

Labor Markets in Central, Eastern and Southeastern European EU Member States: General Trends and Migration Effects

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This study gives an overview of labor market developments in Central, Eastern and Southeastern European (CESEE) EU Member States since their accession to the EU. By using data on net migration rates, the study also sheds light on the question whether migration in the aftermath of the EU enlargement has caused labor shortages and rising wage pressure in the region. The study finds virtually no evidence for this proposition. Net migration has been rather contained since 2004, with most of the countries actually showing higher immigration than emigration.

1 Introduction

Eight Central and Eastern European (CEE²) countries joined the EU in May, 2004, and two more countries entered the EU in January, 2007. Since their accession, almost all of these countries have recorded a pickup in economic growth and per capita income convergence with Western European EU countries. The period since the enlargement has also been characterized by a remarkable improvement of labor market conditions in almost all new EU Member States. Brisk economic activity has caused employment to increase substantially and unemployment rates have fallen to historically low levels. This development was so far reaching that by now labor shortages are beginning to emerge in several economies. In this context, the argument is often brought forward that these labor shortages can at least be partly ascribed to rising emigration of especially young and well-educated people to Western European EU Member States (EU-15), in particular since EU accession. This short study investigates this proposition.

This paper is structured as follows. Sections 2 and 3 outline the evolution of the labor markets of the CESEE EU Member States (EU-10), while section 4 focuses on the legal foundations guiding labor movements in the enlarged union. The magnitude of migration movements in the new EU Member States and their effects on the size and composition of the labor force in these countries will be discussed in section 5. These findings shall be put into context with general economic developments, and we will examine to what extent they are capable of explaining labor market developments in general and labor shortages in particular. The main observation period extends from 2004 to 2006/07, thus covering the time since the CEE EU Member States joined the EU. Bulgaria and Romania only entered the EU in 2007, but in light of the fact that migration ranks high on the policy agenda of those two countries as well, they are also included in the country sample. In evaluating migration and labor market developments, the study uses

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² In this contribution, CEE refers to the Central and Eastern European EU Member States (i.e. the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia and Lithuania). CE refers to the Central European EU Member States (i.e. the Czech Republic, Hungary, Poland, Slovakia and Slovenia). CESEE refers to the Central, Eastern and Southeastern EU Member States (i.e. Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Bulgaria and Romania).

data provided by Eurostat, where labor market figures are generally based on labor force surveys.

2 Labor Markets Have Improved Substantially since EU Accession

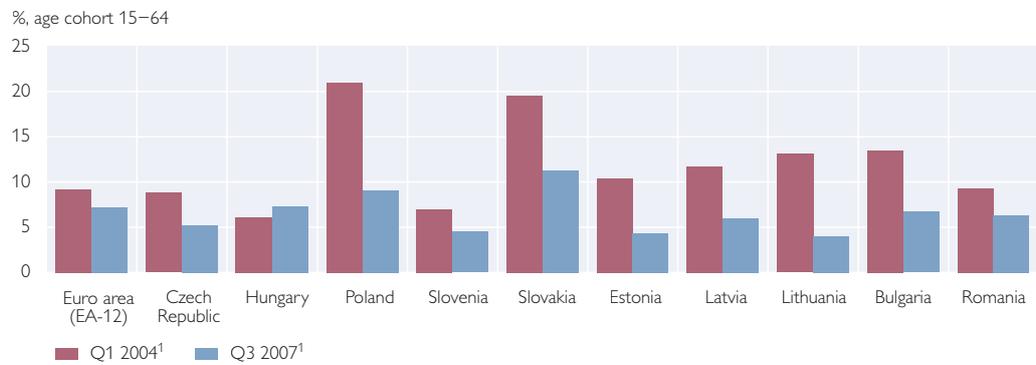
In the period after EU accession, the labor markets of the new Member States changed dynamically, which can be attributed mainly to solid general economic development. Weighted average real growth amounted to 5.6% per year in the countries under observation from 2004 to 2006. This figure is more than 2 percentage points higher than in the three-year period preceding enlargement and more than 3.5 percentage points higher than in the euro area. In addition, after years of labor shedding induced by large-scale enterprise restructuring and the associated phenomenon of jobless growth, the input of labor to economic growth has increased quite substantially. Those mutually reinforcing factors led to a strong improvement in almost all labor market indicators in the region. The labor market performance in most countries was also more favorable than in the euro area.

Above all, unemployment rates in nearly all countries have decreased significantly, with the reductions ranging from 2.5 percentage points to 11.9 percentage points (see chart 1). The development was most pronounced in Poland and the Baltic States, but also in Bulgaria and Slovakia the number of unemployed people decreased substantially. By the third quarter of 2007, unemployment was lower than in the euro area in the majority of countries, reaching particularly low levels (below 5%) in Estonia, Lithuania and Slovenia. This generally favorable picture is only blurred by the development in Hungary, where unemployment rates have increased in recent years. This, however, seems to be attributable to the fact that economic growth performance in this country has been more subdued than on average in the region, with far-reaching budgetary consolidation measures weighing on GDP dynamics since mid-2006.

The decrease in unemployment that most EU-10 countries recorded was broad based and included all age cohorts and levels of educational attainment. Unemployment dropped not only among the working age population at large (people aged 15–64) but also among the young (15–25 years; see chart 2) and older workers (55–64 years; see chart 3). Furthermore, unemployment rates also declined among people with low educational attainment (i.e. pre-primary, primary and lower secondary education; see chart 4). Only the figures for long-term unemployment show a somewhat more mixed picture (see chart 5). While the share in total unemployment of people seeking employment for more than 12 months decreased in some countries (Latvia, Lithuania, Romania, Slovenia), it increased in the Czech Republic, Hungary, Estonia, Bulgaria, and above all Slovakia. Even in these countries, however, with the exception of Hungary, the absolute number of the long-term unemployed shows a clear downward trend. In Slovakia, the high incidence of long-term unemployment can be partly explained by the problematic labor market situation of ethnic minorities, especially the Roma (see Havlik and Holzner, 2008). Overall, however, the evidence points to a clear improvement of the labor market situation in CESEE EU Member States.

