

**Labour mobility within the EU in the context of enlargement and the functioning
of the transitional arrangements**

VC/2007/0293

Deliverable 8

Austrian Institute of Economic Research (WIFO)

Country Study: Austria

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Abstract

We survey the economic and labour market developments of Austria in the years since enlargement to identify noticeable shifts in economic development, which can be causally linked to the enlargements of the EU in 2004 and 2007. Since the public policy debate before enlargement expressed concerns about the potential effects of enlargement on migration, the labour market position of the less skilled and foreigners as well as potentially asymmetric impacts on regions, we pay particular attention to these four aspects of economic development. We find rather ambiguous evidence.

Economic development in Austria since the first round of the Eastern enlargement in 2004 has been marked by a noticeable improvement in the business cycle, which was primarily driven by higher exports to countries outside the EU 27. With the impending financial crisis, however, Austria is likely to enter a recession in 2009 and growth expectations for 2010 are also subdued. We also find that despite strong employment growth, unemployment rates increased in the first two years after enlargement and still have not declined to levels attained at the end of the last economic upswing in the year 2000. At the same time the number of employees increased substantially since 2004. Half of this increase can be accounted for by increased migration.

Increased migration in the period 2004 – 2006, however, was not primarily due to an increase in migration from the new member states, but rather due to increased migration from the old EU member states, in particular Germany. By contrast, migration from the new member states increased only modestly. Although there is some anecdotal evidence of circumvention of the existing restrictions towards immigration, actual labour movements from the NMS to Austria were small relative to ex ante forecasts of post-enlargement migration potentials. This, however, was also to be expected given derogation periods on the freedom of movement of labour.

Furthermore, there is no clear cut evidence that either regional economic development or labour market outcomes of foreigners or low skill groups have been severely affected by migration following enlargement, but some evidence that since the year 2000 foreign workers have experienced increasing difficulties on the Austrian labour market.

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1 Introduction¹

Among the many important steps towards European integration in the last two decades the enlargements of the European Union by the 12 new Central and Eastern European member states in 2004 and 2007 were undoubtedly the most controversially discussed in the Austrian public policy debate. In this debate the potential implication of enlargement on migration and labour markets featured prominently. Critics often mentioned the potential negative effects of migration on the labour market (in particular of the income and employment opportunities of the less qualified), while proponents argued that migration would be associated with positive growth and employment effects and could potentially also alleviate bottlenecks with respect to high qualified workers, which repeatedly arise in boom phases of the business cycle, in particular in low unemployment economies like Austria.

Against the background of the intensity of the controversy, a large number of ex-ante studies were devoted to analysing the potential impact of enlargement on migration and the Austrian labour market (see for example Pichelmann et al., 1998; Walterskirchen and Dietz, 1998; Palme et al., 1999 Mayerhofer and Palme, 2001; ibids, 2001a). In consequence it seems fair to say that Austria represents a country in which the extent of research output on the potential impact of enlargement and the associated migration was particularly large prior to accession of the 12 new member states to the EU 15.

Ex-post evaluations of the developments since 2004 are, however, much more seldom. Exceptions include the study by Untiedt et al. (2006), which focuses on the effects of enlargement on general economic development in the post accession phase 2004 to 2006, and a study by Biffi et al. (2006) which reviews the developments in the field of migration for 2004 and 2005. Among these studies Untiedt et al. (2006) find little evidence that enlargement had major effects on economic development. In fact, according to their results both rapid economic growth and the slow decline in unemployment rates in the post 2004 period in Austria seem to have been primarily driven by higher export growth to countries outside the EU 27 and high immigration of German nationals to Austria.

Biffi et al. (2006) focus more strongly on migration issues and argue that migration from the new member states has not increased dramatically in the two years (2004 and 2005) after enlargement, but that immigration remained at the levels, which prevailed already prior to enlargement. Furthermore, they too suggest that within the short period since enlargement no clear evidence of severe negative effects of migration on regional labour markets can be found.

In this country report on Austria, we focus on the economic, labour market and migration development of the Austrian economy since 2004 with the aim of assessing the impact of

¹ The authors would like to thank Julia Bock-Schappelwein, Herbert Brücker, Anna Iara and Hermine Vidovic for helpful comments.

enlargement on immigration and the effect of migration inflows on the Austrian labour market. Thus we address the questions to which degree enlargement has led to increased migration in the last three years and whether there have been strong and visible changes in the structure of labour market imbalances in the country. In this respect we focus in particular on those aspects of the labour market, where particular impacts on employment and unemployment were expected. These are the labour market situation of foreigners and less skilled as well as the regional impact of enlargement. From a methodological point of view – due to the short observation horizon available since enlargement, which limits the possibility for statistical analysis, – we primarily use descriptive methods. In the next section we describe the economic development since enlargement. Section 3 then analyses changes in the structure of employment and unemployment while section 4 looks at migration trends and section 5 summarises some of the literature on the potential effects of migration on the Austrian labour market, which in the case of Austria largely pre-dates accession. Section 6, finally, concludes.

2 Macroeconomic and institutional framework for migration to Austria

2.1 Macroeconomic and labour market development

2.1.1 Macroeconomic development 2004 - 2007

From a macro-economic perspective, the period 2004 to 2007 was marked by an upswing of both GDP and employment growth (see Figure 1). After the boom years of 1998 and 1999 Austria – following international business cycle trends – had entered a phase of more modest growth at the turn of the century. In 2004 GDP growth picked up pace and assumed values in excess of 2% - levels comparable to those of the late 1990's. In particular the years 2006 and 2007 were marked by GDP growth of more than 3% and can thus be considered boom years. The driving forces behind this upturn were the changes in exports induced by the international business cycle. The Austrian current account changed from -0.2% of GDP in 2003 to over 3.0% of GDP in 2007. The major beneficiaries of this improvement were the manufacturing industries.²

The components of domestic demand (consumption and investments), by contrast, were less important driving forces of the business cycle. Investments in machinery and equipment, after a reduction in 2004, increased only modestly in 2005 and 2006. Thus enterprises reacted to the improved business cycle situation only in 2007 by increasing investments by 7.1%. Similarly, investments in construction remained rather subdued between 2004 and 2005. In the last two years, when the construction sector showed signs of overheating on account of both increased public as well as private sector investments accompanied by good weather conditions in winter, construction investments grew more strongly, however.

The most modest increases over the whole upturn were registered with respect to private consumption. This slow growth, which was below the long term average for the entire period since the turn of the century, was caused by rather modest increase in disposable income³ as well as an increasing savings rate and increasing consumer prices in 2007.

2.1.2 Labour market development

Similarly to GDP employment growth, which at the end of the upswing of the 1990's started to reduce with the usual lag in 2000 to 2002, also increased noticeably in 2004: The number of employees grew by +0.7% and until 2007 growth rates of employees increased each year, reaching 2.1% in 2007. Furthermore, while growth in the number of

² We focus on changes in the current account rather than exports and imports, because since 1.1.2005 exports for the purpose of repair are not included in foreign trade statistics any more, which makes export and import statistics for 2005 difficult to interpret. Without this change export growth in 2005 would have amounted to 8% in 2005 (see: Sieber, 2006)

³ Since the turn of the century disposable incomes increased more modestly than GDP in all years except for 2003.

employees until 2004 was primarily owed to a reduction in average working hours⁴, since 2005 working hours have also been increasing for the first time since 2000 (see Walterskirchen, 2006). This is owed to particularly strong employment growth in the manufacturing sector, which is the primary provider of full time employment in Austria.

Table 1: Economic Development 2004-2007 and WIFO Forecasts 2008-2009: Main Indicators

	2005	2006	2007	2008*	2009*	2010*	
<i>Percentage changes from previous year</i>							
GDP							
Real	2.9	3.4	3.1	1.8	-0.5	0.9	
Nominal	5.0	5.3	5.3	4.1	1.2	2.2	
Manufacturing ¹ , Real	4.8	9.6	5.5	3.0	-2.8	2.0	
Wholesale and retail trade, real	2.2	-1.0	1.5	1.0	0.8	1.0	
Final consumption household expenditure, real	2.6	2.4	1.0	1.0	1.0	1.0	
Gross fixed capital formation, real	2.4	2.6	4.7	1.9	-3.8	0.3	
Machinery and equipment ²	5.5	0.9	6.8	2.0	-7.0	±0.0	
Construction	-0.4	4.2	2.8	1.8	-1.0	0.5	
Exports of goods ³							
Nominal	3.2	6.8	8.7	3.6	-0.5	1.5	
Real	5.4	9.5	10.5	4.9	-1.0	1.7	
Imports of goods ³							
Nominal	2.9	4.1	8.0	2.4	0.3	1.3	
Real	5.9	8.0	9.6	5.3	-0.7	1.8	
Current account balance Billion €	4.9	7.3	8.6	8.7	7.4	6.9	
In % of GDP	2.0	2.8	3.2	3.1	2.6	2.4	
Long-term interest rate ⁴ (in %)	3.4	3.8	4.3	4.3	3.1	3.0	
Consumer prices	2.3	1.5	2.2	3.2	1.2	1.5	
Unemployment rate							
Eurostat definition ⁵	in %	5.2	4.8	4.4	3.5	3.9	4.1
National definition ⁶	in %	7.3	6.8	6.2	5.8	6.5	6.9
Active dependent employment ⁷		1.0	1.7	2.1	2.4	-0.4	0.2
Government financial balance (in % of GDP)	-1.5	-1.5	-0.4	-0.5	-2.8	-3.2	

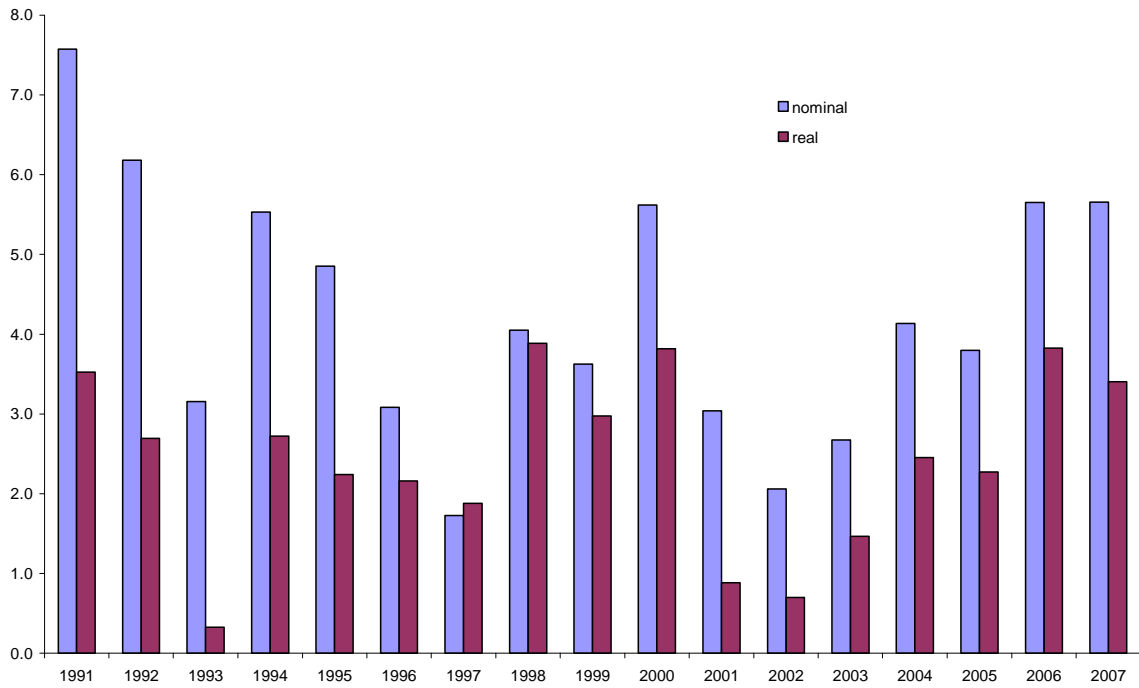
Notes: * 2008 and 2009: forecasts. ¹ Value added, including mining and quarrying. - ² Including other products. - ³ According to Statistics Austria. - ⁴ 10-year central government bonds (benchmark). - ⁵ According to Eurostat Labour Force Survey. - ⁶ According to Public Employment Service Austria, percent of total labour force excluding self employed. - ⁷ Excluding parental leave, military service, and unemployment persons in training. - Last update: Juni 27, 2008

