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CENTROPE Regional Development Report

Focus and Stock Taking Report on Human Capital, Education and Labour Markets in the CENTROPE

Petr Rozmahel (Co-ordinator), Luděk Kouba, Nikola Najman, Marek Litzman (MENDELU), Márta Nárai (WHRI), Karol Frank (EU-SAV), Peter Huber (WIFO)

June 2012

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Abstract

Despite the fact that all CENTROPE countries are members of the European Union, the labour market in the CENTROPE region is very heterogeneous. More than half of the CENTROPE labour force is located in Austrian regions, which are areas with significantly higher wages in comparison with regions in the three post-communist countries. Furthermore, there are substantial disparities between metropolitan areas of Vienna, Bratislava and Brno on the one hand and rural areas with relatively high share of agriculture on the other hand. These structural disparities are reflected in a dramatically varying rate of unemployment among the CENTROPE regions as well – from less than 4 percent in Lower Austria and Burgenland to 12 percent in the Trnava region. Concerning the quality of human capital the CENTROPE region disposes of a well developed education system. In particular there are a large number of institutions at the tertiary education level situated in the region. Here a survey on student mobility intentions shows high willingness of students to study abroad choosing Vienna as the most attractive place of study in CENTROPE.

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CENTROPE Regional Development Report 2011 – Focus and Stock Taking Report on Human Capital, Education and Labour Markets

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1. Introduction

Both regional analysts and policy makers interested in monitoring and reviewing the labour market situation of border regions in the EU are faced by serious data constraints in particular when they are interested in cross border analysis . In principle two sources of regional information are available for such an analysis. The first of these is the European Labour Force Survey and its results available from the EUROSTAT database. This is a regular representative survey conducted on a quarterly basis using a sample of 1.5 million people throughout the European Union (EU) with sampling rates varying between 0.2% and 3.3% of the population depending on the country analyzed.

In this survey, the population is divided into three main groups according to their status in the labour market - persons in employment, unemployed and inactive persons according to a unified European wide definition[1]:

- Persons are considered employed, when they are older than 15 and during the surveyed week, performed paid work for at least 1 hour or were not at work but had a job or business from which they were temporarily absent.[2]
- Persons are considered unemployed, if they were without work during the survey week, are currently available for work (i.e. are not able to start work within 14 days) and are either actively seeking work in the past four weeks or had already found a job to start within the next three months,

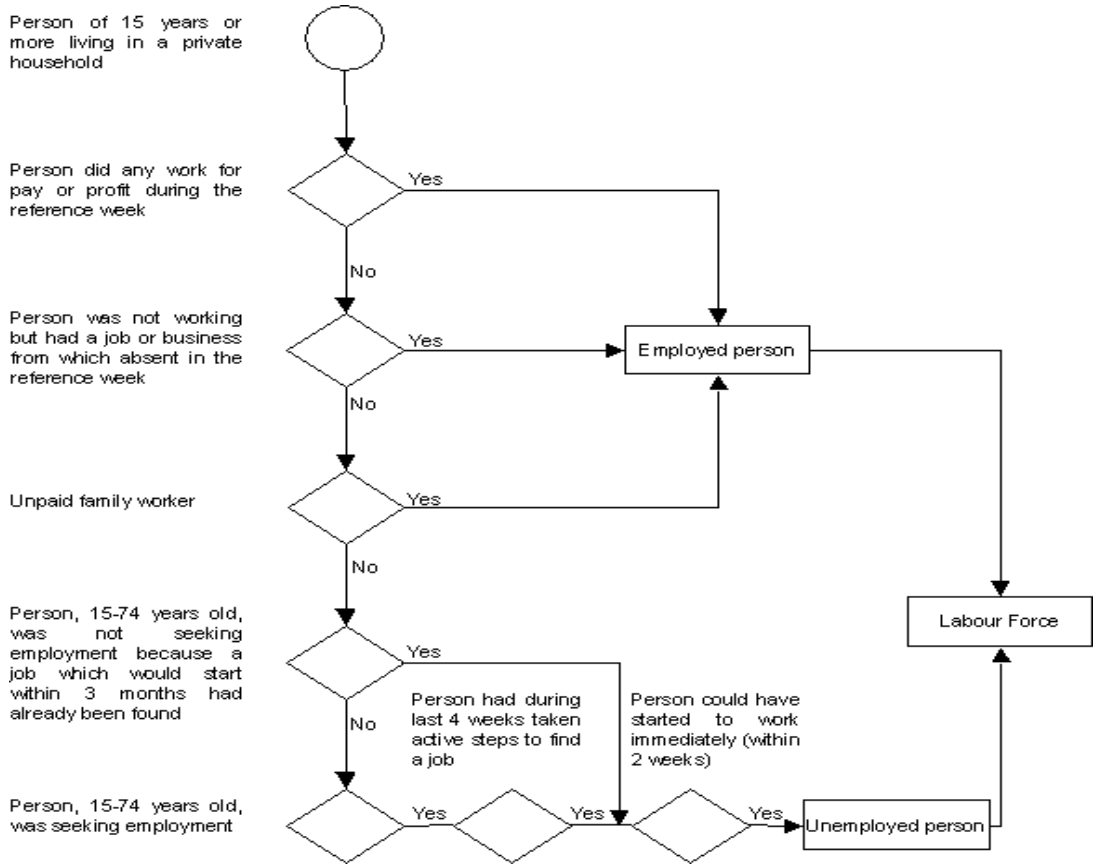
[1] Even though the labour force survey provides a standardized questionnaire according to a unified methodology there may be more subtle differences in methodology arising from for example different sampling strategies (e.g. in some countries the questionnaire was or is continuously sampled, while in others it is sampled only in one week of a quarter). Also some authors have argued that the wording of questions may differ between countries due to the difficulties of an exact translation of all terms used.