Chart 1

Unemployment Rates among Total Working Age Population

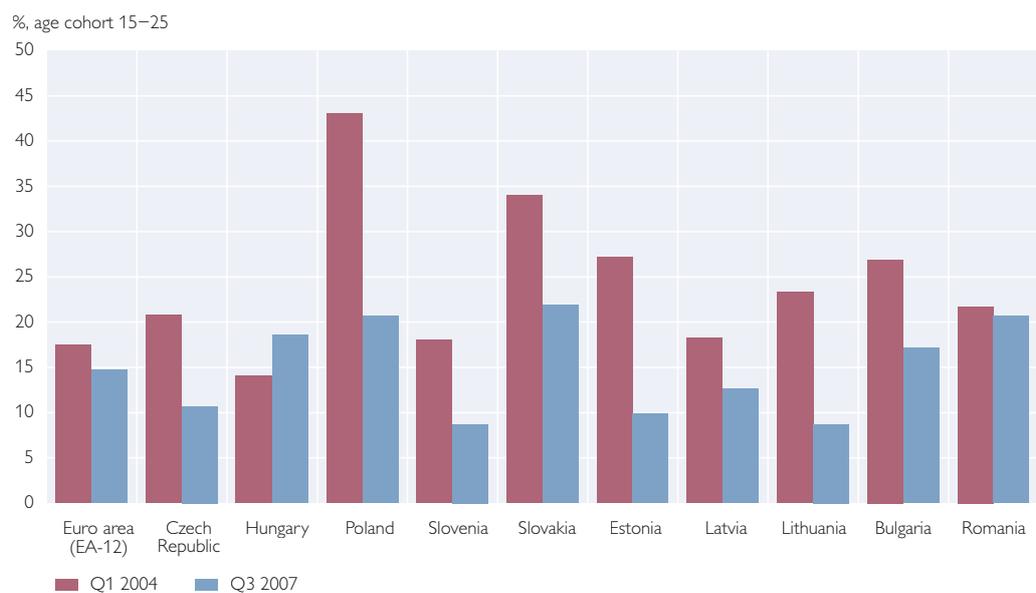


Source: Eurostat.

¹ Seasonality patterns only marginally blurred the general picture.

Chart 2

Unemployment Rates among Younger People

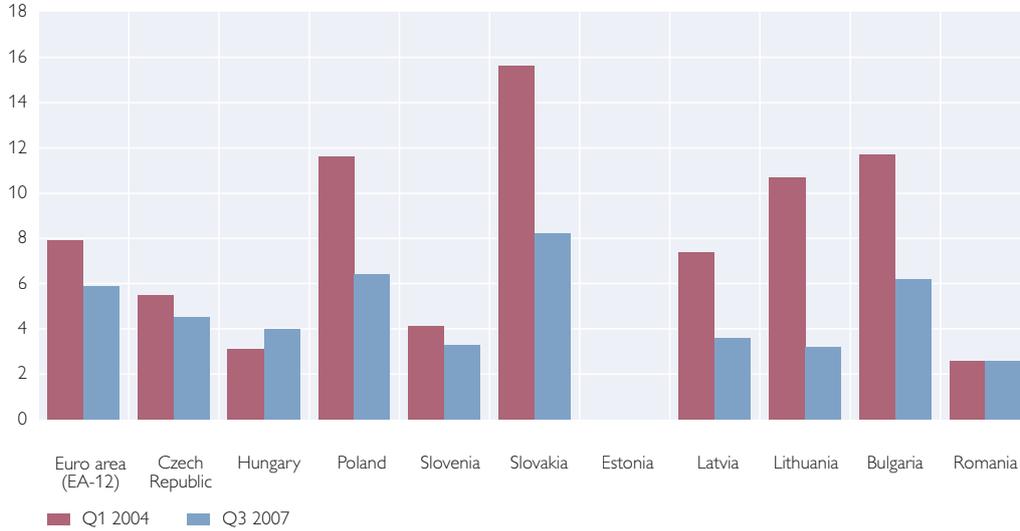


Source: Eurostat.

Chart 3

Unemployment Rates among Older People

%, age cohort 50–64

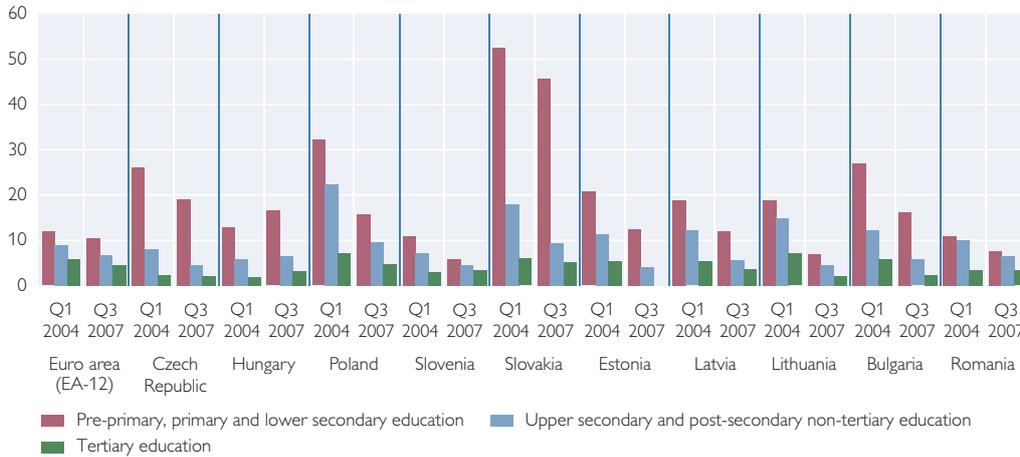


Source: Eurostat.

Chart 4

Unemployment Rates by Educational Attainment

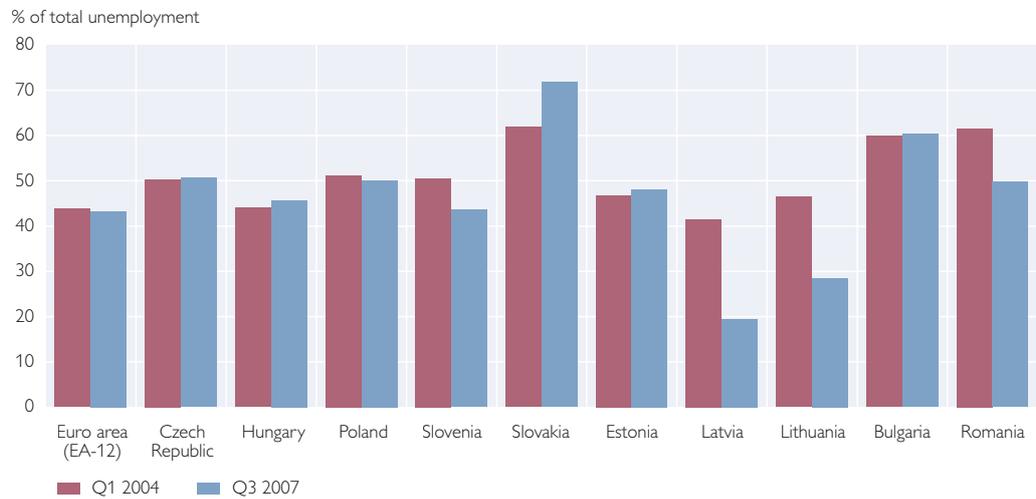
%, age cohort 15–64



Source: Eurostat.