Source: WIFO

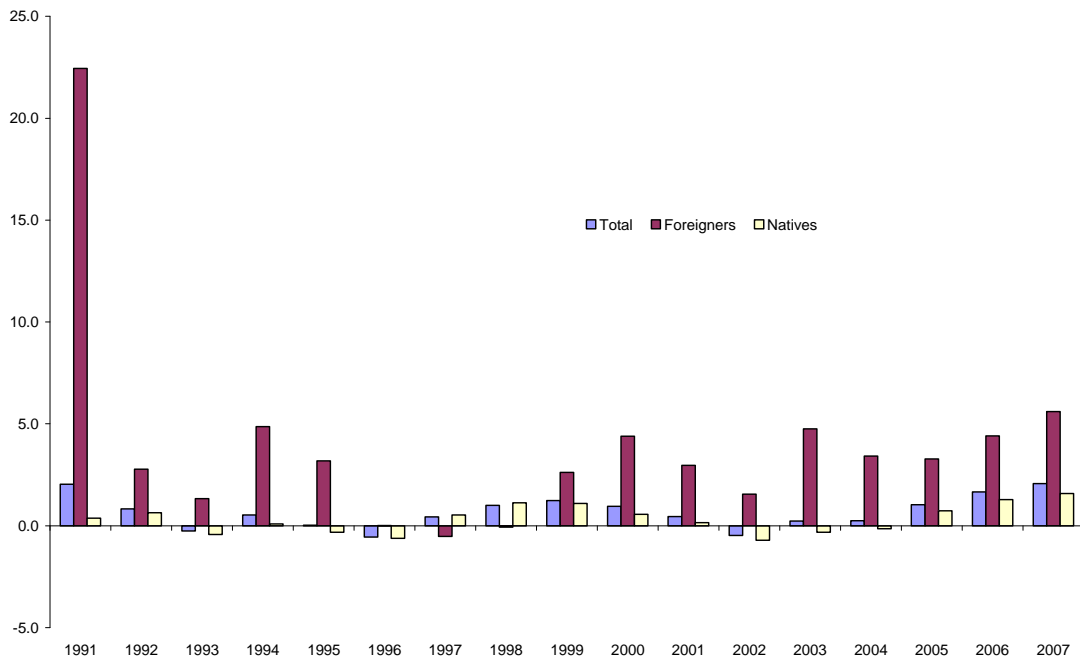
⁴ The share of part time employees in Austria is 21.8% and thus one of the highest in the EU.

Figure 1: Growth of GVA and Employees in Austria 1998-2007 (in %)

Year-by year growth rate, Gross value added



Year-by year growth rate, Employees¹

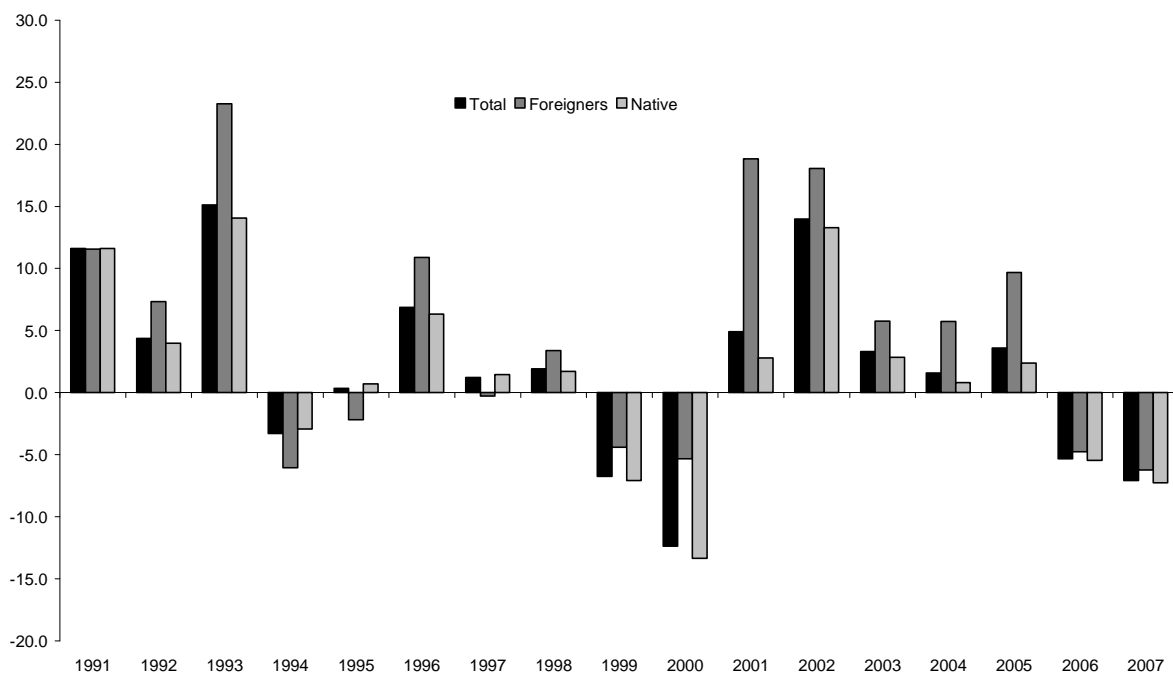


Notes: 1 excluding parental leave, military service and persons in training

Source: HV, Statistic Austria, WIFO-calculations

In contrast to the substantial growth in employment and GDP, however, unemployment rates did not start to decline until 2006. Despite increased use of active labour market policies⁵ the number of unemployed according to national estimates increased by around 3.800 in 2004 and another 8.800 in 2005. The unemployment rate according to the ILO definition was thus at 5.2% in 2005; the unemployment rate according to national methodology of 7.3% in 2005 represented a record high since the 1980's.⁶ Declines in unemployment (amounting to almost 30.000 persons) were only registered as of 2006 (see Table 2).

Figure 2: Development of Unemployment in Austria
1990 = 100



Source: Statistic Austria, WIFO-calculations.

At the same time there was a substantial increase in the number of economically active (number of unemployed and employees) that was carried by increased labour force participation of foreigners⁷, women and older cohorts (the latter due to pension reforms promoting the delay of exit from the labour force to retirement). The largest increases in this respect were registered in the number of foreign employees in Austria (between +3.6% to +4.4% annually in the period 2004 to 2007). The increase in the labour supply in foreign nationals was around 60.000 in the last four years. This represents the highest

⁵ In Austria, persons participating in active labour market measures are not registered as unemployed during their participation.

⁶ We focus on the national definition (i.e. registered unemployment) for the largest part of this study on account of better (more recent) data availability.

⁷ See section 3 for details.

increase since the 1988-1992 immigration wave, where the increase in the number of active foreign employees was around 100.000 (see section 3 below for details).

The number of Austrian economically active natives, by contrast, increased somewhat more modestly at the beginning of the upturn but picked up in speed in the subsequent years (reaching an increase of 0.9% in 2007). Thus foreign workers accounted for 45% of the total increase in the number of economically active in the time period 2004 to 2007.

2.1.3 Forecasts 2008 - 2009

According to the recent (December 2008) economic forecast of the Austrian Institute for Economic Research (WIFO) 2007, however, was the peak of the current upswing. Forecasts for 2008, on account of reduced growth of the world economy and the impending financial crises, assume a more modest growth of real GDP (of 1.8%) and a recession in 2009. According to this latest forecast GDP will decline by -0.5% in 2009 and for 2010 a modest real GDP growth of +0.9% is expected. In particular for the years 2008 and 2009 the current account surplus of the Austrian economy is expected to decline, on account of reduced exports to EU and OECD countries, which will not be compensated by higher exports to the newly industrialized countries and low consumption and investment growth is expected to continue in the next two years.

For the year 2008 the current WIFO forecast foresees a continued increase in employment of 2.4% and a further reduction in unemployment of around 11.600 unemployed⁸. At the beginning (January) of 2008 the number of employees increased by 100.000 relative to the previous year. This implies an increase that was higher by one third than in autumn 2007. Although growth in the number of employees usually lags GDP growth by around two quarters, and the scarcity of skilled workers in 2007 may have prompted employers to retain workers despite lower orders, this development is rather unusual for the current business cycle situation. In part it may be due to changes in the registration requirements for the Austrian social security system. While until the end of 2007 employers were required to register employees with the social security system within three days after the start of work, which gave some leeway as to the timing of registration, as of January 1, 2008, employers are required to register new workers one day before the beginning of a new employment relationship.⁹

⁸ This forecast is based on the assumption of a continuation of the migration trends of previous years, and does not include an explicit assumption on the potential change in migration regime with respect to the new member states in 2009.

⁹ One of the consequences of this change in legislation is that employers in the case of a control can not claim that unregistered (black market) workers have just started to work two days ago, as was allegedly customary in a number of branches in the Austrian economy. Thus it is believed that the new legislation led to an increased registration of a number of informal sector workers. While this view is supported by the fact that the majority of the job creation occurred in tourism and construction, where unregistered work was particularly high, the concrete quantitative impact of this effect is not clear.

Table 2: The Labour market in Austria (2004 – 2009)

	2005	2006	2007	2008*	2009*	2010*
	<i>Changes from previous year in 1,000</i>					
Demand of labour force						
Active employment	37.2	55.9	66.9	86.0	- 15.0	8.0
Active Employees ¹	31.9	51.5	65.5	78.0	- 13.0	8.0
Natives	20.0	35.0	43.6	54.2	- 12.0	5.5
Foreigners	11.9	16.5	21.9	23.8	- 1.0	2.5
Self-employment	5.3	4.4	1.4	8.0	- 2.0	± 0.0
Supply of labour force						
Population(15-64)	15.6	18.5	17.4	24.9	20.2	27.6
Employees	45.9	42.4	50.0	74.4	12.0	23.0
Surplus labour						
Unemployment (LFS)	8.8	- 13.5	- 16.9	- 11.6	27.0	15.0
Unemployment rate						
Eurostat definition ²	5.2	4.8	4.4	3.5	3.9	4.1
National definition ³	7.3	6.8	6.2	5.8	6.5	6.9

Notes: *2008 and 2009: projections. - ¹ Excluding parental leave, military service, and unemployment persons in training. - ² According to Eurostat Labour Force Survey. - ³ According to Public Employment Service Austria, percent of total labour force excluding self employed

Source: WIFO

For 2009, however, a turning point in labour market development is expected on account of the recession. Employment is expected to decline by 15.000 employees (or -0.4%) and unemployment is estimated to increase by 27.000 Persons (or 13%). Furthermore it has to be expected that the majority of the new jobs will be created in the service sector, which in turn implies that a high share of these jobs will be associated with part-time employment and an even less dynamic development in terms of hours worked. For 2010 a modest employment growth of around 8.000 employment relationships and a further increase of unemployment (by 15.000 persons) is currently expected.