[2] In detail here “work” means any work for pay or profit, with payment not having to be received in cash. Self-employed are considered employed if they either work in their own business for the purpose of earning profit or spend time on operating a business despite nothing being produced or sold or if they are in the process of setting up a business. Also persons on temporary absences (e.g. illness, training, holidays, and maternity leave) are considered employed. In the case of long-term absence exceeding three months, workers have to receive at least 50 % their regular wage to be considered employed. Conscripts are never considered in employment

- Finally persons are considered inactive if they can be neither classified as employed or unemployed.

Thus when it comes to comparability of data across countries and regions the ELFS is definitely the most reliable data source on the labour market situation in the EU. A further advantage of this data source is that aside from being interviewed on their labour market status, interviewed persons are also questioned about a number of personal characteristics (such as age, gender, family status etc.), their employment relationship (sector of employment, occupation and others) as well as on a number of non-work related activities in the time preceding the interview (e.g. on whether they have participated in training or education in the four weeks preceding the interview). This therefore allows for addressing a wide range of issues with the data generated by the LFS.

Figure 1.1: Flowchart of the Eurostat methodology



Source: Eurostat.

There are, however, also some serious drawbacks to the European Labour Force Survey (ELFS). The first of these refers to the representativity of the survey. Since the survey is based on a sample of interviews the resulting numbers of people are estimates that have a sampling error. This error is the larger the smaller the group is for which the sample is drawn. Therefore EUROSTAT based on the information of the national statistical offices sets two kinds of limits on the reporting of groups of small sizes. The first is a limit below which the estimates provided must be considered of limited value only. If estimates belong to this category they must be separately identified. The second limit, by contrast, applies to groups that are so small that no reporting for them is possible, so that if estimates fall below this number, missing observations will result.

The second drawback is associated with the recency and the regional coverage of the data. Since the survey is supposed to be representative at the NUTS 2 level, data is available mostly on NUTS 2 region of residence level. This is clearly a serious drawback for a study such as this one, where an analysis on NUTS 3 level is required. Furthermore, aggregate results for the survey are only available for 2010 at the time of writing this report (which is spring 2012) and the individual level data (which has been also used by the project team elabourating this report) is available only until 2009.

An alternative is to use national data; this is usually much more recent but has the serious drawback that it is often also incomparable. For instance the country studies collected in this report, which provide a short overview on the methods of collecting of national data suggest that in Austria persons on maternity leave are counted among the employed in the standard labour market reports, while in the Czech Republic they are considered neither employed nor unemployed. This clearly distorts any comparison of employment development between Austria and the Czech Republic based on national data. Similarly there are also many differences with the compilation of registered (national) unemployment series.[3] Thus comparing national data across countries may provide extremely misleading results.

[3] Here the methodological differences are often slightly more subtle. For example all countries consider only persons who are available for work as unemployed, but there are many subtle differences of who is defined as being available for work (e.g. Austrian data consider people with a training of more than 28 days as unavailable, in the Czech and Slovak Republic 14 days are the border; in Austria apprentices cannot become unemployed because they are considered not to look

Since a full harmonization of national administrative data is beyond the scope of a project such as ours, - which is focused on determining stylized facts, recent trends common problems and potential areas of co-operation in the field of labour market policy among the CENTROPE regions - our approach in this report was slightly more pragmatic. We decided to proceed in a two step approach. In the first step we used comparable data on the labour market situation in CENTROPE provided by EUROSTAT to present us an admittedly crude but comparable picture of the labour market of CENTROPE as a cross-border region. In this step we used both NUTS 3 level data as well as a NUTS 2 level data, although we are well aware that the latter are only a proxy measure for CENTROPE. Furthermore, we also used the most recent data available even if some of it stems only from 2009. The results of this first step are documented in the first chapter of this report, which focuses on an analysis of the CENTROPE Labour Market and the Education System of the CENTROPE from a comparative perspective. We think that, despite its obvious weaknesses, this can be justified because it provides additional insights on a topic that has been little analyzed so far, and because, in particular looking at older data provides insights on some of the relations that are more stable over time (such as employment or economic structure).