Chart 5

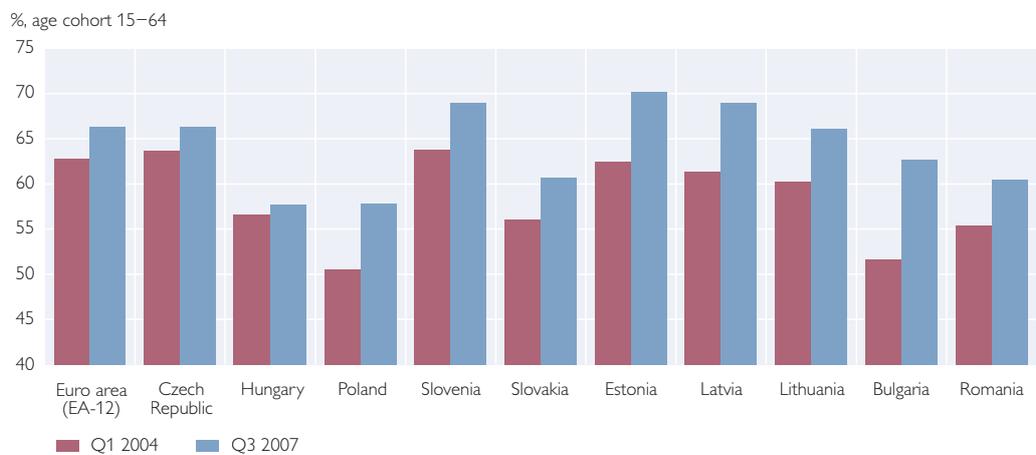
Long-Term Unemployment



Source: Eurostat.

Chart 6

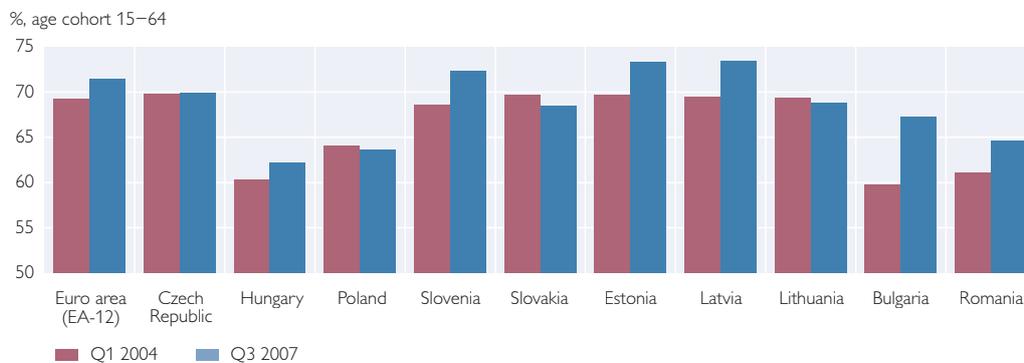
Employment Rates



Source: Eurostat.

Chart 7

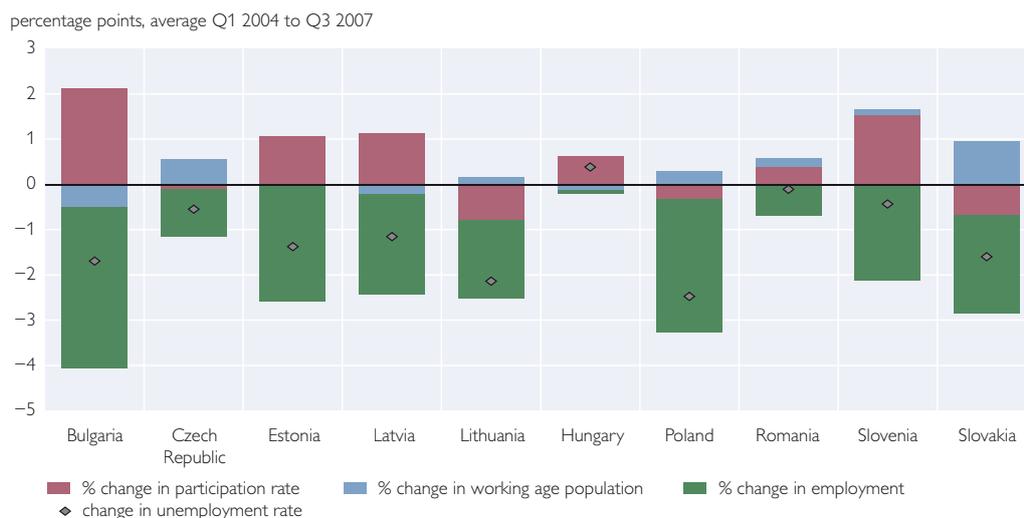
Participation Rates



Source: Eurostat.

Chart 8

Decomposition of Change in Unemployment Rate



Source: Eurostat, author's calculations.

Changes in unemployment are a function of changes in employment and/or changes in the labor force (which can be defined as total population times participation rate). An increase in employment lowers the unemployment rate (*ceteris paribus*) as more people find jobs, while an increase in the labor force increases unemployment (*ceteris paribus*) as the supply of people willing to work rises. A decomposition of unemployment dynamics along these lines reveals that the reduction in unemployment was to a considerable extent driven by rising employment (see chart 8). In fact, employment increased throughout the region and in most cases strongly, albeit starting from low levels in many countries (see chart 6). By 2007, Estonia already reached the goal of the EU's Lisbon Strategy of an employment rate of over 70%, while Latvia and Slovenia came close to it. Developments in participation rates were somewhat more heterogeneous across the EU-10 countries: They rose in the Czech Republic, Slovenia, Estonia, Latvia, Bulgaria, and Romania, while they declined in Lithuania, Poland, and Slovakia, thus helping

cut unemployment in the latter countries (see chart 7). The impact of changes in working age population on unemployment dynamics was generally only marginal, the exception being Slovakia where the working age population grew by around 4% during the observation period.