2.2 Institutional setting for labour migration from the NMS

After the substantial immigration of the early 1990's the Austrian migration regime underwent substantial reform in the 1990's and the first decade of the 2000's.¹⁰ In general these reforms were guided by a combination of a move from the guest worker system, which still prevailed during the 1970's and much of the 1980's, to a more settlement based system and the attempt of the legislator to increase selectivity of migration regulations with the aim of improving the qualification of migrants. Today (and at the time of accession) the administrative procedures in the migration field with respect

¹⁰ Important reforms occurred in 1993, 1997, 2002, 2003 and 2005.

to third country migrants are guided by two regulatory authorities: the ministry of the interior and the ministry of economic affairs and labour. The former regulates the inflow and resident status of immigrants and short term movers on the basis of residence law, the latter regulates access to the labour market on the basis of the law on foreign employment (Ausländerbeschäftigungsgesetz). With the signing of the accession treaty and the associated derogation periods, residents of the new member states do not require a residence title any more and are thus not subjected to the quota system of foreign residence law. They, however, still fall under the stipulations of the law of foreign employment.

Technically the stipulations of the accession treaties were implemented at the national level by means of the "EU-Erweiterungsanpassungsgesetz" (see Nowotny, 2007). This law foresees that:

Citizens of the new EU-member states are not subjected to residence law and thus do not need a residence title any more. In effect this implies a (weak) advantage over citizens from third countries with respect to labour market access (so called community preference), since they are not subject to the quota system for foreign residents. Thus they can receive a work permit if the regional committee at the local public employment service (PES) grants them one (see Nowotny, 2007).¹¹

Citizens of the new member states are, however, still subjected to the quota system of the foreign employment law. In effect this implies that members from the new EU member states can only access the Austrian labour market as key workers, qualified personnel in care, and seasonal workers. Under the provision of a unanimous decision of the regional councils at the Austrian PES, they can, however, also be given a legal work permit as "other workers" if a vacancy cannot be filled in the regional labour market.¹²

As stipulated by the accession treaty, citizens from the new member states who acquire (or have acquired) legal access to the labour market for more than one year have free access to the labour market. The same applies to the spouse or children of such citizens. In addition citizens of the new member states have to be generally preferred over third country citizens with respect to labour market access and their right to access to the labour market cannot be made more restrictive than at the time of accession.

Furthermore, migration policy in the time period from 2004 to 2007 was marked by a number of pro-active measures. The most important of these was probably the reform of residence law in 2003 and 2006, by which a right of work for foreign students of an Austrian University (if this does not impede on the success of the studies) and an automatic right to work for other residents that legally resided in Austria for five years or more was introduced. This law also applies to new-member state citizens. In addition a bilateral agreement concerning the movement of commuters (Grenzgängerabkommen)

¹¹ Work permits are provided by committees staffed by social partners on a regional (district) level under the provision that the regional labour situation requires the employment of foreign workers.

¹² With respect to access to this possibility the Austrian PES has been commanded to give preference to citizen of the new member states (over third country nationals).

was completed with the Czech Republic mid 2005. This agreement thus augments the existing agreement with Hungary.¹³

3 Migration trends since 2003

3.1 The extent of migration

3.1.1 Labour migration

A closer look at the structure of migration to Austria suggests that the primary sources for foreign labour supply growth did not originate from the new member states.¹⁴ While the number of foreign employees registered in Austria increased by 62.000 in the last four years, a more detailed analysis of the structure of foreign employees in Austria suggests that the primary source of immigration were German citizens.¹⁵ Their number among the foreign employees increased by 32.000 and thus more than doubled in the last four years.¹⁶ The number of employees from Poland, Hungary, Former Czechoslovakia and Poland increased by around 15.500 employees in the same time period. While this represents a stronger increase in the number of foreign employees from these countries than in the time period from 2000 to 2003 (where the number of foreign workers from Poland, Hungary, Former Czechoslovakia and Poland increased by 5.000 only), this figure seems small relative to the estimates of migration potentials that existed prior to accession.

¹³ A similar agreement has been contemplated with Slovakia but has not yet been signed

¹⁴ The same applies to export growth which grew primarily due to increased demand from non-European OECD countries (see Untiedt et al, 2006)

¹⁵ A further cause for increased number of foreign employees in Austria in the time period considered are the changes in legislation, whereby foreign residents, which legally resided in Austria for more than five years automatically obtain the right to enter the labour market without requiring a work permit (see Biffi, 2007).

¹⁶ While German citizen were the third largest group of foreign workers in Austria in 2003, they are by now second the most important group. More detailed analyses of the migrant flows from Germany (see Walterskirchen, 2006) suggests that these migrants are primarily persons that reacted to the bad labour market conditions in Germany and often found employment as seasonal workers (in particular in tourism).

Table 3: Foreign Employees in Austria by nationality

	2000	2001	2002	2003	2004	2005	2006	2007	Absolute change 2003-2007
Former Yugoslavia*	158,492	161,792	161,315	161,121	160,898	160,138	161,930	164,413	3,292
Turkey	57,128	56,831	56,285	55,689	54,588	53,479	54,101	55,126	-563
Germany	20,887	23,537	26,502	31,525	38,987	47,033	55,368	63,830	32,306
Poland	11,158	11,239	11,284	11,549	11,984	12,615	13,416	14,594	3,045
Hungary	10,399	11,266	11,967	12,657	13,628	14,693	15,785	18,042	5,385
Former Czechoslovakia	9,979	10,412	10,850	11,400	12,412	13,718	14,753	16,154	4,754
Romania	9,660	9,900	10,116	10,687	11,022	11,315	11,692	13,094	2,407
Other countries	42,147	44,337	46,113	55,735	58,781	61,195	63,651	67,327	11,592
NMS Total	41,196	42,817	44,217	46,293	49,046	52,341	55,646	61,884	15,591
Total	319,850	329,314	334,432	350,361	362,299	374,187	390,695	412,578	62,217

Notes: * without Slovenia

Source: BMWA, WIFO-calculations

Table 4: Entry of Foreign Employees to employment in Austria by countries and groups of countries

	Total			Without employment permits			With employment permits		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
NMS 10	11,010	12,356	12,602	6,297	8,658	11,205	4,713	3,698	1,397
Czech Republic	1,171	1,287	1,100	477	665	923	694	622	177
Estonia	6	12	11	5	12	9	1	0	2
Cyprus	2	5	7	2	5	7	0	0	0
Latvia	13	29	23	10	24	22	3	5	1
Lithuania	23	36	51	19	34	48	4	2	3
Hungary	3,593	3,588	3,058	1,915	2,236	2,591	1,678	1,352	467
Malta	1	4	1	1	4	1	0	0	0
Poland	3,328	3,713	4,309	2,180	3,173	4,103	1,148	540	206
Slovenia	513	937	1,231	338	621	1,103	175	316	128
Slovakia	2,360	2,745	2,811	1,350	1,884	2,398	1,010	861	413
EEA & EU without Austria	20,343	25,321	20,225	20,322	25,317	20,224	21	4	1
Others	16,721	16,856	13,365	12,779	15,336	13,062	3,942	1,520	303
Total	48,074	54,533	46,192	39,398	49,311	44,491	8,676	5,222	1,701

Source: BMWA, WIFO-calculations

This finding of increased but – relative to estimates of the migration potential - limited migration from the new member states is reconfirmed by a number of data sources on migratory movements. For instance Untied et al. (2006) report that data on first time registration of foreign employees in Austria, which is available for the time period from 2003 to 2005 only, indicate that in the first two years after enlargement around 100.000

foreign employees were registered for the first time in the social security files.¹⁷ Of these around a quarter (i.e. 24.958) were citizens of the 10 central and eastern European new member states, and around 45.000 came from other countries of the European economic area (see Table 4). Furthermore, the number of first time registrées to the Austrian social security system was only by some 1.000 employees higher in 2004 and 2005 than in the year before accession (2003). Again the most important change occurred with respect to citizens of the European economic Area (in particular in the year 2004). Increased labour migration in Austria thus primarily stems from the old EU countries according to these data too.

With respect to citizens from the new member states the most notable change was in the structure of first time registrations with the Austrian social security system. While in 2003 43% of the new registrations required work permits, by 2005 this was only the case for slightly more than 10%. This suggests that the majority of the newly registered workers from the new member states after 2004 entered the Austrian labour market under the exceptions from derogation period stipulated in the accession treaty.¹⁸

3.1.2 Changes of residence

Data on population moves from and to Austria, which is available until 2007, also suggests that the migration impulse to Austria in the period since enlargement did not primarily stem from the new member states (see Table 5). According to this data, which measures cross-border changes of residence, net immigration from the 12 new member States (NMS 12), amounted to around 10.000 Persons per year in the years 2004 to 2007. Relative to the figures before enlargement, which were at around 6.500 in the years 2002 and 2003, this represents an increase of some 3.500 migrants per year. Furthermore relative to the total number of net migrants of around 60.000 in 2004 and 2005 and around 30.000 migrants in 2006 and 2007, migrants from the new member states account for 15% to 30% of total net migrant inflows in Austria.

¹⁷ The figures on first time registrées suggest higher migration than data on foreign employees because they do not take account of return migration and naturalisations. In particular naturalisations may have led to a substantial underestimation of the actual increase in the number of foreign workers in the period considered here, because many of the migrants of the migration wave from the early 1990's became eligible for naturalisation in the time period considered (see Biffi, 2007, for data on naturalisations of foreign citizen in Austria)

¹⁸ These exceptions pertain in particular to relatives of migrants that had legal access to the labour market for more than one year prior to accession or attained such access during the derogation periods.

Table 5: Immigration and migration of foreigners by nations from and to Austria by countries and groups of countries

	2007			2006			2005		
	Immigration	Migration	Netto-Migration	Immigration	Migration	Netto-Migration	Immigration	Migration	Netto-Migration
Estonia	47	30	17	47	36	11	49	20	29
Latvia	80	52	28	72	57	15	87	62	25
Lithuania	181	140	41	240	185	55	255	136	119
Malta	22	18	4	15	5	10	9	9	0
Poland	5,398	3,403	1,995	6,145	3,001	3,144	7,245	2,574	4,671
Slovakia	3,658	2,455	1,203	3,678	2,338	1,340	3,759	429	3,330
Slovenia	720	556	164	670	521	149	586	1,924	-1,338
Czech Republic	1,344	1,152	192	1,353	1,111	242	1,434	980	454
Hungary	4,615	2,858	1,757	3,889	2,537	1,352	3,692	2,276	1,416
Cyprus	34	29	5	17	21	4	27	21	6
NMS 10	16,099	10,693	5,406	16,126	9,812	6,314	17,143	8,431	8,712
Bulgaria	2,149	992	1,157	1,315	1,037	278	1,484	1,045	439
Romania	9,223	3,627	5,596	4,794	3,723	1,071	5,332	3,480	1,852
Former Yugoslavia*	12,793	10,372	2,421	19,234	10,323	8,911	20,640	9,103	11,537
Germany	20,414	10,305	10,109	18,467	9,244	9,223	17,268	6,770	10,498
EU (14)	28,684	16,826	11,858	26,374	15,496	10,878	25,310	12,004	13,306
Total	106,905	74,191	32,714	100,972	73,495	27,477	117,822	68,650	49,172

Notes: * without Slovenia

Source: Statistic Austria, Migrationstatistic, WIFO-calculation

These data, however, also portray a slightly different picture of the structure of migration movements by country of origin, since the largest part of cross-border changes of residence among migrants from the new member states originates from Polish citizens and also the increases in German migrants are smaller than suggested by employment data. This can be related to a number of reasons: data on employees can differ from data on residents if cross-border commuting or temporary migration plays an important role in cross-border labour flows, or if family reunion and self-employment is a more important component in residential migration from certain countries. This could explain the higher share of Polish citizens in residential flows – since in all likelihood there are fewer commuters among the Polish workers in Austria than among the workers from neighbouring countries and since family reunification is likely to play a larger role over the distances involved in Austrian – Polish migration.¹⁹ The discrepancies with respect to the German migrants by contrast are likely to be a result of the high share of seasonal and temporary workers among the Germans in Austria; these may often work in Austria without changing their place of primary residence, and would thus not be considered migrants in residential migration data.