In the second step of the analysis we then went into some more detail. In particular in this step we were able to obtain two comparable data sets that allow us to analyze particular aspects of cross-border labour markets and the cross-border education system in CENTROPE. In the first of these, presented in chapter two, we analyze comparable data on unemployment and vacancies for 10 occupational groups in the CENTROPE, with the aim of first of all finding out how high mismatch unemployment is in these occupational groups (i.e. what proportion of unemployment in these occupations could be avoided if the unemployed were perfectly mobile across regions) and second of all determining whether the relationship between vacancies and unemployment has changed since the 2nd quarter of 2011 (i.e. since the establishment of the freedom of movement of labour across national borders in CENTROPE). In the second case we decided to conduct a self financed a questionnaire on student mobility in CENTROPE, the results of which are reported in chapter 4 of this report. The outcomes of the survey shed light on the attractiveness of

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for work but for education). These differences clearly also lead to an incomparability of national data on unemployment.

CENTROPE for student mobility and identify factors of the students' decision processes when choosing a place to study broad.

Finally in this second step also a set of country studies that focus on both more recent data as well as on the institutional aspects of labour market (presented in chapter 5) and education system (presented in chapter 6) governance in the individual regions of CENTROPE were conducted to first of all present more up-to-date information and to second of all provide additional institutional information to readers.

PART ONE: Labour Markets, Human Capital and Education in CENTROPE from a Cross-Border perspective

2. An Analysis of the Labour Market Situation in CENTROPE

Authors: Luděk Kouba, Marek Litzman, Peter Huber

2.1. Overview of aggregate labour market developments in CENTROPE (2000-2010)

2.1.1. Unemployment rates

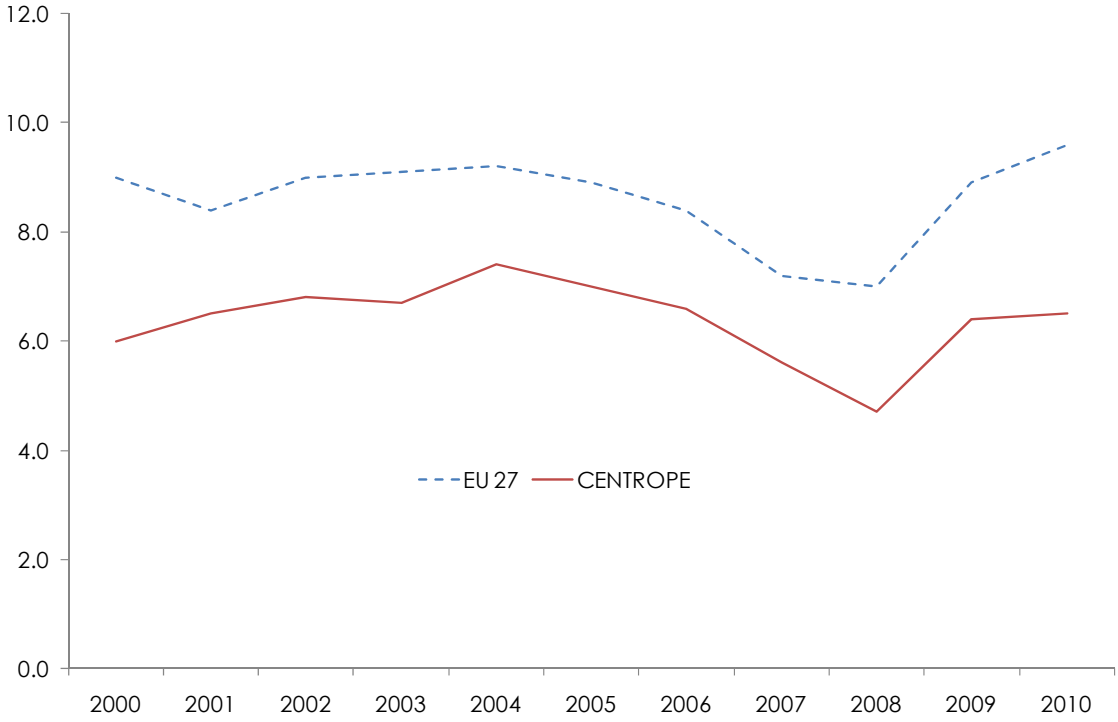
Already a fist glance at the main macro-economic aggregate labour market indicators for CENTROPE suggests that this is a region with a more favourable labour market situation than the EU27. The unemployment rate of the region as a whole has been continuously below the EU 27 average in each and every year since the year 2000, with the lead of CENTROPE amounting to 2.2 percentage points in the average of the last decade (see figure 1.1). Also most of the regions of CENTROPE are privileged in terms of unemployment rates relative to their respective countries. This applies in particular to the Hungarian and Slovak CENTROPE but also to the Austrian provinces of Lower Austria and Burgenland.[4] Furthermore only Trnava region and Vas had an unemployment rate exceeding the EU27 average in 2010

The data, however, also show significant inter-regional differences in the distribution of unemployment rates: The difference between the region with the highest (Vas) and the lowest (Lower Austria) unemployment rate in CENTROPE amounted to 6.5 percentage points in 2010 and was therefore about as high as the average unemployment rate of the whole region. These differences are caused by a number of factors: First of all national differences play some role. Here the Czech Republic and Austria since the mid 2000's have lower unemployment rates than Slovakia and Hungary. However, national

[4] Note that as shown in chapter 6 Burgenland has a higher than average unemployment rate than the Austrian average. This difference is due to the fact that seasonally unemployed that have a guaranteed recall will not be counted as unemployed (since they may not be searching or because they have a job in three months) in the labour force survey but are counted as unemployed by the national methodology.

differences cannot explain all of the heterogeneity in unemployment rates. As shown by both table 2.1 and even more clearly the country studies in chapter 6 of this report aside from national differences there are also many regional differences among regions within a country. This results in an East-West differentiation in terms of unemployment among the CENTROPE regions, with the more eastern regions in general showing higher unemployment rates than more Western ones.