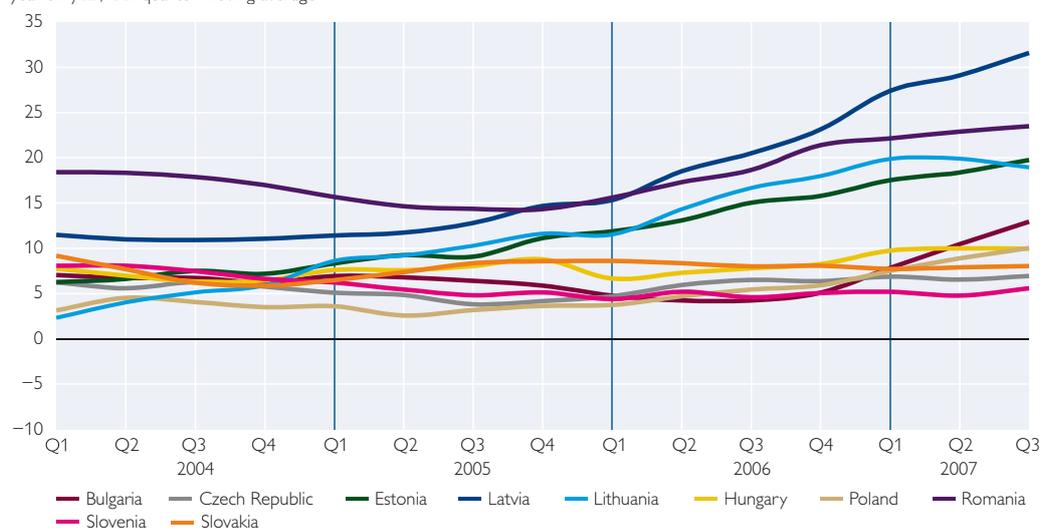
3 Productivity Developments Offset High Wage Growth only in Some Countries

The broad-based improvement in labor market indicators was accompanied by rising wage pressure (see chart 9). This development was especially pronounced in Latvia. Labor costs (including wages and salaries as well as bonuses), however, also developed dynamically in Estonia, Lithuania, Romania, and more recently also in Bulgaria. It can be noted that in these countries, nominal labor cost growth started to accelerate soon after EU accession (in Romania already in anticipation of EU accession) and came to between 13% in Bulgaria and as much as 32% in Latvia in the third quarter of 2007, with Lithuania (19%), Estonia (20%), and Romania (23%) in between. The CE countries did not experience comparable developments. However, in Poland and also in Hungary, labor cost growth has accelerated somewhat in recent quarters. In these five countries, labor cost climbed by between 5% and 10% in the third quarter of 2007. The difference between the two country groups can be related to the differences in growth rates. Especially the Baltic economies have experienced an economic boom in recent years. Average real growth in that region has amounted to more than 9% since EU accession, and high wage growth appears to be one of the signs of overheating that have become visible in these countries. To a lesser extent, this is also true for Bulgaria and Romania. Per capita income levels in the Baltic countries and the Southeastern European countries were still lower (at the time of EU accession) than in most Central European countries, which according to standard growth theory explains

Chart 9

Development of Labor Costs in Whole Economy

year-on-year, four-quarter moving average

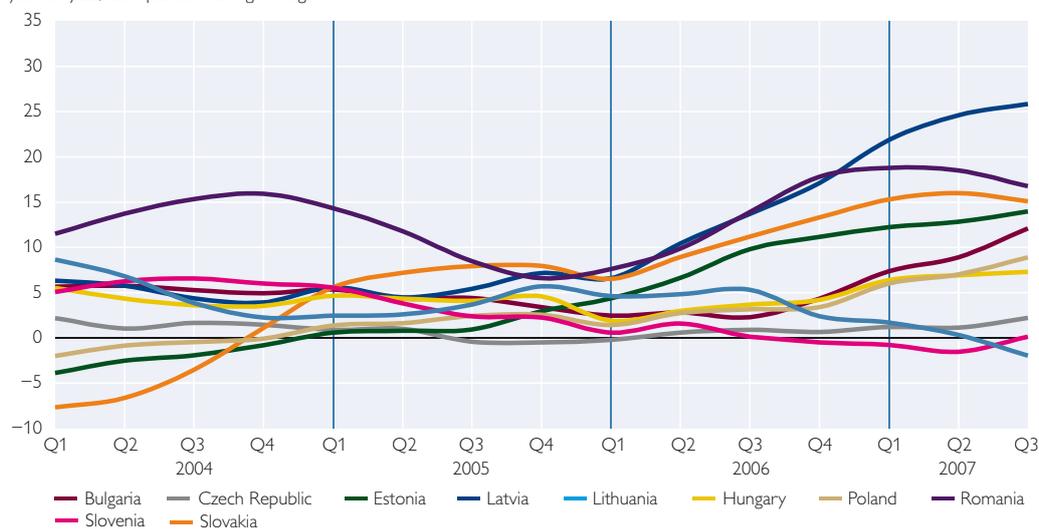


Source: Eurostat, author's calculations.

Chart 10

Development of Unit Labor Costs in Whole Economy

year-on-year; four-quarter moving average



Source: Eurostat, author's calculations.

the high growth rates recorded and also implies more dynamic wage and price convergence toward Western European standards.