¹⁹ Furthermore self-employment also plays a larger role in Austro-Polish migration (see below)

Table 6: Stock of foreign citizens and foreign born by nationality (2004 – 2006)

	Citizenship				Place of Birth			
	2004	2005	2006	Change 2004/2006	2004	2005	2006	Change 2004/2006
Austria	7,320,383	7,356,402	7,389,018	68,635	7,014,287	7,032,023	7,028,594	14,307
Turkey	119,658	115,165	110,805	-8,853	141,858	143,081	147,121	5,263
Germany	84,676	93,617	105,194	20,518	140,395	138,140	146,597	6,203
Former Yugoslavia	301,006	299,041	298,477	-2,529	340,867	346,843	363,446	22,579
Czech Republic	7,109	12,719	10,749	3,640	44,683	46,104	50,576	5,894
Hungary	16,862	19,778	13,940	-2,922	26,332	35,530	29,679	3,347
Poland	34,334	28,915	39,962	5,628	51,367	49,552	58,916	7,550
Slovakia	8,655	10,232	10,242	1,587	15,909	18,381	16,390	481
Slovenia	(4,144)	6,977	(5,426)	1,282	14,898	16,843	15,971	1,073
Baltic Countries	x	x	X	x	x	(3,350)	x	X
Bulgaria	5,076	4,754	4,432	-643	9,120	9,804	9,321	201
Romania	20,210	26,825	20,998	789	42,607	49,410	47,863	5,256
NMS-Total	98,935	111,192	106,612	7,677	207,767	228,975	230,730	22,963
Rest	148,773	157,074	171,898	23,124	228,259	243,428	265,516	37,258
Foreign-Total	753,048	776,088	792,986	39,937	1,059,145	1,100,467	1,153,410	94,265

Notes: Values in brackets – Values below 6.000 persons are subject to substantial statistical uncertainties, x – values below 3.000 cannot be interpreted

Source: Austrian labour force survey, WIFO-calculations

Furthermore the data also indicate a substantial increase in net migration from Bulgaria and Romania in 2007. Here net migration increased from a level of around 2.000 to around 6.500 in the year 2007, an increase that is reflected in an increase of foreign employees from Romania by only 1.500 employees. This may be indication that migrants from the NMS2 have made increasing use of the improved possibility for family reunification, after not having to apply for residence titles any more.

3.1.3 Labour force survey data

Finally, inference can also be drawn from Austrian Labour Force Survey, which is the only data source which provides information on residents by country of birth in Austria. It does therefore not suffer from the mismeasurement that occurs in stock data due to naturalisation, which characterise other data sets.²⁰ The Labour Force Survey data indicate that increases in the number of citizen of, citizens or persons born in the new member states (although increasing in the years since 2004) accounted for about 20% to 25% of the total change in stocks of foreign citizens and foreign born, while the largest increase in the stock of foreign citizens came from Germany, and the largest increase in

the foreign born of a single group was registered with natives of former Yugoslavia (see Table 6).²¹

3.2 Regional distribution of foreign employment

In sum, total migration from the new member states to Austria (irrespective of the data looked at) was substantially lower than was expected prior to enlargement. While this is not surprising given the fact that the estimates of migration potentials were made under the assumption of freedom of movement of labour, another expectation associated with enlargement was that migration would centre strongly on the Eastern provinces of Austria (i.e. Vienna, Lower Austria, Burgenland). As can be seen from Table 7, nearly 70% of the employees from the major new member states (Poland, Hungary, former Czechoslovakia and Romania) – compared to less than 50% of all foreign citizens – worked in the Eastern provinces of Austria. Due to the changes in immigration policy which, as stated in section 2.2, strongly preferred seasonal workers in the last years and thus preferred regions with a high share of tourism and construction in employment (such as Tyrol and Salzburg), this expected pattern of migration did not materialise. All of the Eastern provinces of Austria except for Burgenland²² experienced increases in foreign employees from the new member states, which were less than proportional to the 2004 share in total foreigner stocks. In total these provinces received slightly less than 50% of the total increase in the share of foreign employees.²³ Unemployment rates of foreigners (both overall as well as from the NMS) are, however, highest in Vienna (see Figure 3) and correlate strongly with aggregate unemployment rates.

²⁰ Migration estimates based on the LFS, however, suffer from a number of other weaknesses. In particular the LFS underestimates the true number of foreigners in Austria due to an under sampling of temporary migrants, and the small number of migrants sampled in the LFS makes estimates of the share of foreigners in total population unreliable. Furthermore, in Austria changes in the sampling plan of the Austrian labour force survey make LFS data pre- and post-2004 incomparable. (Prior to 2004 the LFS was only conducted once a year, since 2004 it is conducted on a quarterly basis)

²¹ Differences between changes in the change of stock of foreign born and foreign citizen are accounted for by differences in return migration and naturalisation across country groups.

²² In all likelihood the Burgenland is an exception on account of the Grenzgängerabkommen.

²³ Again this finding can be reconfirmed using data on migration flows rather than foreign employees (see Huber et al 2007)

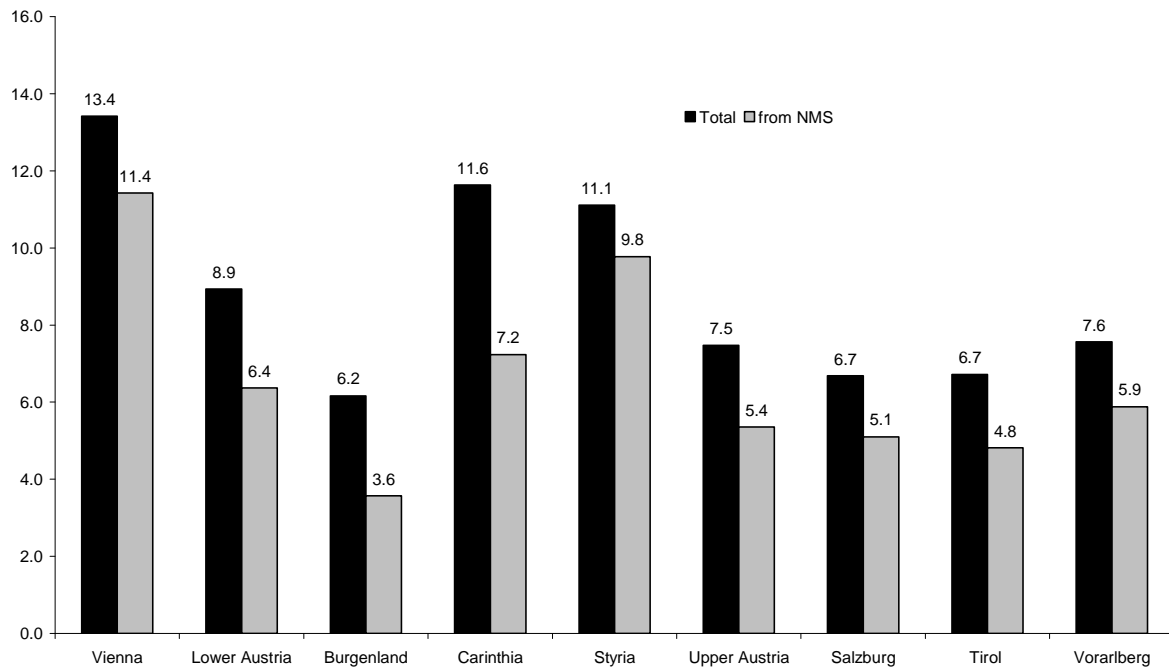
Table 7: Foreign Employees from the new member states in Austria by Region

	2004		2005		2006		2007		Change 2004-2007	
	Total ¹	From NMS ²	Total ¹	From NMS ²	Total ¹	From NMS ²	Total ¹	From NMS ²	Total ¹	From NMS ²
Vienna	114,604	14,650	118,628	15,518	123,759	16,468	129,572	17,947	14,968	3,297
Lower Austria	50,526	12,511	52,229	13,411	54,207	14,036	57,430	15,050	6,904	2,539
Burgenland	9,972	6,389	10,194	6,517	10,690	6,808	11,590	7,524	1,618	1,135
Carinthia	13,984	947	14,569	1,012	15,168	1,103	16,357	1,359	2,373	412
Styria	27,315	3,646	28,504	4,079	29,655	4,534	31,820	5,456	4,505	1,810
Upper Austria	48,673	5,987	49,326	6,317	50,663	6,597	53,791	7,534	5,118	1,547
Salzburg	28,162	1,493	28,823	1,628	30,509	1,785	32,522	2,136	4,360	643
Tyrol	35,747	1,957	37,359	2,189	39,265	2,332	40,634	2,560	4,887	603
Vorarlberg	26,432	692	26,338	713	26,798	704	27,566	740	1,134	48
	355,415	48,272	365,970	51,384	380,714	54,367	401,282	60,306	45,867	12,034
	Share in Total									
Vienna	32.2	30.3	32.4	30.2	32.5	30.3	32.3	29.8	32.6	27.4
Lower Austria	14.2	25.9	14.3	26.1	14.2	25.8	14.3	25.0	15.1	21.1
Burgenland	2.8	13.2	2.8	12.7	2.8	12.5	2.9	12.5	3.5	9.4
Carinthia	3.9	2.0	4.0	2.0	4.0	2.0	4.1	2.3	5.2	3.4
Styria	7.7	7.6	7.8	7.9	7.8	8.3	7.9	9.0	9.8	15.0
Upper Austria	13.7	12.4	13.5	12.3	13.3	12.1	13.4	12.5	11.2	12.9
Salzburg	7.9	3.1	7.9	3.2	8.0	3.3	8.1	3.5	9.5	5.3
Tyrol	10.1	4.1	10.2	4.3	10.3	4.3	10.1	4.2	10.7	5.0
Vorarlberg	7.4	1.4	7.2	1.4	7.0	1.3	6.9	1.2	2.5	0.4

Notes: ¹ All foreign citizens in Austria ² employees from Poland Hungary, former Czechoslovakia and Poland

Source: Austrian Social Security Data, WIFO-calculations

Figure 3: Unemployment rates of Foreigners by Austrian Provinces 2006 (in %)



Notes: Total: All foreign citizens in Austria. NMS: Poland, Hungary, former Czechoslovakia, Romania

Source: Austrian Social Security Data, own calculations

Table 8: Structure of active aged Population, Employment Rates and Unemployment Rates for Natives and Foreigners (2004 and 2006)

	2004			2006		
	Low Skilled	Medium Skilled	High Skilled	Low Skilled	Medium Skilled	High Skilled
	Share of Active aged Population					
Austria	18.0	63.2	18.8	14.0	68.2	17.8
Foreign born Total	38.5	44.8	16.7	35.3	48.0	16.7
	Employment Rate					
Austria	47.9	73.3	82.8	47.6	75.1	88.0
Foreign born Total	49.7	68.1	75.8	51.4	67.9	74.7
	Unemployment Rate					
Austria	6.8	3.6	2.5	8.3	3.4	1.9
Foreign born Total	15.2	8.9	6.0	13.7	8.8	6.2

Notes: based on active aged population by place of birth. Low skilled = ISCED 2 or lower, Medium Skilled = ISCE 3&4, High Skilled=ISCED 5 or higher

Source: Austrian labour force survey, WIFO-calculations

3.3 Labour market status of migrants

3.3.1 Qualification structure of employed and unemployed foreigners

The changes in the sending country structure of migration have also led to a noticeable improvement in the qualification structure of migrants. In particular, because of the high share of medium level educated migrants among the German as well as migrants from the NMS the share of medium skilled foreign born in the active age population has increased noticeably (by 3.2 percentage points) between 2004 and 2006. This has led to rather different changes in employment and unemployment rate developments of natives and foreigners by skill groups. While employment rates increased for higher skilled natives and decreased for persons with low skill levels, they decreased slightly for the more skilled foreign born, but increased for low-skill foreign born. Similarly, while unemployment rates decreased in the high and medium skilled segment of the natively born (and increased for the low skilled), the opposite was the case for foreigners (see Table 8).

