5	-1.4	-1.7	1.9	-7.9	-8.8	4.2	-3.0
Average gross wages, PLN ^{*)}	31.6	26.5	21.9	15.7	10.6	11.6	8.0	4.3	16.3
Average gross wages, real (PPI based)	4.9	12.6	8.6	7.8	30.3	3.5	6.3	3.3	11.8
Average gross wages, real (CPI based)	3.0	5.5	6.1	3.5	28.3	1.3	2.4	2.4	7.9
Average gross wages, EUR (ER)	13.2	17.4	11.1	9.2	27.8	17.6	18.1	-0.8	16.6
Employment total	1.8	1.9	2.8	2.3	-2.7	-2.3	-0.6	-0.2	0.2
GDP per empl. person, PLN at 1999 pr.	11.8	4.0	3.9	2.4	7.0	6.5	5.7	1.5	5.2
Unit labour costs, PLN at 1999 prices	17.7	21.7	17.3	12.9	28.7	4.8	2.2	2.8	14.8
Unit labour costs, ER (EUR) adjusted	1.2	12.9	6.9	6.7	19.4	10.5	11.7	-2.2	10.9
Slovak Republic									
GDP deflator	9.9	4.4	6.7	5.2	6.4	6.4	5.4	3.9	6.4
Exchange rate (ER), SKK/EUR	1.4	-0.1	-1.0	4.2	11.4	-3.5	1.7	-1.4	1.8
Real ER (CPI-based)	-4.9	-3.2	-4.8	-0.6	2.1	-11.8	-2.8	-2.6	-4.0
Real ER (PPI-based)	-2.8	-3.5	-4.5	0.5	6.8	-8.8	-3.3	-3.3	-2.8
Average gross wages, SKK	14.3	13.3	13.1	8.4	7.2	6.5	8.2	9.3	11.1
Average gross wages, real (PPI based)	4.9	8.8	8.3	5.0	2.8	-3.8	1.6	7.0	4.9
Average gross wages, real (CPI based)	4.0	7.1	6.6	1.6	-3.0	-4.9	1.0	5.8	2.3
Average gross wages, EUR (ER)	12.8	13.5	14.3	4.1	-3.7	10.4	6.4	10.8	9.1
Employment total	1.7	3.6	-0.9	-0.3	-3.0	-1.4	1.0	0.2	-0.2
GDP per empl. person, SKK at 1999 pr.	4.7	2.1	6.5	4.3	4.5	3.7	2.2	4.2	4.6
Unit labour costs, SKK at 1999 prices	9.2	11.0	6.2	4.0	2.6	2.8	5.8	4.8	6.2
Unit labour costs, ER (EUR) adjusted	7.7	11.1	7.3	-0.2	-7.9	6.5	4.1	6.3	4.3
Slovenia									
GDP deflator	15.2	11.1	8.8	7.8	6.6	10.6	9.2	8.0	10.4
Exchange rate (ER), SIT/EUR	0.5	10.7	6.4	3.3	4.0	5.9	5.9	4.2	6.7
Real ER (CPI-based)	-8.8	3.2	0.2	-2.6	-0.7	-0.5	0.1	-1.1	-0.3
Real ER (PPI-based)	-6.9	4.4	1.2	-2.9	1.8	3.0	-1.4	-0.7	0.8
Average gross wages, SIT	18.4	15.3	11.7	9.6	9.6	10.6	11.9	9.7	13.2
Average gross wages, real (PPI based)	4.9	8.0	5.3	3.4	7.3	2.8	2.8	4.4	5.7
Average gross wages, real (CPI based)	4.3	4.9	3.1	1.6	3.3	1.6	3.3	2.1	3.3
Average gross wages, EUR (ER)	17.8	4.1	5.0	6.1	5.4	4.5	5.7	5.3	6.1
Employment total	-0.1	-0.5	0.2	0.2	1.8	1.3	1.4	0.6	0.8
GDP per empl. person, SIT at 1999 pr.	4.2	4.0	4.4	3.5	3.4	3.3	1.4	2.6	3.8
Unit labour costs, SIT at 1999 prices	13.5	10.9	7.1	5.8	6.0	7.1	10.4	7.0	9.1
Unit labour costs, ER (EUR) adjusted	13.0	0.1	0.6	2.5	2.0	1.2	4.2	2.7	2.2

*) Methodological change in 1999 (broader wage coverage). Growth in 1999 comparable according to new methodology.