Figure 2.1: Unemployment rates, population aged 15-64 years (%)



Source: EU Labour Force Survey. – *2010 = estimates based on NUTS2 level development and national statistic provided in chapter 5.

Aside from this East-West differentiation –as also amply documented in the country studies in chapter 6 of this study - this internal differentiation in CENTROPE is, also closely connected to differences in economic structure and differences in structural change between regions. Here in all countries of CENTROPE more rural peripheral regions such as the Southern Burgenland, parts of Lower Austria, Vas and also the southern regions in South Moravia tend to have higher unemployment rates than more industrial regions on account of high seasonality. Industrial regions, by contrast seem to be more strongly

affected by the business cycle, so that they suffered particularly under the recent economic crisis. By contrast, as also described in detail in chapter 6 the unemployment rates in the large towns of the region (such as Vienna, Bratislava and Brno) differ markedly between countries. In Vienna substantial structural change and inflow of population have caused unemployment rates to be higher than the national average, with in particular mismatch unemployment being rather high. Bratislava and Brno by contrast remain to be privileged in term of unemployment rates within their regions and belong among the regions with the lowest unemployment rates. This can be attributed to the fact that in the EU 8-countries cities have traditionally been considered the "leaders of transition" in the 1990's. This has now also led to them being "leaders of the catch-up process" since the early 2000's.

Table 2.1: Unemployment rates, population aged 15-64 years (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	3.5	3.6	4.0	4.3	4.9	5.2	4.7	4.4	3.8	4.8	4.4
--Burgenland	3.2	4.1	4.3	4.2	5.6	6.0	5.0	3.7	3.6	4.6	3.9
--Lower Austria	3.0	3.2	3.5	3.5	4.2	4.3	4.0	3.6	3.4	4.3	3.6
--Vienna	5.8	5.9	7.2	7.8	8.9	9.1	8.8	8.3	6.7	7.5	7.3
Czech Republic	8.8	8.2	7.3	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3
--South Moravia*	-	-	-	8.1	8.4	8.1	8.0	5.4	4.4	6.8	7.6
Hungary	6.4	5.7	5.8	5.9	6.1	7.2	7.5	7.4	7.8	10.0	11.2
--Gyor-Moson-Sopron*	4.3	4.2	3.9	3.3	3.8	4.3	4.3	3.6	3.5	6.3	6.3
--Vas*	4.6	5.1	4.8	5.1	5.8	7.9	7.4	6.8	5.5	10.2	10.1
Slovakia	18.8	19.3	18.7	17.6	18.2	16.3	13.4	11.1	9.5	12.0	14.4
--Trnava region*	16.6	18.1	16.2	13.3	12.6	10.5	8.8	6.5	5.9	9.1	9.9
--Bratislava reg.	7.3	8.3	8.7	7.1	8.3	5.3	4.6	4.3	3.4	4.6	6.2
EU 27	9.0	8.4	9.0	9.1	9.2	8.9	8.4	7.2	7.0	8.9	9.6
CENTROPE	6.0	6.5	6.8	6.7	7.4	7.0	6.6	5.6	4.7	6.4	6.5

Source: EU Labour Force Survey. – *2010 = estimates based on NUTS2 level development and national statistic provided in chapter 5.

Despite these regional disparities that also carry over to unemployment rate changes, the CENTROPE in average has also been less strongly affected by the crisis than the EU27 and also has recovered more quickly. After falling unemployment rates were registered in all regions in the boom phase of 2006-2008, unemployment increased substantially in 2009, when the unemployment rate has increased in all regions of CENTROPE. Nonetheless in aggregate the increase in the unemployment rate of 1.7 percentage points in the CENTROPE average was more moderate than in the EU27. Similarly in 2010 – although unemployment increased or stagnated in all CENTROPE regions with the exception of the Austrian CENTROPE, where unemployment rates declined – the aggregate increase in unemployment rates of CENTROPE was only 0.1 percentage points as opposed to 0.7 percentage points in the EU average. Furthermore, the results from national statistics presented in the case studies suggest that also in 2011 unemployment rates increased mildly in the CENTROPE average. Thus despite substantial variations across regions in aggregate CENTROPE has proven to be more resilient to the crisis than the EU 27 in terms of unemployment