Table 9: Development of self-employed from the new member states in Austria

	2003	2004	2005	Change 2003-2005 absolute
Czech Republic	142	187	229	+87
Estonia	2	3	5	+3
Cyprus	5	4	5	+0
Latvia	7	4	6	-1
Lithuania	4	6	23	+19
Hungary	567	618	813	+246
Malta	0	2	2	+2
Poland	1,022	2,410	4,109	+3,087
Slovenia	102	112	152	+50
Slovakia	181	352	660	+479
Total	2,032	3,698	6,004	+3,972

Notes: Data: End of November

Source: Public Employment Service Austria, WIFO-calculations

3.3.2 Self employment of foreigners

Furthermore, according to the Austrian Chamber of commerce, the number of registered enterprises increased substantially in the first years after accession. According to the Chamber of Commerce around 10.000 of these new enterprises were registered by entrepreneurs from the new member states in the years 2003 and 2005.²⁴ These enterprises were often registered in construction services and centred in Vienna. This finding is also partially confirmed by registration data from the Austrian public employment service (see Table 9). According to this data around 4.000 new entrepreneurs from the new member states were registered in the time period 2003 to 2005.²⁵ In absolute terms, most of these new entrepreneurs are of Polish origin.

²⁴ Unfortunately more recent data is not available.

²⁵ The differences between Chamber of Commerce data of 10.000 and the PES is sizeable, however. This is primarily due to the fact that first the PES measures the average annual stock of entrepreneurs, while the Chamber of Commerce measures new registrations and that here are higher incentives to deregister with the PES than with the Chamber of Commerce.

4 Changes in the structure of employment and unemployment

While the years since 2004 were in general marked by rather positive macroeconomic developments they were also marked by a less than proportionate reduction in unemployment. Thus it is also interesting to analyse the changes in the structure of employment and unemployment in this period. Given that in the pre-accession debate on the effects of migration the most sizeable effects were expected on foreign workers and less skilled, these are also the most interesting groups to observe. Furthermore before enlargement it was also often argued that cross-border labour mobility – in particular in Austria where regional aspects play an important role – could potentially have a regionally asymmetric effect, with the border regions more strongly affected. Thus besides focusing on employment and unemployment changes of foreigners and by skill groups in this section we also focus on regional indicators.

4.1 Unemployment of foreigners

One of the most noticeable changes in the structure of unemployment in Austria since the turn of the century was the substantial increase in the unemployment of foreign nationals residing in Austria. In the period from 2000 to 2005 (when aggregate unemployment also increased) unemployment among foreign citizens increased by almost 2.5 percentage points, while the increase in unemployment of natives was around 1 percentage point (see Table 10) and even after the reduction in unemployment in 2006 and 2007, foreign unemployment was still by 1.3 percentage higher than in the year 2000, while native unemployment was only by approximately 0.2 percentage points higher.

Table 10: Unemployment rates of foreigners by nationality

	2000	2001	2002	2003	2004	2005	2006	2007
Former Yugoslavia*	7.8	9.0	10.4	10.8	11.0	11.5	10.6	11.3
Turkey	9.0	10.6	12.1	12.6	13.2	14.1	12.8	11.7
Germany	6.9	6.9	7.4	7.2	6.7	6.4	5.6	5.1
Poland	6.8	7.9	9.3	9.4	9.8	10.2	9.7	8.5
Hungary	3.9	4.1	4.8	4.6	4.7	5.2	5.0	4.4
Former Czechoslovakia	5.1	5.6	6.3	6.4	7.1	7.3	7.0	6.4
Romania	7.5	8.3	9.6	9.0	9.2	9.7	9.1	8.1
Total Unemployment rate of foreigners	7.5	8.5	9.8	9.8	10.0	10.6	9.7	8.8
Natives	5.7	5.8	6.5	6.6	6.7	6.8	6.4	5.9
Foreign-Native Differential	1.8	2.7	3.2	3.2	3.3	3.8	3.4	2.9

Notes: Based on the national definition of unemployment and employment – * without Slovenia

Source: HV, WIFO-calculations

This increase in foreign unemployment also led to an increase in the native-foreign unemployment rate differential. It increased from 1.8 percentage points in 2000 to 2.4 percentage points in 2007 and to even higher levels in the years of increasing unemployment. Part of this increase is due to the fact that foreign workers are more

strongly affected by the business cycle on account of the sectors they work in.²⁶ The native-foreign unemployment rate differential in 2005, however, was the highest since the beginning of records in the early 1990's. This suggests that foreign workers are facing increased labour market integration problems. Most of this increase, however, occurred before enlargement²⁷, thus suggesting that it reflects internal problems in the labour market for foreigners rather than an impact of enlargement.

Furthermore, when focusing on the structure of unemployment rates by nationalities (see Table 10) it also appears that the groups of foreigners facing the largest problems in the labour market are not the foreigners from the new member states but rather the traditional "Gastarbeiter" groups from Turkey and former Yugoslavia. The unemployment rates among Germans, Hungarians and (to a lesser degree) Czech and Slovak citizens were lower or equal to those of natives²⁸, and also Poles and Romanians have unemployment rates below the total average for foreigners in Austria. Only citizens from former Yugoslavia and Turkey have unemployment rates above the average of foreigners in total. The labour market problems of foreigners are thus closely related to the problems of the Turkish and former Yugoslav migrant groups.

In part these problems of foreign workers are associated with the low qualification of foreign workers in Austria. According to recent studies (see Belot and Hatton, 2008, Biffi, 2006) Austria is the country with the lowest share of high educated migrants among the OECD countries. Furthermore in particular the migrants from the traditional sending countries of former Yugoslavia and Turkey have very high shares of low qualified workers (see Bock-Schappelwein et al., 2008)

Considering the changes in unemployment rates among different foreigner groups, however, suggests a substitution process between the newly emerging German migrants (see next section for details) and the more traditional groups.²⁹ Despite substantial immigration from Germany the unemployment rates among German citizens decreased (by -1.7 percentage points) in the time period considered in Table 10 while that of Turkish citizens increased by 2.7 percentage points.³⁰

²⁶ The highest shares of foreign workers are registered in agriculture and forestry (with a foreigner share of 35.9%), restaurants and hotels (33.7%), textiles and leather (23.5%), private households (22.5%) and construction (19.7%) (see Biffi, 2007). More than 50% of the employed foreigners in Austria work in only four NACE-2digit industries (business services, transport, hotels and restaurants and metal processing), which account for only a third of total Austrian employment.

²⁷ Focusing on the native-foreign unemployment rate differentials as indicator of the diverging labour market conditions of natives and foreigners in Austria, it increased by 2.4 percentage points between 2000 and 2003, while the subsequent decrease (from 2004 to 2007) was 0.8 percentage points.

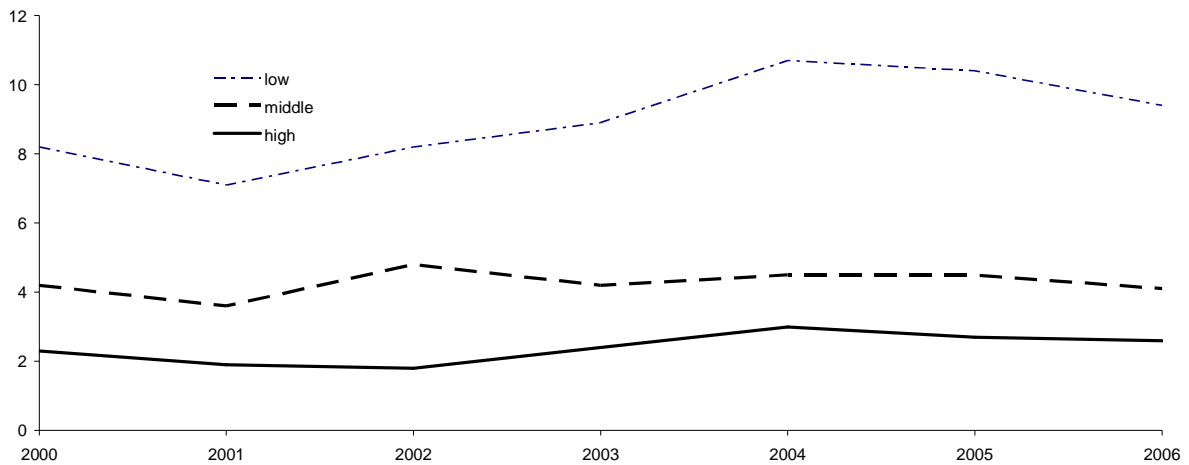
²⁸ The low unemployment rate among Hungarians is, however, due to the high share of commuters and temporary migrants in the Hungarian labour force in Austria.

²⁹ From a sectoral point of view this potential competition arises primarily in the tourism sector). Similar evidence of increased competition among different foreigner groups is provided by Biffi and Bock-Schappelwein (2004), who find that in particular citizen of third countries are coming under increased pressure, since their work permit may be withdrawn when they become unemployed.

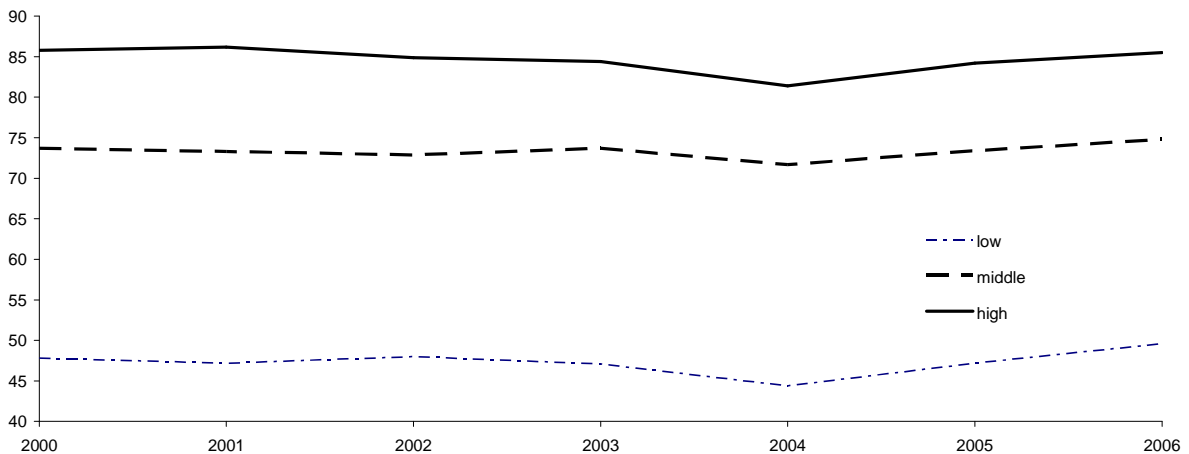
³⁰ This figure may, however, be slightly biased downward due to naturalisations of Turkish citizen in the time period considered (see below)

Figure 4: Unemployment rate and employment rate of foreigners, by educational attainment

Unemployment rate (%)



Employment rate (%)



Source: Eurostat.

4.2 Employment and unemployment by skill groups

Parallel to the changes in employment and unemployment of foreigners, Austria also experienced substantial changes in the structure of employment and unemployment by skill groups since the turn of the century (see figure 4). In particular this period was marked by a substantial increase in unemployment rates of the low-skilled relative to the high skilled. In the year 2000 the unemployment rate of the low skilled still lay at just over 8.2% according to Eurostat sources. In 2006 the unemployment rate of the low skill group was at 9.4%. Thus the unemployment rate increase for the low skilled was +1.2 percentage points in this time period. The increases in the unemployment rates of the high skilled in the same time period was only +0.3 percentage points and for the medium skilled there was even a slight decline (by -0.1 percentage points). Thus the majority of

the increase in unemployment between 2000 and 2006 is due to the increase in the unemployment rate of the low-skilled in Austria, and skill differences in unemployment rates (i.e. the difference between the unemployment rate of the low-skilled and the high skilled) increased from 5.9 percentage points in 2000 to 6.8 percentage points in 2006.