(Table A/4 ctd.)

Table A/4 (ctd.)

	1995	1996	1997	1998	1999	2000	2001	2002 prelim.	1996-02 Average
Bulgaria									
GDP deflator	62.7	120.9	948.6	23.7	3.7	6.7	6.7	3.8	81.0
Exchange rate (ER), BGN/EUR	34.4	153.8	760.2	4.0	-0.8	0.0	0.0	0.0	68.1
Real ER (CPI-based)	-14.5	17.4	-24.2	-10.8	-2.0	-7.3	-4.6	-3.5	-6.6
Real ER (PPI-based)	-8.5	11.1	-19.0	-12.7	-3.5	-11.0	-2.4	-1.0	-6.9
Average gross wages, BGN	53.2	74.4	865.6	43.3	9.7	11.7	6.9	13.3	81.5
Average gross wages, real (PPI based)	-0.2	-24.2	-9.9	20.7	6.7	-5.0	3.0	12.0	-0.6
Average gross wages, real (CPI based)	-5.5	-21.3	-16.6	20.7	6.9	1.2	-0.4	7.1	-1.5
Average gross wages, EUR (ER)	13.9	-31.3	12.3	37.7	10.6	11.7	6.9	13.3	8.0
Employment total	1.3	0.1	-3.9	-0.2	-2.1	-3.5	-0.4	0.8	-1.5
GDP per empl. person, BGN at 1999 pr.	1.6	-9.5	-1.8	4.1	4.5	9.2	4.5	4.0	2.3
Unit labour costs, BGN at 1999 prices	50.7	92.8	882.9	37.6	5.0	2.3	2.3	9.0	77.4
Unit labour costs, ER (EUR) adjusted	12.1	-24.1	14.3	32.2	5.9	2.3	2.3	9.0	5.6
Romania									
GDP deflator	35.3	45.3	147.3	54.2	47.8	43.7	37.9	23.5	64.8
Exchange rate (ER), ROL/EUR	33.6	46.9	109.5	23.5	63.1	22.5	30.4	20.1	51.1
Real ER (CPI-based)	4.1	8.5	-16.1	-21.0	13.4	-14.0	-0.7	0.1	-5.8
Real ER (PPI-based)	3.3	-1.3	-16.4	-7.6	12.9	-16.5	-6.3	-3.5	-6.9
Average gross wages, ROL	54.8	51.7	98.4	60.3	44.3	46.9	48.9	27.3	63.9
Average gross wages, real (PPI based)	14.6	1.2	-21.5	20.4	-0.2	-4.2	5.6	2.2	-0.2
Average gross wages, real (CPI based)	17.1	9.3	-22.1	0.8	-1.1	0.9	10.7	3.9	-0.3
Average gross wages, EUR (ER)	15.8	3.2	-5.3	29.9	-11.6	20.0	14.1	6.0	8.5
Employment total	-2.8	-3.2	-2.5	-3.1	-3.4	-1.1	0.8	0.0	-2.1
GDP per empl. person, ROL at 1999 pr.	10.3	7.4	-3.7	-1.8	3.0	3.2	4.8	4.9	2.9
Unit labour costs, ROL at 1999 prices	40.4	41.2	106.1	63.2	40.1	42.4	42.0	21.4	59.3
Unit labour costs, ER (EUR) adjusted	5.1	-3.9	-1.6	32.2	-14.1	16.3	8.9	1.1	5.4
Estonia									
GDP deflator	31.3	23.3	11.3	9.8	4.5	6.7	5.2	4.1	10.7
Exchange rate (ER), EEK/EUR	-3.4	1.7	4.0	0.7	-0.9	0.0	0.0	0.0	0.9
Real ER (CPI-based)	-22.9	-15.3	-4.6	-5.2	-2.8	-1.6	-3.2	-1.5	-5.8
Real ER (PPI-based)	-19.7	-10.8	-3.6	-3.7	0.3	-0.2	-3.0	-0.2	-3.6
Average gross wages, EEK	37.0	25.7	19.7	15.4	7.6	10.5	12.3	11.5	17.2
Average gross wages, real (PPI based)	9.1	9.5	10.0	10.8	8.9	5.4	7.6	11.1	10.6