Table 2.2: Gender differences in the unemployment rate

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	avg
Austria	–0.5	–0.4	0.1	0.1	–0.9	–0.6	–0.9	–1.1	–0.5	0.4	0.4	–0.3
Burgenland	–0.4	–0.3	–1.0	–0.5	–1.4	–2.5	–1.9	–0.8	0.1	–0.4	–0.4	–0.9
Lower Austria	–1.0	–0.2	–0.3	–0.4	–1.5	–1.0	–1.0	–1.0	–1.1	0.5	0.4	–0.6
Vienna	1.4	1.5	2.3	2.2	0.9	2.3	1.5	0.4	0.4	2.2	–	1.6
Czech Republic	–3.1	–3.1	–3.1	–3.7	–2.8	–3.3	–3.0	–2.5	–2.1	–1.9	–2.1	–2.8
South Moravia	–	–	.	–3.3	–2.4	–3.2	–3.3	–2.4	–2.4	–1.5	–	–2.6
Hungary	1.5	1.3	0.8	0.5	0.0	–0.4	–0.6	–0.6	–0.5	0.6	0.9	0.4
Gyor-Moson-Sopron	–0.6	–0.4	0.0	0.2	–0.8	–0.3	–2.4	–1.5	–2.8	–1.8	–	–1.0
Vas	–0.3	2.9	1.6	0.8	–1.9	–0.9	–2.2	–3.6	–1.6	2.2	–	–0.1
Slovakia	0.3	1.1	–0.1	–0.3	–1.8	–1.7	–2.4	–2.8	–2.5	–1.4	–0.4	–1.0
Bratislava reg	–1.2	–0.5	–1.0	–2.2	–1.9	–1.8	0.3	–1.2	0.0	1.6	–	–0.8
Trnava region	–1.9	–0.7	–4.0	–1.6	–3.4	–4.2	–4.9	–4.4	–3.0	–2.2	–	–3.1

Source: EU Labour Force Survey. – Differences between male and female unemployment rate.

The crisis of 2009 has, however, also had a sizeable impact on the structure of unemployment. This can be seen from the development in gender differences in the unemployment rate published by EUROSTAT and available for all CENTROPE regions until 2010. From this data (see table 2.2) it is clear that gender differences, which were to the favour of men in all regions (except for Vienna) and years before 2009, improved in the favour of women. This is a consequence of the fact that industrial employment (which is traditionally dominated by males) suffered more from the crisis than did service employment. Therefore men have lost more jobs during the recession of 2009 than females.

2.1.2. Employment growth

Similar developments as for the development of unemployment rates can also be shown to apply to employment growth. In this respect too, despite large internal regional variation CENTROPE as an aggregate has a history of outperforming the EU 27 average in the last decade. Employment grew more rapidly (declined by less) than the EU average in all years except for two (2004 and 2006) since 2004 (in which complete data was available for the first time) and over the period 2004 to 2010 the cumulative employment growth advantage of CENTROPE over the EU 27 amounted to 1.2 percentage points. Furthermore, also with respect to this indicator CENTROPE as an aggregate has proven to be more resilient to crisis than the EU 27. Employment declined by 0.9% in 2009 and stagnated in 2010 in the region as an aggregate, while the respective growth rates in the EU27 average were –1.7% (in 2009) and –0.6% (in 2010).

The crisis has, however, also changed the regional patterns of employment growth. In the period before 2009 and especially during the economic boom 2007 to mid 2008, it was in particular high employment growth in the Slovak and Czech parts of CENTROPE which were important for CENTROPE's good growth performance. The good performance of the Austrian CENTROPE in 2009 and 2010 in combination with lower productivity growth and a much stronger increase in the number of part time employed in this part of CENTROPE, however, led to a slight reversal of long term employment growth trend in this period. Although the Austrian regions still lag substantially behind the region with the fastest employment growth over the period 2004 to 2010 (Trnava +13.3%), they now show slightly higher employment growth than South Moravia and Bratislava and definitely higher growth than the Hungarian parts of CENTROPE, where in Vas employment was by –13.1% lower in 2010 than in 2004 according to EUROSTAT data.

Table 2.3: Employment growth in the regions of CENTROPE 2000-2010 (in % of the previous year)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Cumu-lative since 2004
Austria	0.5	0.6	–0.6	2.2	–1.3	2.1	3.3	1.9	1.5	–0.3	0.5	8.0
Burgenland	–0.3	–2.5	0.6	4.0	–3.7	1.8	2.6	5.1	0.8	–1.0	0.7	6.3
Lower Austria	0.1	0.1	2.4	0.8	–0.2	1.3	2.7	2.9	2.4	–2.1	0.7	7.8
--Vienna	0.6	0.6	–6.5	3.3	–3.0	1.4	5.3	1.7	1.4	1.7	–0.2	8.5
Czech Republic	–0.7	0.1	1.0	–0.6	–0.2	1.6	1.4	1.9	1.6	–1.3	–1.0	3.9
South Moravia*					0.2	1.2	0.3	3.3	0.9	–1.3	0.4	5.1
Hungary	1.0	1.0	0.1	1.3	–0.5	0.0	0.7	–0.1	–1.2	–2.5	0.0	–3.6
Vas*	1.7	–0.4	1.0	0.5	–3.8	–2.3	1.4	–0.2	–2.7	–6.6	0.6	–13.1
Gyor-Moson-Sopron*	–0.5	1.7	2.9	–2.5	–1.0	1.5	0.5	3.3	–0.9	–1.4	1.5	3.5
Slovakia	–1.4	0.9	0.0	1.8	0.3	2.2	4.0	2.4	3.2	–2.7	–2.1	7.2
Bratislava region	0.4	–1.1	–1.9	2.2	–1.7	3.6	1.4	2.1	2.7	–0.4	–3.1	4.5
Trnava region*	–2.1	3.2	1.6	2.4	3.3	3.5	2.2	2.5	2.7	–1.7	0.1	13.3
CENTROPE					–0.9	1.6	2.5	2.6	1.5	–0.9	0.0	6.5
EU 27	2.9	1.4	0.0	0.6	0.6	1.9	1.9	2.0	1.2	–1.7	–0.6	5.3