Solid productivity dynamics (measured as gross value added in total economy (excluding agriculture) per person employed) helped to dampen the cost impact of wage pressure in almost all countries under review. Productivity growth was especially pronounced in Slovakia, where it reached 10% in the third quarter of 2007 (based on four-quarter moving averages), but it was also dynamic in Romania, Estonia, Slovenia, Latvia, the Czech Republic, and to a lesser extent in Lithuania and Hungary. In Bulgaria and Poland, however, productivity advances were subdued, with annual average values of only around 1% to 2% over the last three years. In both countries, this went hand in hand with accelerating labor cost growth (as measured by the labor cost index for the whole economy (excluding agriculture) provided by Eurostat). Those two factors translated into rising unit labor costs, which put downward pressures on margins and/or upward pressures on domestic prices (see chart 10). Strong increases in unit labor costs can also be observed in Estonia, Latvia, Lithuania, and Romania. In those countries, unit labor cost developments were mainly driven by rising wages, with quite solid productivity growth exerting a somewhat dampening effect. The Central European countries generally show lower growth rates of unit labor costs or, in some cases, no growth at all in recent years. Especially in the Czech Republic, Slovakia, and Slovenia, productivity developments fully offset wage increases. Unit labor costs dropped in Slovenia for most of 2007, while they recently started to decline in Slovakia, as well. In the Czech Republic they have been essentially flat since mid-2005.³

³ Unit labor cost developments have important implications for competitiveness. A discussion of this issue is, however, beyond the scope of this paper.

The argument has frequently been put forward that migration in the aftermath of enlargement contributed to tightening labor markets, and thereby speeded up wage and unit labor cost convergence (see EBRD, 2007, or IMF, 2007). The assumption behind this proposition is that emigration boomed after the labor markets of (at least some of) the EU-15 had been opened for workers from Eastern Europe. This line of argument will be examined in the next section, which presents a synopsis of the EU rulebook in this area.

4 Legal Framework Guiding Migration in the EU

The issue of migration within the European Union is closely related to one of the four freedoms of the EU's internal market, namely the freedom of movement for persons. Free movement entails the right to reside and work in another EU Member State as well as the right to equal treatment in respect of access to employment, working conditions and all other advantages that help facilitate the worker's integration in the host Member State. However, there are several limitations to this basic freedom – it can be restricted on grounds of public security, public policy, and public health, and there are some limitations regarding employment in the public services of the host Member State. Furthermore, it was agreed in the Accession Treaties governing the 2004 and 2007 EU enlargements that free movement can be restricted from, to, and between the new Member States for a transitional period of up to seven years (see European Commission, 2004 and 2006a).

The transitional arrangements provide that for the first two years following accession, access to the labor markets of the “old” EU members will depend on these countries' national law and policy. In practical terms, this usually meant that workers from EU-10 Member States needed a work permit. National measures may be extended for a further period of three years. Only in case of serious disturbances of the labor market, EU Member States may continue to apply national restrictions for another two years after notifying the European Commission. The transitional arrangements cannot be extended beyond an absolute maximum of seven years. The “new” Member States are allowed to impose reciprocal restrictions on nationals of those countries that restrict access to their labor markets.

During the first phase (i.e. from May 2004 to April 2006), three EU-15 Member States (Ireland, Sweden and the United Kingdom) granted liberalized access to their labor markets under national law. The United Kingdom, however, adopted a Worker's Registration Scheme. Under this scheme, workers from the EU-8 (i.e. the CEE Member States that joined the EU in 2004) must register with the U.K. Home Office within 30 days of starting their employment in the country. The remaining EU-15 countries maintained their work permit systems, albeit with some modifications that were sometimes combined with a quota system. While three EU-8 countries (Poland, Slovenia and Hungary) applied reciprocity to nationals of those EU-15 Member States that apply restrictions, none of the EU-8 countries restricted access by workers from other EU-8 Member States.

Since May 2006, seven more countries have opened their labor markets completely to workers from the EU-8 countries – Spain, Finland, Greece and Portugal (as of May 2006), Italy (as of July 2006), the Netherlands (as of May 2007) and Luxembourg (as of November 2007). The United Kingdom has continued its man-

datory registration scheme, and also in Finland employment must be registered for monitoring purposes.

Several of the EU-15 Member States that maintained restrictions have simplified existing national regimes or procedures of labor market access to varying degrees (Belgium, France, Luxembourg and Denmark). Germany and Austria notified the Commission that they would maintain national measures throughout the second phase. Finally, Hungary still applies reciprocal measures, while Slovenia and Poland ceased to do so in May 2006 and January 2007, respectively.

After the EU accession of Bulgaria and Romania, ten EU-25 Member States (Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Poland, Slovenia, Slovakia, Finland and Sweden) liberalized labor market access for Bulgarian and Romanian workers under national law. In Finland, Cyprus and Slovenia, employment must be registered subsequently for monitoring purposes. The remaining EU-25 Member States have maintained work permit systems, albeit sometimes applying modifications and simplified procedures.

Bulgaria and Romania have decided not to restrict access to their labor markets for EU nationals from those countries that apply restrictions for Bulgarian and Romanian workers.

5 Overview of Migration Flows

Originally, the transitional arrangements were put in place to prevent sizeable migration waves from the “new” EU Member States to Western European countries, which could have had severe impacts on the host countries’ national labor markets. The underlying motivation was to restrict free movement for a period of up to seven years in which Western European labor markets could prepare for the inflow of workers, where perceived necessary, and in which per capita income convergence of the “new” Member States could progress further, thus reducing the incentives to migrate. Generally, it seems that the transitional arrangements were effective in keeping inward migration from the EU-10 in check. Those EU-15 labor markets that opened up fast have not experienced major upheavals. So far, migration from the “new” to most of the “old” EU Member States has been by no means excessive since the enlargement. At the same time, one has to concede that (apart from Sweden, which forms somewhat of an exception) the countries that opened their labor markets from the beginning were geographically fairly distant from the CESEE countries.

The evidence available suggests that since EU accession, some 200,000 to 250,000 people per year have emigrated from the CEECs (see Brücker, 2007a). This figure is about 30% to 40% lower than projected *ex ante* and represents around 1½% cumulatively of the countries’ total population since 2004 (with Latvia, Lithuania and Poland showing somewhat higher emigration rates). However, the statistical migration data available are often of poor quality, and comparability across countries is not always guaranteed (see Nowok and Kupiszewska, 2005). In this context, it should be noted that the forecasts were usually based on the assumption that all countries would immediately open their labor markets for CEE workers. In reality, the introduction of the transitional arrangements probably led to a reduction in total migration streams, and definitely caused a redirection of migration flows to countries that opened their labor markets, especially to the U.K. and Ireland (less so to Sweden, owing at least partly to language barriers;

see Doyle, Hughes and Wadensjö, 2006). These countries received a much larger fraction of total migration than originally expected, while traditional migration destinations for CEE citizens like Germany and Austria received comparatively little (see Iara, 2008). Due to the higher inflow of migrants to the U.K. and Ireland after the 2004 enlargement, both countries opted to restrict access to their labor markets for Bulgarian and Romanian citizens for the first two years after accession. So far, the most attractive destination countries for people from Bulgaria and Romania are Spain and Italy (see Iara, 2008).