This increase in skill differentials in unemployment rates occurred despite a relatively positive development of employment rates of the low skill groups. While the employment rate of all skill groups declined between 2000 and 2004 (and the aggregate employment rate stagnated.³¹) – with the decline for low skilled labour amounting to 3.4 percentage points, relative to 4.4 percentage points for the high and 2 percentage points for the medium skill groups – there has been a noticeable increase in the employment rate of the low skilled since 2004 (by 5.2 percentage points), which was higher than for the high (+4.1 percentage points) and the medium skill groups (+3.1 percentage points).

4.3 Regional changes in employment and unemployment

A further concern of Austrian policy was that regions closer to the border - due to the combined impact of migration and commuting – could potentially experience negative labour market developments.³² Considering the development of the number of employees and unemployment at the provincial (NUTS 2) level, however, no clear correlation between the time of accession (2004) and regional development of employees and unemployment in the provinces bordering on the new member states (Vienna, Lower Austria, Burgenland, Styria and Carithia) relative to the other provinces emerges. Among the border regions some (such as Vienna and Burgenland) experienced below average growth rates in the number of employees since 2004, while the other border regions experienced above average growth. Similarly unemployment increased by more than average since 2004 in Vienna and Burgenland, but less than average in all of the remaining border provinces.

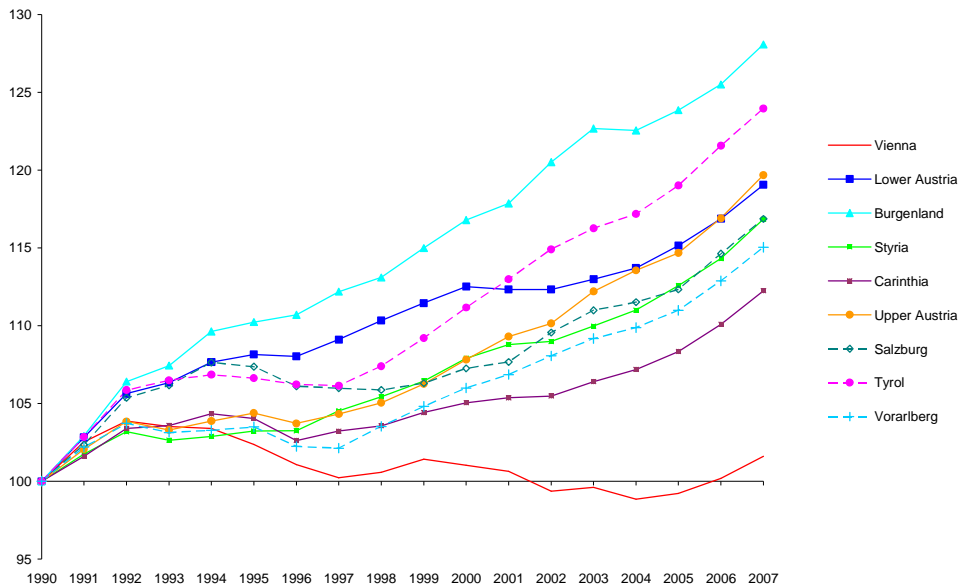
Rather than enlargement the decisive impact on regional employment and unemployment in the post enlargement period came from differences in the export intensity. Good export growth in the years 2004 to 2007 led to above average employment growth (and more favourable unemployment rate developments) primarily in the export oriented industrial provinces of Styria, Lower Austria, Upper Austria and Vorarlberg, while regions which are more strongly focused on locally traded services satisfying internal demand (such as Vienna and the Burgenland) developed less favourably.

³¹ This stagnation in the aggregate employment rate between 2000 and 2004 despite the decline in the employment rate for all skill groups was due to the structural change of the working age population from (the low employment rate) less skilled to the (high employment rate) high skilled.

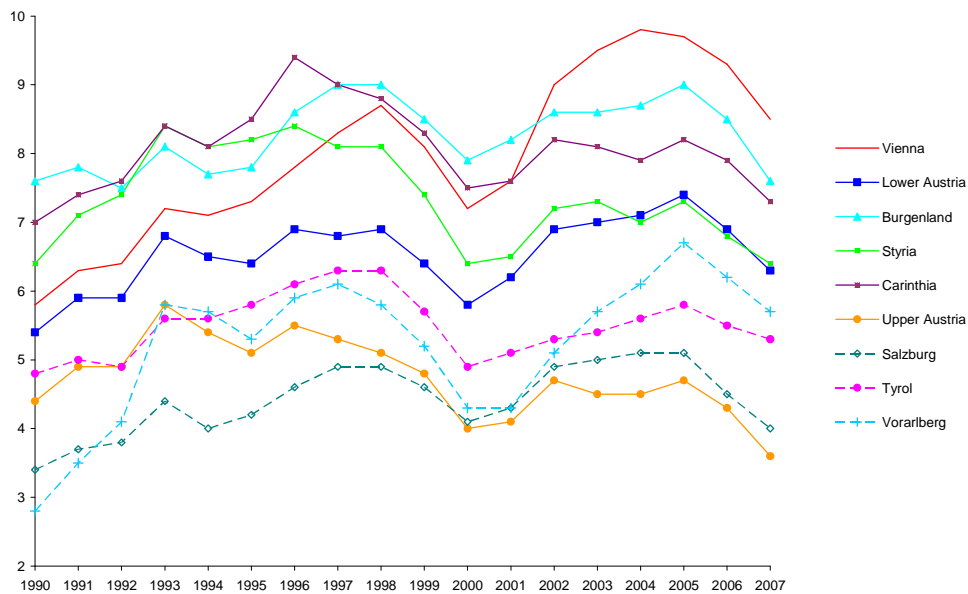
³² In Austria there are marked differences in the regional structure of foreign employment. The highest foreign worker share is found in Vorarlberg followed by Vienna and Salzburg (see Biffi, 2007). Furthermore citizen from the new member states disproportionately often settle in the border provinces of Austria (see Huber, 2002). This plus expected commuting led most analysts to believe that migrants from the new member states would also primarily work in the eastern parts of Austria after enlargement.

Figure 5: Development of Regional Labour Market in Austria

Employees 1990 = 100



Unemployment rate



Source: BMWA, WIFO-calculations.

Some of the Austrian provinces (most notably Vienna but also Burgenland and Styria) located near the border to the new member states, however, belong to the provinces with traditionally high unemployment rates. Among these, the highest unemployment rates were registered in Vienna. The registered unemployment rate in Vienna was at 8.5% in 2007. The reasons for these substantial labour market problems are, however, more strongly associated with a combination of continuing structural change and de-

industrialisation in the city (since 2000 manufacturing employees in the city declined by around a quarter and employees in construction decreased by a fifth) in combination with stagnating public sector employment (see Huber and Mayerhofer (2005) for a recent study on labour market development in Vienna).³³

Furthermore Austrian regions close to the border with the new member states (aside from Vienna) are often characterised by a below average level of economic development, a high share of agricultural employees and a low share of service sector employees and in many of these regions low wage industries (both in services and manufacturing) dominate the industrial employment structure. The labour market situation reflects the structural problems of the regions, there is so far little evidence that labour market developments have started to diverge after enlargement.³⁴

Table 11: Development of Employees and Unemployment by economic regions in border and non-border regions

End of July; Percentage changes from previous year

	Employees				Unemployees			
	2004	2005	2006	2007	2004	2005	2006	2007
East-Border areas								
Human capital-intensive	+1.3	+0.8	+1.4	+1.5	+0.8	+2.7	-6.2	-5.9
Physical capital-intensive	+0.4	-3.4	-0.8	-2.1	-3.2	+1.9	-0.7	-9.2
Rural	+2.0	-1.0	+1.5	+1.9	-1.1	+9.8	-5.1	-3.7
Non-East-Border areas								
Human capital-intensive	+0.5	+0.4	+2.4	+2.2	+0.3	+6.2	-10.8	-3.0
Physical capital-intensive	+5.0	+0.6	+2.1	+2.6	+2.5	+6.8	-8.3	-6.9
Rural	+1.6	+1.1	+0.8	+3.0	+0.5	+9.7	-8.2	-9.1

Source: HV, AMS, WIFO-calculations

Focusing on the more disaggregate district (NUTS4) level and grouping regions by region types according to a typology developed by Mayerhofer and Palme (2001a)³⁵ which classifies Austrian districts into urban (human capital intensive), capital intensive and rural regions and defines a border region as one within a travelling time of 90 Minutes from the closest town in the new member states and comparing border to non-border regions (see Table 11) provides an equally inconclusive picture. Urban centres and their environs (human capital intensive regions) in the border regions performed slightly better in terms of employee growth than their counterparts in non border regions in 2004 and 2005 but slightly worse thereafter, and better in terms of unemployment growth in 2005 and 2007 but worse in the other years. Similarly, rural border regions performed better in

³³ In addition some recent evidence (presented in Biffl et al 2008) also suggests that Vienna is particularly strongly affected by the increasing problems of integrating foreign citizen in the labour market.

³⁴ Interestingly while for most of the post World War II history Austria was characterized by an East-West differential in growth rates, in the 1990s a West-East differential existed. This was reversed again at the beginning of the century.

³⁵ See the map in the appendix for a definition of these regions.

2004 in terms of employees and unemployment, while they performed worse throughout 2005 to 2007. The only region type where employee growth was consistently lower in border regions than in non-border regions were industrial regions (physical capital intensive regions), but here too unemployment developments oscillate substantially and heterogeneity among individual regions tends to be too large to draw any firm conclusions.³⁶

5 Effects of migration on the national labour market and the economy

Studies which focus on the impact of migration and enlargement on the Austrian labour market mostly pre-date accession. These studies followed a number of methodological approaches and centred around the potential macro-economic impact of migration, its micro-economic implications on individual workers, potential regional impacts and on estimating migration potentials from the NMS to Austria. For instance Breuss (2001, 2002a and 2002b) simulates the macro-economic impact of enlargement. In accordance with other macro-economic model simulations (such as those of Keuschnigg and Kohler, 1998 and 1999) he finds that Austria should be the largest beneficiary of enlargement among the old EU-member states. According to his results Austrian GDP should have been 0.9% higher six years after enlargement than in a baseline Scenario without enlargement. Thus, macro-economic simulations prior to enlargement, which, however, did not exclusively focus on migration, suggested positive GDP and employment effects.

Table 12: Macro-Economic Studies of Effects of enlargement and Migration

Author	Method	Result
Bock-Schappelwein et al (2009)	Simulation using a dynamic CGE Model (TaxLab)	Improved skill structure of the 2000 to 2006 migration to Austria led to more favourable effects of migration relative to the 1990s. Migration of the early 2000's will contribute increase GDP by 3% and employment by 3.5%. In the short run a maximal increase of the unemployment rate of 0,5% is forecast
Hofer (2008)	Simulation based on a long term macro-economic model (A-LMM)	Migration of 25.000 persons per year will increase GDP by 2,7% until 2025, will reduce GDP/capita by 0,05%, and increase the unemployment rate by 0,2 percentage points
Breuss (2001)	Simulation based on OEF Model considering Trade, Factor Mobility and Productivity gains	Enlargement +0,15% pro Jahr
Keuschnigg and Kohler (1999)	Simulation based on CGE Model	Long term GDP increase of 1,1%
Breuss and Schebeck(1998)	Simulation based on WIFO Makromodells	Enlargement will bring increase in GDP of +0,13% per Year

More recently three macro-economic simulation studies appeared which exclusively focus on the macro-economic effects of migration. Prettner and Stiglbauer (2007) – using a multivariate time series model to simulate the effects of a migration of 200.000 migrants within 10 years (which they consider a realistic estimate for East-West migration after the end of derogation periods) – find that this increases the unemployment rate by 0.6 percentage points within this period. Hofer (2008) by contrast uses a long run CGE model

³⁶ This result is consistent with the results reported in Untied et al (2006), who use a more formal difference in difference approach to test the potential impact of enlargement on Austrian border regions relative to non border regions and find few to no significant effects.

to simulate the macro-economic implications of various scenarios of the population forecasts undertaken by the Austrian Statistical office. He finds that the increase of migration of 25.000 persons per year implied by these forecast will increase GDP by 2.7% until 2025 but will reduce GDP/capita by 0.05% and increase the unemployment rate by 0.2 percentage points. Finally, Bock-Schappelwein et al (2009) simulate the economic impact of both the migration to Austria at the beginning of the 1990's as well as the 2000's using a CGE mode which can take account of the differing skill structure of these two migration waves. They find that, due to the improved skill structure of migrants, the latter wave had a more favourable effect on the macro economic development of Austria. According to their results the migration of the early 2000's in the long run (over a simulation horizon over 15 years) will contribute to increasing GDP by 3% and employment by 3.5%, while in the short run a maximal increase of the unemployment rate of about 0,5% is forecast.