Source: EU Labour Force Survey. – Imputed from data on economically active, and unemployed, *2010 = estimates based on NUTS2 level development and national statistic provided in chapter 5.

2.2. Labour Market Structure

Thus according to the available data on NUTS 3 level provided by EUROSTAT as well as from the country studies in chapter 4 CENTROPE is a region that has consistently outperformed the EU 27 in terms of labour market indicators in the last decade and is marked by a combination of both low unemployment and high employment growth, where in particular the first stylized fact (low unemployment rates relative to EU 27 average) applies to almost all parts of the region.

Unfortunately, however, using NUTS 3 level data these two insights are the only ones that may be gained from EUROSTAT sources, since data on employment and unemployment are the only data that are published on this regional level. A labour market expert, however, would probably want to know more about the CENTROPE labour market before coming to further conclusions. In particular such an expert may inquire about the structure

of employment in terms of gender and age, industry structure and atypical work arrangements, similarly he/she may be interested in the skill structure of the employed in CENTROPE or – given that in Mai 2011 freedom of movement of labour was introduced for the first time in the region – what have been the developments of labour mobility in this region.

All these questions can only be answered at the hands of NUTS 2 level data, since data on these issues are available on this level of regional disaggregation only. Therefore for the further analysis of this chapter we will be using this level of approximation of the CENTROPE region.

2.2.1. Employment rates

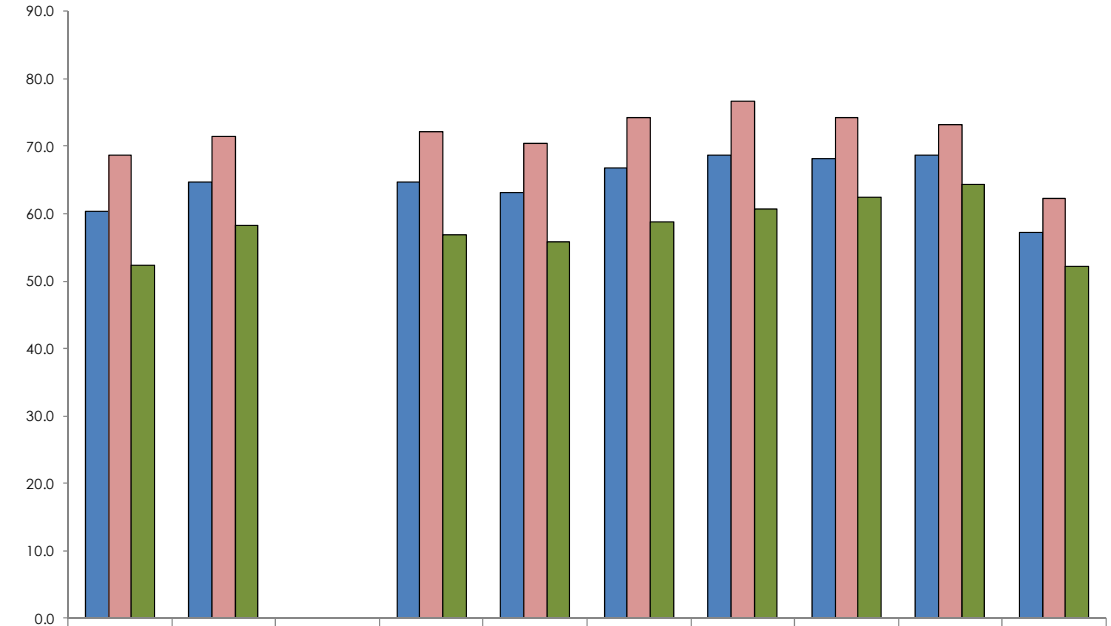
Considering first the employment rates in the NUTS 2 approximation of the CENTROPE, we see once more the substantially better performance of CENTROPE relative to the EU average. Even though by enlarging the level of analysis to the NUTS 2 level we tend to add Hungarian, Czech and Slovak NUTS 3 regions to the CENTROPE that have weaker labour markets than the CENTROPE parts of the regions (see country studies in chapter 6) the CENTROPE aggregate still shows a by 4.3 higher employment rate than in the EU average in 2010. For males the advantage over the EU 27 is 2.9 percentage points, for females it is 6.0 percentage points (Figure 2.2).