It remains to be seen how migration will develop after the complete abolition of the transitional arrangements. A few factors point to a possible increase in migration to countries like Germany and Austria, which share long borders with the “new” EU Member States in Central Europe. This makes commuting for work on a daily or weekly basis an attractive option.⁴ However, the literature on migration (Mincer, 1978; Carrington, Detragiache and Vishwanath, 1996) also shows that existing migrant networks may play a decisive role when it comes to taking migration decisions. As such networks are now already established in the U.K. and Ireland, one can expect those countries to remain attractive migration destinations (see Brücker, 2005). However, given the restrictions imposed on Bulgarian and Romanian workers, the immigration from these countries will probably remain contained. Furthermore, the favorable labor market and wage developments in the EU-10 countries, as depicted above, may well lower incentives to migrate.

In order to arrive at a comprehensive overview of the labor market implications of migration, we need to look at the changes to the labor force brought about by both emigration and immigration. Net migration figures can be calculated from population data as the difference between population changes and the natural increase or decrease of the population (net migration_{t-1} = population_t - population_{t-1} + births_{t-1} - deaths_{t-1}). Such figures represent the difference between immigration to and emigration from a given country. Therefore, net migration figures do not tell us about the absolute levels of emigration and immigration streams. In contrast to more detailed data on emigration and immigration movements, these figures are readily available for large country samples and longer time periods and are comparable across countries (the latter is not always possible with more detailed data because definitions of migration may differ).

The migration figures derived on the basis of population data, however, do not allow any conclusions on short-term migration, i.e. migration for a time span of less than a year, which may be an important factor for some countries (see Budnik, 2007). A further disadvantage is that population data is usually derived from official registration records. It appears that people frequently migrate (also for shorter time spans on a cyclical basis) without deregistering at the relevant administrative offices. These people therefore do not show up in the net migration figures derived

⁴ Existing estimates of the commuting potential between Austria and its Central European neighbors, for example, put the numbers at between 40,000 to 110,000 people over the first five years, with some estimates as high as 200,000 people or more over a ten year period. However, such estimates are subject to considerable uncertainty. See European Commission (2006b).

from population data.⁵ These shortcomings somewhat narrow the conclusions that can be drawn on the basis of the data material used. To remedy this problem we would have to rely either on proper population censuses that are only conducted at long intervals or on survey data from other sources. Such data, however, are not available for all countries and, due to different data collection methodologies, comparability cannot be guaranteed. Against this background, the use of data derived from population statistics provided by Eurostat seems to be the most reasonable choice as they are somewhat harmonized and quality controlled.

Bearing the above caveats in mind, the data on net migration among the working age population presents a very mixed picture of developments in CESEE countries (see table 1). Out of the ten nations under observation only three (Latvia, Poland and Romania) showed negative net migration rates among the working age population since 2004. Six countries (the Czech Republic, Estonia, Lithuania, Hungary, Slovenia, and Slovakia) showed positive net migration, meaning that more people immigrated into than emigrated from those countries. Available data suggest that emigration to Western Europe was accompanied by increasing immigration from countries like Russia, Ukraine, Belarus, and Moldova, as well as from Asian countries like China or Vietnam. Also, a comparison between the periods from 2001 to 2003 and from 2004 to 2006 (i.e. pre- and post-EU accession) shows no genuine decrease in net migration rates in the time series. Generally, one would have expected net migration to decrease once the people from Eastern Europe gained easier access to Western European labor markets after enlargement, but this happened only in Romania, a country that was not an EU member in 2006. In the other countries net migration actually increased. This general picture is also largely confirmed by net migration rates of total population.⁶

Longer time series show that net outward migration reached a peak at the beginning of transition in the early 1990s (see United Nations, 2002). Since then, net migration rates have generally increased and even become positive in some CE nations. According to World Bank data on migration stocks for the CESEE EU Member States for 2005 (World Bank, 2008), the Czech Republic, Slovenia and Latvia showed a positive net migration stock. This means that the stock of immigrants in e.g. Slovenia was higher than the stock of Slovenian emigrants in foreign countries. However, such figures are not strictly comparable with net migration flows, as they do not record the year in which the migration movement took place. So these figures may predominantly reflect migration streams from the early years of transition.

A look at the development of the working age population since EU accession reveals that migration did not lead to quantitative labor shortages in the EU-10

⁵ A method of gaining an impression of cross-border mobility for short time periods (i.e. commuting) is to compare the Eurostat employment figures according to the national concept and the domestic concept. While the national concept measures employment of residents (e.g. of all persons residing in Hungary, irrespective of whether they actually work in Hungary or not), the domestic concept measures employment within a given nation (e.g. employment in Hungary, irrespective of whether the person in question is actually a resident of Hungary or not). Comparing the two figures reveals the difference between the number of people residing in a given country and of people working there. If this difference is positive, people commute to other countries for work. As this data is only available for very few countries, however, the calculations have not been conducted.

⁶ The only major exception is Lithuania though this seems mainly ascribable to data problems.

Table 1

Net Migration Rates¹ (Working Age Population, 15–64)

| | 2001 to 2003, average | 2004 to 2006, average |
|----------------|-----------------------|-----------------------|
| Bulgaria | -10.4 | 0.0 |
| Czech Republic | -0.7 | 3.3 |
| Estonia | 0.1 | 0.1 |
| Latvia | -2.4 | -0.2 |
| Lithuania | -3.3 | 2.8 |
| Hungary | 0.9 | 1.9 |
| Poland | -5.6 | -0.4 |
| Romania | -0.0 | -0.5 |
| Slovenia | 1.7 | 2.1 |
| Slovakia | -1.3 | 0.5 |

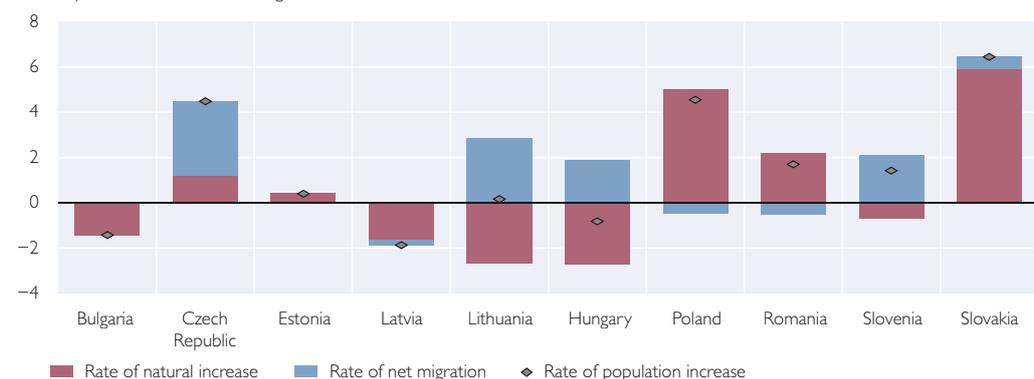
Source: Eurostat, author's calculations.