Further recent studies with a slightly different focus include Hunya and Iara (2006) as well as Mayr (2005) and Mayr (2006). Hunya and Iara (2006) analyse the labour market effects of the accession of Romania and find that in an unrestricted regime it is most realistic to expect an immigration of about 43.500 Romanian nationals within the first decade after accession and conclude that this migration will in all likelihood have negative effects on the Austrian labour market, while they cannot preclude that low-skilled domestic employees and blue collar worker may face retarded wage growth and increased unemployment risks. Mayr (2005 and 2006) by contrast analyses the effects of migration on public sector budgets in Austria. She finds that migrants make a modest net-contribution to the Austrian budget.³⁷

Micro-economic studies (see Winter-Ebmer 1994, 1996a, 1996b, Winter-Ebmer and Zimmermann 1998, Huber and Hofer, 2001, Hofer and Huber 1999), by contrast, highlighted the distributional implications of migration and trade liberalisation. These studies too primarily considered the effects of massive migration in the years 1998 to 2002 when the number of foreign workers increased by around 100.000 in Austria, since this facilitates identification. These studies established a number of stylized facts with respect to the likely changes in income distribution and relative employment/unemployment probabilities. In particular they suggest that:

- High qualified workers tend to profit from the immigration of less qualified foreign workers. Their wages increase in response to immigration. Low qualified workers employment and wage opportunities, by contrast, are reduced by the increased competition from foreign workers. These negative effects on low qualified workers tend to be small. For instance Hofer and Huber (1999) find that an increase in of the

³⁷ In addition most of the recent studies on migration issues in Austria suggest a change in the focus of interest in the Austrian migration debate. A number of recent studies such as Biffi (2006, 2007) and Bock-Schappelwein et (2008) have focused on the integration of foreign workers in Austria and on issues of over- and under-qualification. In general these studies suggest substantial problems of integration of second generation foreigners in the education system and high rates of over-qualification among the foreign born, which, however, are mainly due to the specific problems of the Turkish and former Yugoslavian groups rather than to the migrants from the new member states.

share of migrants in employment by 1 percentage point reduces wage growth for blue collar workers significantly by 2.9%, while the effect on white collar is positive but insignificant.³⁸

- Effects of migration depend strongly on the overall economic environment and the size of migratory movements. In particular marginal effects (per migrant) seem to be lower in times of modest immigration than in periods of rapid immigration. This is evidenced by the fact that individual level data regression coefficients are substantially higher in analyses for periods of high migration (such as those analysed by Winter-Ebmer and Zweimüller (1996, 1996a, and 1996b) than for analyses based on periods of normal migration (e.g. Hofer and Huber, 1999, Huber and Hofer 2001)

Table 13: Results of Micro-Econometric Studies on the Effects of Migration on Native Workers

Author	Group	Variable	Result
Winter – Ebmer and Zweimüller	Workers aged 15-57	Entry to Unemployment	Increase in foreigner share by one standard deviation increases unemployment risk by 0.8 percentage points
		Duration of Unemployment	Increase of foreigner share by 1% increases unemployment duration by 4% to 6%
Winter-Ebmer and Zimmermann	Young workers under 35	Individual Unemployment Risk	Small and mostly insignificant effects
Huber and Hofer (2001)	Workers Aged 19 to 56	Wage Growth	Significant Effects only for blue-collar workers. Increase in foreigner share by 1% reduces wage growth by 0.2%
		Change of Industry and non-employment risk	Unemployment risk of blue-collar workers is increased by migration, but not for white collar workers
Winter-Ebmer and Zimmermann (1998)	Sectoral employment	Employment growth of native Workers	Increase in foreigner share by 1% reduces employment growth by -0,1%
		Wage growth	Increase in foreigner share by 1% reduces wage growth by -0.1 to -0.2 %
Huber and Hofer (2002)	Workers Aged 19 to 56	Wage Growth	Significant Effects of migration only on blue-collar workers. For women there is no significant effect
		Change of Industry and non-employment risk	Significant effects of migration for the unemployment risk of blue-collar workers. For women there are no significant effect
Prettner and Stiglbauer (2008)	Sectoral employment	Employment	Migration has no negative effect with employment of natives, but is positively correlated with overall employment
		Unemployment	Migration has no significant effect on Unemployment of natives, but is positively correlated with total unemployment
Bock-Schappelwein et al (2009)	Workers aged 19 - 55	Wages	Migration since 2000 had less pronounced distributional effects most of estimates are insignificant, little evidence of detrimental wage
		Employment	Migration since 2000 had insignificant effects throughout

- Immobile workers, which cannot react to increased labour market competition by moving out of sectors or regions most strongly affected, have a higher chance of

³⁸ Similar results are found by Winter-Ebmer and Zweimüller (1996).

suffering declines in income and/or job opportunities than mobile workers (see for example Hofer and Huber, 2003 and Winter-Ebmer and Zweimüller, 1996).

- Due to the segmentation of the Austrian labour market newly migrating workers are most likely to come into competition with existing foreign workers. Here Huber and Hofer, 2001 find that an increase of the share of foreign employees by 1% increases the competing labour supply by 1.46% for foreigners but by only 0.94% for natives, on account of the sectoral segregation of employment of natives and foreigners.

Again in a more recent study Bock-Schappelwein et al. (2009) re-examine the effects of migration for the more recent migration since the year 2000. They find that in contrast to the 1990's recent migration had less pronounced distributional effects. In particular while for immobile workers and workers working in high migration sectors of the economy wage increases were reduced by around 0.5% in this time period, most of their estimates turn out to be insignificant, and they find little evidence of detrimental wage and/or mobility effects of migration both for low wage and existing foreign workers in the period 2000 to 2006. Bock-Schappelwein et al. (2009) attribute this finding to the changing skill structure of the post 2000 migration to Austria.

In sum the studies on the macro-economic impact thus conclude that migration has beneficial macro-economic effects, while the studies analysing the labour market effects highlight the distributional consequences of migration. It is suggested that these effects work against the less qualified, foreign workers and immobile, but are likely to remain relatively small. Furthermore evidence on the post 2000 migration to Austria suggests that the effects have been even smaller for the most recent migration episode, which was also characterised by more highly skilled migration than that of the early 1990's. Typical policy conclusions in this literature thus suggested that a mix of active labour market programs, increased training activities and measures aimed at better integration of foreign workers into the labour market should be pursued to reduce any negative distributive consequences of migration after enlargement (see Huber and Hofer, 2001).

6 Summary

This country report surveys the economic and labour market developments of Austria in the years since enlargement to discuss whether noticeable shifts in economic development, which can be causally linked to the enlargements of the EU in 2004 and 2007, can be found. Since the public policy debate before enlargement was characterised by concerns about the potential effects of enlargement on migration, the labour market position of the less skilled and foreigners as well as potentially asymmetric impacts on regions, we pay particular attention to these aspects of economic development in Austria since 2004. In general we find few clearly visible effects of enlargement. Economic development in Austria since the first round of the so called "Eastern Enlargement" in 2004 has been marked by a noticeable improvement in the business cycle, which was primarily driven by higher exports to countries outside the EU 27. For 2009, however,

business cycle outlooks, due to the international financial crises are more bleak as are expectations with respect to the development of employment and unemployment.

We also find that despite strong employment growth, unemployment rates increased in the first two years after enlargement and still have not reached the levels attained at the end of the last economic upswing in the year 2000. At the same time the economic activity of employees increased substantially since 2004. Half of this increase can be accounted for by increased migration.

Focusing in more detail on the development of migration, however, we also find that increased migration in particular in the period 2004 – 2007 was not due to a surge in migration from the new member states, but rather due to increased migration from the old EU member states, in particular Germany. Migration from the new member states by contrast increased only modestly since enlargement. Although there is some anecdotal evidence of circumvention of the existing restrictions towards immigration, actual labour movements from the NMS to Austria were small relative to ex ante forecasts of post-enlargement migration potentials. This, however, was also to be expected given derogation periods on the freedom of movement of labour.

Furthermore, we find no clear cut evidence that either regional economic development or labour market outcomes of foreigners or low skill groups have been severely affected by enlargement, but some evidence that the Austrian labour market has experienced increasing difficulties in integrating workers from the traditional sending countries of migrants since the beginning of the year 2000.

7 Literature

Arbeiterkammer Österreich. 2005. "Ein Jahr EU-Erweiterung: Trends und Fakten." – Eine umfassende Analyse aus Sicht der Bundesarbeiterkammer, AK, Vienna.

Beer, E. et al.. 2003. "Die Erweiterung der Europäischen Union mit 1. Mai 2004: Was wird sich für uns ändern." Kommentar zu Beitrittsvertrag aus Sicht der österreichischen ArbeitnehmerInnen, Arbeiterkammer Österreich, Vienna.

Belot, M., and T.J. Hatton. 2008. Immigration Selection in the OECD, CEPR Discussion Paper 6675.

Biffi, Gudrun et al.. 1997. "*Ökonomische und strukturelle Aspekte der Ausländerbeschäftigung in Österreich.*" Studie im Auftrag des AMS, WIFO, Vienna.

Biffi, Gudrun. 2006. Conditions of Entry and Residence of third Country highly Skilled in Austria, IOM, Vienna.

Biffi, Gudrun, Peter Huber, and Ewald Walterskirchen. 2006. "*Auswirkungen der Übergangsregelungen im Bereich der Freizügigkeit und der Dienstleistungsfreiheit.*" WIFO, Vienna.

Biffi, Gudrun. "SOPEMI" Report on Labour Migration, Austria, various issues.

Biffi, Gudrun, and Julia Bock-Schappelwein. "*Zur Niederlassung von Ausländerinnen und Ausländern in Österreich.*" WIFO, various years.

Biffi, G., Ageing of migrants: a challenge for the individuals, the society and the economy", Workshop III, Präsentation bei der Konferenz "Lifelong Learning – Equal Opportunities for Older Workers", Leipzig, 19.–21. März 2007.

Biffi, G., Bock-Schappelwein J., 2007 Zur Niederlassung von Ausländern in Österreich, Studie im Auftrag des BMI, WIFO-Gutachtenserie, Wien, 2007.

Bock-Schappelwein et al 2008 Hoch qualifizierte Zuwanderung in Österreich, Hintergrundpapier zum Österreichischen Forschungsdialog, Wien, 2008

Birner; A., Peter Huber, and P. Winkler. 1999. "*Schätzung des Potentials an Einpendlern und Arbeitsmigranten aus den MOEL und regionale Arbeitsmarktwirkungen.*"

Blonigen, B. April 2005. "A Review of the Empirical Literature on FDI Determinants." NBER Working Paper, (11299).