Furthermore, also all regions considered except for Western Slovakia – where however the fact that this region in addition to Trnava also includes Trencin and Nitra distorts results – have higher employment rates than the EU 27 average. The regions with the highest overall employment rate among the CENTROPE NUTS 2 regions are Bratislava and Lower Austria (68.6%), the lowest for both men and women outside Western Slovakia are found in West-Transdanubia (Nyugat-Dunatul: 55.8%). Among females employment rates are highest in Bratislava (64.4%) among males it is highest in Lower Austria.

This rather favourable situation with respect to the employment situation is also re-confirmed when looking at age and gender specific employment rates (table 2.4). In this we find that in the CENTROPE as an aggregate almost all groups of the population analyzed have higher employment rates than the EU 27 average, so that for most groups the employment situation is more favourable in this region than in the EU 27 average. The only exception to this is the employment rate of the 55 to 64 years old persons, which is lower in the aggregate of CENTROPE than in the EU 27 both for men and women. In

particular for older females the employment rate is lower than in the EU27 average in all of the regions (even the large cities) analyzed, while for men the low employment rate of the elder is mainly caused by low employment rates of older men in the Austrian CENTROPE and in Western Slovakia. Although some of these differences are caused by differences in pension law, this suggest that the low employment rates (of in particular women) are a common problem shared by almost all regions.

Figure 2.2: Employment rates of the population aged 15-64 years in CENTROPE and the NUTS 2-regions of CENTROPE (2010, in %)



	European Union (27 countries)	CENTROPE Total		Soth East	West Transdanubia	Burgenland	Lower Austria	Vienna	Bratislava region	Western Slovakia
Total	60.4	64.7		64.6	63.1	66.7	68.6	68.2	68.6	57.2
Male	68.6	71.5		72.2	70.4	74.3	76.6	74.3	73.1	62.3
Female	52.3	58.3		56.9	55.8	58.8	60.6	62.4	64.4	52.2

Source: EUROSTAT.

There are also some interesting differences among the regions and genders. For instance for males in the ages between 35 and 54 years even Western Slovakian employment rates are higher than the EU 27 average. This suggests that the low employment rates of this region are primarily due to problems in employing females and both young and older males. Similarly the higher than average employment rates of young people (aged between 15 and 24) are primarily due to high employment rates of this group in Austria (while in the EU 10-parts of CENTROPE the employment rate of both young males and

females is below the EU average throughout). This suggests that the dual education systems in Austria (see chapter 7 for a description of the Austrian education system) also provides for a rather smooth transition of youths into employment.

Table 2.4: Age and Gender specific Employment rates of the population aged 15-64 years in CENTROPE and the NUTS 2 regions of CENTROPE (2010, in %)

GEO/AGE	From 15 to 24 years	From 25 to 34 years	From 35 to 44 years	From 45 to 54 years	From 55 to 64 years
			Total		
EU 27	36.1	73.3	76.4	70.9	36.3
CENTROPE Total	38.5	77.8	85.4	79.9	29.8
South East	34.7	76.3	83.9	80.7	34.3
West Transdanubia	33.7	76.4	85.4	80.3	30.9
Burgenland	45.7	85.6	85.1	78.5	21.9
Lower Austria	50.5	84.3	86.8	80.5	29.2
Vienna	46.1	81.1	87.2	78.5	31.5
Bratislava region	34.8	79.8	88.9	87.2	43.2
Western Slovakia	29.6	71.6	78.9	75.2	20.5
			Females		
EU 27	33.0	64.4	67.2	61.6	27.3
CENTROPE Total	35.9	69.3	80.9	75.2	17.6
South East	32.4	62.1	83.6	81.1	20.0
West Transdanubia	29.7	62.8	81.0	79.1	18.0
Burgenland	44.0	78.7	77.9	66.2	12.3
Lower Austria	46.6	77.3	78.9	70.7	19.0
Vienna	41.9	77.5	82.6	74.5	18.9
Bratislava region	31.8	71.5	87.3	86.6	31.3
Western Slovakia	29.5	64.8	76.9	70.9	8.6
			Males		
EU 27	39.3	82.1	85.6	80.4	45.9
CENTROPE Total	41.1	86.2	89.8	84.6	43.6
Southeast	36.8	89.8	92.1	86.3	50.4
West Transdanubia	37.6	89.6	89.7	81.5	46.3
Burgenland	47.3	92.4	91.9	89.7	31.6
Lower Austria	54.5	91.3	94.4	90.0	39.6
Vienna	50.3	84.8	91.7	82.6	45.2
Bratislava region	37.8	88.4	90.6	87.9	57.8
Western Slovakia	29.8	78.2	80.9	79.7	34.6

Source: EUROSTAT.