¹ Migration per 1,000 inhabitants.

Chart 11

Decomposition of Working Age Population Growth

Persons per 1,000 inhabitants, average 2004 to 2006



Source: Eurostat, author's calculations.

but, quite to the contrary, in Lithuania, Hungary and Slovenia, it mitigated the – far more significant – negative effects of demographic trends on the working age population, while in the Czech Republic it reinforced short term positive demographic trends (see chart 11).⁷ In Latvia, Poland and Romania, net migration made no more than a slightly negative contribution to working age population growth.

In addition to size, the composition of the labor force in terms of age and skills is important for labor market and wage developments. It is often suggested that predominately the young and well educated tend to migrate, an idea supported by, for instance, labor force survey data from the UK Statistics Authority and the Central Statistics Office Ireland which show that younger people were indeed more strongly represented among CEE immigrants. Net migration figures for the country group under observation, however, show that the outflow of young peo-

⁷ It should be noted, however, that longer-term demographic trends in the Czech Republic point to considerable population ageing.

Table 2

Net Migration Rates¹ by Population Cohorts, Average 2004 to 2006

| | 15–24 years | 25–39 years | 40–54 years | 55–64 years | 15–64 years |
|----------------|-------------|-------------|-------------|-------------|-------------|
| Bulgaria | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Czech Republic | 5.0 | 4.7 | 2.3 | 0.4 | 3.3 |
| Estonia | –0.0 | –0.0 | 0.2 | –0.1 | –0.0 |
| Latvia | –0.7 | 0.1 | –0.2 | –0.3 | –0.2 |
| Lithuania | 0.4 | –10.6 | 13.1 | 12.8 | 2.8 |
| Hungary | 2.8 | 2.4 | 1.1 | 1.4 | 1.9 |
| Poland | –0.7 | –0.4 | –0.4 | –0.1 | –0.4 |
| Romania | –0.3 | –1.0 | –0.2 | –0.1 | –0.5 |
| Slovenia | 4.1 | 2.5 | 1.3 | 0.5 | 2.1 |
| Slovakia | 0.3 | 0.6 | 0.6 | 0.5 | 0.5 |

Source: Eurostat, author's calculations.

¹ migration per 1,000 inhabitants

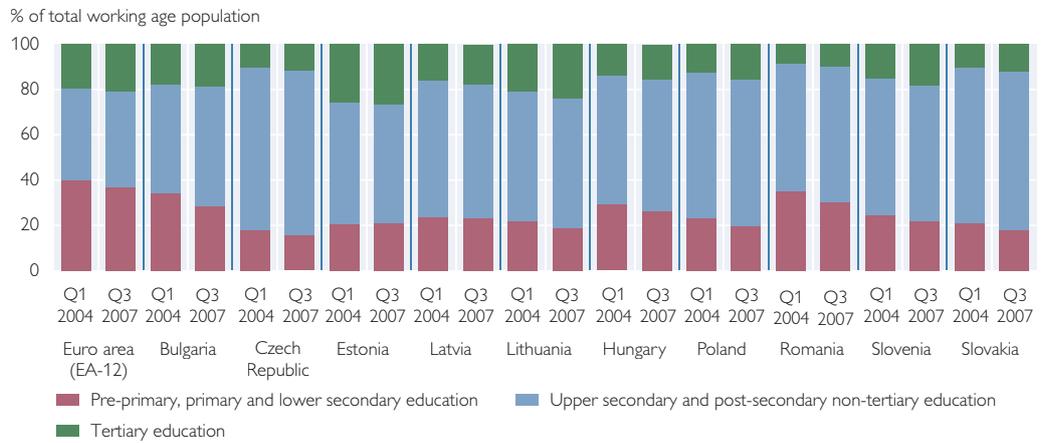
ple did not substantially exceed the inflow. Net migration was rather broad based across age groups, with only Lithuania and, to a lesser extent, Latvia, Poland and Romania experiencing larger outflows of younger people (see table 2). This finding is not surprising given that young people in all countries, not just the EU-10, are more likely to migrate and so also account for a greater share of the inflow. On balance (i.e. in net migration rates), absolute levels of migration streams should not matter. Migration, therefore, did not substantially alter the age composition of the workforce in the sending countries.

Unfortunately, data on the skill levels of emigrants and immigrants are scarce. One recent survey by Eesti Pank shows that, in Estonia, less educated population strata are more likely to migrate (see Rõõm, 2008). A similar pattern could be confirmed for Poland (see Budnik, 2007, and Iara, 2008). Brücker (2007b) reports that migrants are concentrated at medium skill levels. However, we cannot generalize these findings to the EU-10 countries as a whole. Still, the composition of the working age population according to educational attainment and its development over time shows a clear trend toward higher education levels (see chart 12). In all countries, the share of people with tertiary education in the total working age population increased over the last few years, whereas the share of people with only pre-primary, primary and lower secondary education decreased in almost all countries. So even if most migrants were well educated, their departure has apparently not seriously impacted on the aggregate skill picture of the working age population. Of course, the shift to higher education levels might have progressed more swiftly were it not for migration, but data constraints prevent us from backing up this argument.