Average gross wages, real (CPI based)	6.2	2.1	7.6	6.7	4.2	6.3	6.1	7.6	6.8
Average gross wages, EUR (ER)	41.9	23.6	15.1	14.6	8.6	10.5	12.3	11.5	16.1
Employment total	-6.2	-2.2	-0.3	-1.7	-4.5	-1.2	0.9	1.4	-1.3
GDP per empl. person, EEK at 1999 pr.	11.2	6.3	10.2	6.4	4.0	8.6	5.5	4.6	7.6
Unit labour costs, EEK at 1999 prices	23.2	18.2	8.7	8.5	3.5	1.8	6.4	6.6	8.9
Unit labour costs, ER (EUR) adjusted	27.6	16.2	4.5	7.7	4.4	1.8	6.4	6.6	7.9
Latvia									
GDP deflator	15.0	16.2	7.5	4.9	5.3	4.6	2.5	1.8	7.1
Exchange rate (ER), LVL/EUR	2.9	1.2	-4.7	0.6	-5.7	-10.2	0.5	3.5	-2.6
Real ER (CPI-based)	-15.1	-11.8	-10.3	-2.2	-6.7	-10.5	0.4	3.7	-6.4
Real ER (PPI-based)	-3.9	-10.4	-7.7	-1.6	-1.8	-6.6	0.1	2.7	-4.3
Average gross wages, LVL	24.5	10.3	21.6	11.1	5.8	6.1	6.3	8.8	11.6
Average gross wages, real (PPI based)	11.3	-3.0	16.8	9.0	10.2	5.4	4.6	7.7	8.3
Average gross wages, real (CPI based)	-0.4	-6.2	12.2	6.1	3.3	3.4	3.7	6.8	4.7
Average gross wages, EUR (ER)	21.0	9.0	27.6	10.4	12.2	18.1	5.8	5.1	14.6
Employment total	-3.5	-2.5	4.3	-0.4	-1.8	-2.8	2.2	2.8	0.3
GDP per empl. person, LVL at 1999 pr.	2.7	6.3	3.9	5.2	4.7	9.9	5.6	3.2	6.5
Unit labour costs, LVL at 1999 prices	21.2	3.8	17.0	5.6	1.0	-3.5	0.7	5.5	4.8
Unit labour costs, ER (EUR) adjusted	17.8	2.5	22.8	4.9	7.1	7.5	0.2	1.9	7.6
Lithuania									
GDP deflator	41.9	21.5	14.2	5.4	-0.4	0.9	-0.2	0.0	6.6
Exchange rate (ER), LTL/EUR	9.7	-3.1	-9.7	-0.8	-4.9	-13.4	-3.1	-3.5	-6.5
Real ER (CPI-based)	-19.0	-20.3	-15.3	-3.9	-4.4	-12.3	-2.0	-1.8	-10.2
Real ER (PPI-based)	-10.7	-16.2	-14.0	2.9	-7.7	-23.2	-0.5	-2.7	-10.7
Average gross wages, LTL	47.8	28.6	25.9	19.5	6.2	-1.7	1.2	5.2	13.6
Average gross wages, real (PPI based)	15.2	10.3	18.7	24.3	3.1	-16.7	2.5	5.9	7.2
Average gross wages, real (CPI based)	5.9	3.2	15.6	13.7	5.4	-2.7	-0.1	4.9	6.5
Average gross wages, EUR (ER)	34.7	32.7	39.3	20.4	11.7	13.5	4.4	9.0	21.5
Employment total	-1.9	0.9	0.6	-0.8	-0.5	-3.7	-4.0	-7.7	-2.6
GDP per empl. person, LTL at 1999 pr.	5.3	3.7	6.4	8.2	-1.3	8.0	11.0	15.6	8.5
Unit labour costs, LTL at 1999 prices	40.4	24.0	18.3	10.5	7.6	-9.0	-8.9	-9.0	4.7
Unit labour costs, ER (EUR) adjusted	28.0	27.9	31.0	11.3	13.2	5.1	-5.9	-5.7	12.0

Source: National statistics and wiw estimates.

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