Bock-Schappelwein et al, 2008. Die Ökonomischen Wirkungen der Immigration in Österreich 1989-2007, Study of the commissioned by the Austrian Ministry for Labor and Economic Affairs, WIFO, Vienna

Brandel F., H. Hofer, and K. Pichelmann. 1994. "Verdrängungsprozesse am Arbeitsmarkt." Institut für Höhere Studien Forschungsbericht No. 345.

Breuss, Fritz., and Fritz Schebeck. 1998. "Kosten und Nutzen der EU-Osterweiterung für Österreich", WIFO-Monatberichte, 71(11): 741–750.

Breuss, Fritz. 2001. "Makroökonomische Auswirkungen der EU-Erweiterung auf alte und neue Mitglieder." WIFO-Monatsberichte 74(11). 655–666.

Breuss, Fritz. März 2002a. "*Die Kosten der Nicht-Erweiterung der EU.*" WIFO-Studie, WIFO, Vienna.

Breuss, Fritz. 2002b. "Benefits and dangers of EU-Enlargement." *Empirica*, 29(3), 245–247

Breuss, F., G. Fink, and P. Haiss. 2004. "How Well Prepared Are the New Member States for the European Union?" *Journal of Policy Modeling* (26).

Breuss, Fritz, Serguei Kaniovski, and Margit Schratzenstaller. 8/2004. "Steuerreform 2004/05 – Maßnahmen und makroökonomische Effekte." WIFO-Monatsberichte: 627–643.

Breuss, Fritz. 2006. "Ostöffnung, EU-Mitgliedschaft, Euro-Teilnahme und EU-Erweiterung – Wirtschaftliche Auswirkungen auf Österreich." WIFO Working Papers, 270.

Boeri, T., and Herbert Brücker. 1999. "The Impact of Eastern Enlargement on Employment und Wages in the EU Member States." Manuskript, European Integration Consortium, Deutsches Institut für Wirtschaftsforschung, DIW, 1999.

European Commission. 2006. Enlargement two years after. An economic Evaluation, European Economy, Occasional Paper, Brüssel.

European Commission. 2006. Bericht über die im Beitrittsvertrag festgelegten Übergangsregelungen, Mitteilung der Kommission an den Rat des europäischen Parlaments, den Wirtschafts- und Sozialausschuss und den Ausschuss der Regionen, Brüssel.

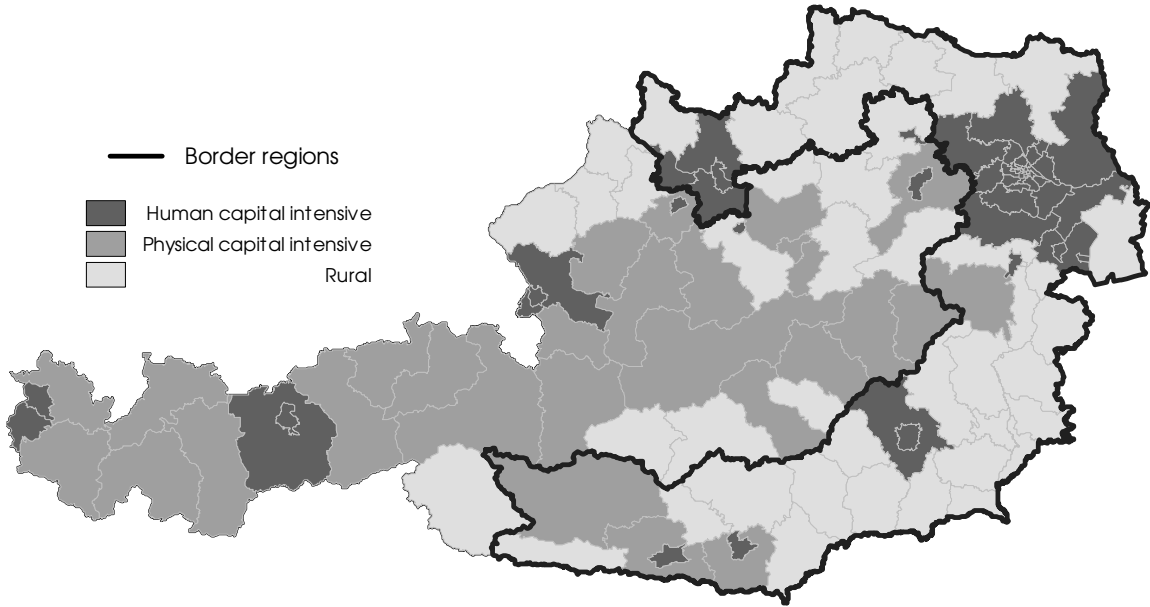
Fassmann, H., and C. Hintermann. 1997. Migrationspotential Ostmitteleuropa. Struktur und Motivation potentieller Migranten aus Polen, der Slowakei, Tschechien und Ungarn, ISR-Forschungsbericht 15, Institut für Stadt- und Regionalforschung, Vienna.

- Hofer, H., and Peter Huber.** 1999. *"Wage and Mobility Effects of Trade on the Austrian Labor Market."* Institut für höhere Studien und Österreichisches, Institut für Wirtschaftsforschung, Vienna.
- Hofer, H.** 1998. "The Impact of Emigration on Host Country's Wages und Unemployment." in Pichelmann, Karl (Hrsg.): *The Economic Consequences of Eastern Enlargement of the European Union – The Austrian View*, IHS, März.
- Hofer, H.,** 2008 "Zuwanderung: Ein zusätzliches Wachstumspotenzial für die österreichische Wirtschaft?", *Wirtschaftspolitische Blätter* 0208, 2008, S. 199 – 210
- Huber, Peter., and K. Pichelmann.** 1998. "Osterweiterung, struktureller Wandel und Arbeitsmärkte", *Wirtschaftspolitische Blätter* (4):339-349.
- Huber, Peter, and H. Hofer.** 2001. *"Auswirkungen der Erweiterung der Europäischen Union auf Beschäftigung und Arbeitsmarkt, Preparity Teilprojekt 9."* WIFO, Vienna.
- Huber, Peter.** 2001a. *"Auswirkungen der Erweiterung der Europäischen Union auf das Arbeitskräfteangebot, Preparity Teilprojekt 10."* WIFO, Vienna.
- Huber, Peter, and Herbert Brücker.** 2003. *"Auswirkungen und Ausnutzung von Übergangsfristen für die Freizügigkeit der Arbeitskräfte nach der EU-Erweiterung."* WIFO, Vienna.
- Huber, Peter.** 2002. "Migration and Regions – The case of Austria." in *Ralph Rotte Migration Policy and the Economy: International Experiences*, 157 – 178, ars et unitas, Neuried.
- Hudler-Seitzberger, M., and M. Bittner.** 2005., *"Labourmarkte Monitoring (LAMO) – Arbeitsmarkt-monitoring. Entwicklung, Anwendung und Validierung eines Mointoringinstruments zur regelmäßigen Beobachtung der Veränderungen am Arbeitsmarkt im Zuge der EU-Erweiterung."* Zusammenfassende Projektdarstellung, Paul Lazarsfeld Gesellschaft für Sozialforschung, Vienna.
- Hunya, Gabor and Anna Iara** (2006) *The Impact of Romania's Accession to the EU on the Austrian Economy*, wiiw Research Reports 326
- Keuschnigg, Ch., and W. Kohler.** 1998. "Eastern Enlargement of the EU: How Much Is It Worth For Austria?" CEPR Working Paper, London. (1786).
- Keuschnigg, Ch., and W. Kohler.** 1999. "Eastern Enlargement to the EU: Economic Costs and Benefits for the EU Present Member States." *Final Report, The Case of Austria*, Study XIX/B1/9801, Manuscript, Brüssel.
- Kohler, W.** 1999. "Trade and wages: What Can Faktor Contents Tell Us?" Working Paper, Universität Linz, Linz.9906.
- Lutz, Hedwig, and Ewald Walterskirchen.** 2004. *"Aktive Beschäftigung in Österreich."* WIFO, Vienna.
- Mayr, Karin (2005)** *The Fiscal Impact of Immigrants in Austria – A Generational Accounting Analysis*, Empirica, pp. 181 -200
- Mayr, Karin (2006)** *Immigration: Auswirkungen auf Arbeitsmarkt und öffentliche Finanzen*, *Wirtschaftspolitische Blätter*, 2/2006, pp. 237 – s52
- Mayerhofer, Peter, and Gerhard Palme.** 2001. *"Sachgüterproduktion und Dienstleistungen: Sektorale Wettbewerbsfähigkeit und regionale Integrationsfolgen."* Teilprojekt 6/1 in dies. (Koord.), *"PREPARITY – Strukturpolitik und Raumplanung in den Regionen an der mitteleuropäischen EU-Außengrenze zur Vorbereitung auf die EU-Osterweiterung."* Forschungsprogramm des WIFO, Vienna.

- Mayerhofer, Peter, and Gerhard Palme.** (2001a), "*Aspekte der regionalen Wettbewerbsfähigkeit.*" Teilprojekt 8 in dies. (Koord.), "PREPARITY – Strukturpolitik und Raumplanung in den Regionen an der mitteleuropäischen EU-Außengrenze zur Vorbereitung auf die EU-Osterweiterung", Forschungsprogramm des WIFO, Vienna, 2001.
- Nowotny, I.** 2007. "Das Ausländerbeschäftigungsgesetz: Die Regelung des Zugangs von AusländerInnen zum österreichischen Arbeitsmarkt." in (Fassmann H. (ed) 2. *Österreichischer Migrations- und Integrationsbericht*, Drava, Klagenfurt.
- Palme, Gerhard et al..** 1999. "*Regionale Auswirkungen der EU-Integration der MOEL.*" WIFO, ÖIR, Vienna.
- Pichelmann, K.** März 1998. "The Economic Consequences of Eastern Enlargement of the European Union." - The Austrian View, IHS.
- Pollan, Wolfgang.** 2000. "Die volkswirtschaftlichen Auswirkungen der Zuwanderung von Arbeitskräften", *WIFO-Monatsberichte*, 73(2).
- Prettner, K. and A. Stiglbauer.** 2007. "Auswirkungen der vollständigen Öffnung des Arbeitsmarktes gegenüber den EU 8-Staaten, Geldpolitik und Wirtschaft." 53–71.
- Sieber, Susanne.** Aussenhandel 2005, WIFO-Monatsberichte, 5/2006.
- Untied, Gerhard et al..** 2006. "Auswirkungen der EU Erweiterung auf Wachstum und Beschäftigung in Deutschland und EU Mitgliedstaaten." BMWA, Berlin.
- Walterskirchen, Ewald, and R. Dietz.** 1998. "Auswirkungen der EU-Osterweiterung auf den österreichischen Arbeitsmarkt." Vienna, WIFO.
- Walterskirchen, Ewald.** 2006. "*Aktive Beschäftigung in Österreich.*" WIFO-Studie im Auftrag der Arbeiterkammer Vienna, Vienna.
- Winter-Ebmer, R., and J. Zweimüller.** 1996. "*Die Auswirkungen der Ausländerbeschäftigung auf den österreichischen Arbeitsmarkt 1988 bis 1991.*", in Holzmann, R., Neck, R., (Hrsg.) *Ostöffnung: Wirtschaftliche Folgen für Österreich*, Manz, Vienna, 55-102.
- Winter-Ebmer, R. and J. Zweimüller.** 1996A. "Immigration and the Earnings of Young Native Workers", *Oxford Economic Papers*, Vol. 48, 473-491.
- Winter-Ebmer, R., and J. Zweimüller.** 1996B. "Immigration, Trade and Austrian Unemployment." *CEPR Discussion Paper No:* 1346.
- Winter-Ebmer, R., and K.F.** 1998. "East - West Trade and Migration: The Austro German Case." IZA DP No. 2, Bonn.

8 Appendix

Figure A1: Austrian Border regions and region types



Source: WIFO