The general skill upgrading in the EU-10 countries can be traced back to a rising overall education level, as shown by increasing enrolment rates in upper-secondary, post-secondary and above all tertiary education, which was even more pronounced than in the euro area. It should be borne in mind, however, that education systems in CEE countries do not always deliver the skills that labor markets require. The shift to a higher education level has allowed the CEE countries to increasingly manufacture higher-quality and technologically more advanced

Chart 12

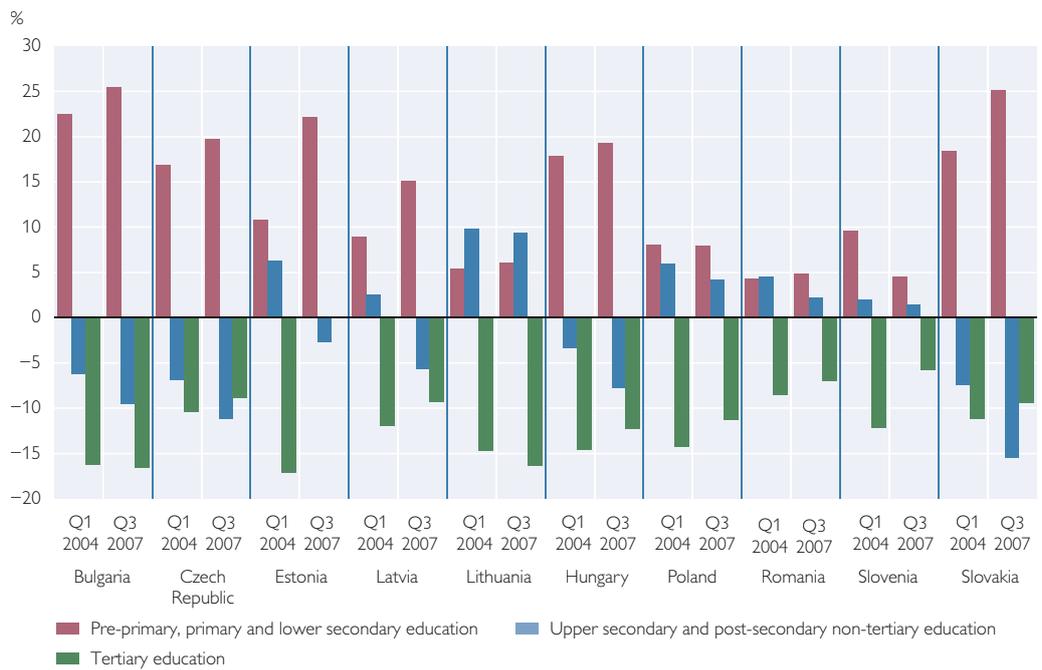
Educational Attainment among Working Population



Source: Eurostat.

Chart 13

Excess Supply of Labor by Educational Attainment



Source: Eurostat, author's calculations.

products. In order to sustain this move toward higher value added products, it is crucial to ensure a sufficient supply of well-trained labor.

Despite rising enrolment rates and increasing shares of people with higher education, the rising demand for skilled workers cannot be fully met in a number of EU-10 countries. Excess supply, measured by the difference between the percentage share of workers with a given educational attainment in unemployment and in employment (World Bank definition⁸), provides a proxy of the magnitude of the educational mismatch. It is clearly visible that in all EU-10 countries workers with tertiary education are in short supply (see chart 13). In most countries, this is also true for people with upper secondary and post-secondary non-tertiary education. In contrast, people with low educational attainment clearly make up a greater share of the unemployed than of the employed. In most countries, this mismatch has even been increasing over time, with only Poland, Romania and Slovenia showing better outcomes now than three years ago.

This educational mismatch seems to be a main driver behind high labor cost growth. Simulations of the macroeconomic effects of migration on the labor markets of sending countries generally find that migration has little impact on income (see e.g. Brücker, 2007b, who finds that the aggregate income of natives in sending countries is only marginally affected by migration.) The primary cause for the educational mismatch is an abrupt shift in labor demand accompanied by a gradual adjustment in labor supply. Whether emigration has played some second-order role in adding to this mismatch cannot be stated with certainty (apart from Estonia and Poland, where it has not) owing to missing data. With ongoing structural change and further upgrading in production, this educational mismatch could become an obstacle to economic development. Measures to raise educational attainment are hence of paramount importance. As regards migration, policy measures to promote inward migration (including remigration) of skilled workers, especially those with upper secondary and post-secondary non-tertiary education, could also alleviate this mismatch.

6 Conclusions

Labor market conditions in most new EU Member States have improved markedly since EU accession in 2004. A broad-based decrease in unemployment rates and strongly rising employment have led to increasing wage pressures and emerging labor market shortages in some economies. Many observers subsequently attributed this labor market tightening in part to the increasing migration of especially young and well-educated people in the aftermath of EU enlargement.

However, net migration figures derived from population data do not seem to support this assumption. In fact, in the period from 2004 to 2006, net migration was only slightly negative in three of the ten CESEE EU Member States, while it was positive in the remaining seven. This finding seems to conflict with anecdotal evidence and some recent studies (see Brücker, 2007a, and Iara, 2008). However, it should be borne in mind that work in this area often focuses on emigration only

⁸ "A positive (negative) value means that the unemployed more (less) frequently have given educational attainment than the employed. The educational structure of employment proxies that of labor demand. The education structure of unemployment proxies that of excess labor supply." (World Bank, 2007).

(especially to the United Kingdom and Ireland, as data for these countries is readily available) and does not take account of immigration and return migration. Another factor explaining this gap is temporary migration, which only partly shows up in annual net migration figures but may well play an important role in several countries. The data material in this area, however, is especially limited and comparability across countries is often difficult. Moreover, available data suggest that the age structure of the EU-10 population has not been affected by migration.

For most countries, available data do not allow for a breakdown of migration by educational attainment. We thus cannot directly examine whether those leaving the country are primarily well educated. The overall picture of the composition of the working age population according to skill levels, however, indicates that the educational structure has continued moving toward higher education levels since 2004. This may be interpreted as indirect evidence that the emigration of well-educated people has remained contained so far. Thus, this finding does at least not corroborate the claim that skilled people have a higher propensity to emigrate from EU-10 countries.

This is reassuring given that labor market data show that people with a high educational attainment are in high demand but low supply in all the countries of the region. The lack of skilled labor also seems to be a key factor driving wage and unit labor cost developments, whereas there is little evidence that migration has contributed substantially. As further income convergence will require continued upgrading toward the manufacture of higher-quality and technologically more advanced products, coping with shortages of highly skilled labor – both by added efforts in skilling the domestic population and by attracting skilled inward migrants – poses an increasingly urgent challenge for the future economic development and catching-up of the EU-10 countries.

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