2.2.2. Working times

Table 2.5: Share of part-time employment in CENTROPE and the NUTS 2-regions of CENTROPE by gender (2001-2010, in %)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Total									
EU 27	15.9	15.9	16.5	17.2	17.7	17.9	18.1	18.2	18.8	19.2
CENTROPE Total	3.6	3.6	9.3	10.0	10.5	10.9	11.3	11.6	12.6	12.8
Southeast	4.7	4.8	5.1	5.3	5.4	5.5	5.6	5.7	6.4	6.2
West Transdanubia	2.5	2.7	3.2	4.0	3.3	2.7	3.1	3.2	3.9	4.0
Burgenland	3.7	4.3	16.6	20.0	21.0	19.8	21.8	21.1	22.1	22.1
Lower Austria	3.9	4.5	18.4	19.0	19.7	21.0	21.9	22.9	23.5	24.2
Wien	4.2	4.2	16.5	18.4	20.9	21.5	22.0	23.1	24.8	24.6
Bratislava region	3.0	2.0	3.6	3.9	3.4	3.6	3.8	3.1	3.6	4.4
Western Slovakia	2.2	1.8	2.3	2.6	2.5	2.5	2.5	2.5	3.0	2.8
	Male									
EU 27	6.5	6.5	6.7	7.0	7.4	7.6	7.7	7.9	8.3	8.7
CENTROPE Total	1.4	1.5	3.3	3.6	4.0	4.2	4.5	4.8	5.5	5.8
Southeast	2.2	2.2	2.2	2.2	2.7	2.6	2.6	2.6	3.1	3.0
West Transdanubia	0.9	1.4	1.7	2.3	1.8	1.6	1.7	1.7	2.2	2.5
Burgenland	0.4	0.6	2.5	3.0	3.9	4.3	5.3	5.4	5.7	6.4
Lower Austria	0.8	1.2	4.0	4.9	5.4	5.6	6.6	7.1	7.2	8.3
Vienna	1.8	1.9	7.3	7.8	9.8	10.6	11.0	12.3	13.3	13.3
Bratislava region	1.4	1.7	2.4	2.4	1.5	1.7	2.1	1.9	2.6	2.6
Western Slovakia	1.2	1.0	1.3	1.5	1.4	1.3	1.0	1.2	2.0	1.8
	Female									
EU 27	28.1	28.0	29.0	30.0	30.6	30.8	31.1	31.0	31.4	31.9
CENTROPE Total	6.2	6.0	16.6	17.8	18.3	19.0	19.6	19.9	21.0	21.1
Southeast	8.0	8.1	8.9	9.3	9.0	9.4	9.6	9.9	10.7	10.3
West Transdanubia	4.6	4.4	5.1	6.1	5.0	4.2	4.9	5.1	5.9	5.8
Burgenland	8.1	9.2	34.9	41.6	43.1	39.4	42.4	40.3	41.8	41.3
Lower Austria	7.8	8.7	36.5	36.1	37.2	39.8	40.5	41.7	42.2	42.6
Vienna	7.0	6.7	26.7	30.5	33.2	33.8	34.6	35.2	37.3	37.0
Bratislava region	4.6	2.3	4.9	5.6	5.5	5.7	5.6	4.4	4.7	6.4
Western Slovakia	3.3	2.8	3.6	4.1	3.9	4.1	4.5	4.1	4.1	4.0

Source: EUROSTAT.

The high employment rates in CENTROPE are, however, in part also due to an increasing share of part time employment in the Austrian part of CENTROPE. This has an impact on both employment as well as unemployment rate statistics, since a larger share of part time employed – all else equal – implies lower average working hours per employed. Thus for a

given volume of working hours more people will be employed (and fewer unemployed) as the share of part time employment increases.

When looking at the CENTROPE in aggregate the share of part time employed is still below the European average, despite a substantial increase in the last decade. In total in 2010 around 12.8% of the employed (5.8% of the men, 21.1% of the women) in CENTROPE were working in part time employment, while in the EU 27 the respective percentage was 19.2% (8.7% for men and 31.9% for women). This suggests that with respect to part time employment CENTROPE is still lagging behind other regions of the EU 27.

Table 2.6: Sector Structure in CENTROPE and the NUTS 2 regions of CENTROPE (2009, in %)

	Austrian	Czech	Hungarian	Slovakia		CENTROPE	EU 27*
	CENTROPE						
Agriculture + Fishing	4.6	5.2	4.2	3.5		4.3	4.6
Manufacturing incl. Mining	13.7	30.9	31.9	26.7		22.7	17.5
Electricity, Gas and Water Supply	0.6	1.6	1.5	1.9		1.3	0.8
Construction	7.6	9.6	7.3	9.0		8.4	8.3
Trade	16.0	11.8	14.4	13.0		14.2	14.5
Hotels and Restaurants	5.4	3.1	5.3	4.4		4.7	4.4
Transport Storage and Communication	6.8	6.6	7.3	7.6		7.0	6.1
Financial Intermediation	4.3	1.7	1.6	2.8		3.1	3.1
Real Estate	12.0	7.3	5.1	7.7		9.1	10.3
Public Administration	7.5	6.4	5.1	7.3		7.0	7.2
Education	5.8	6.3	6.4	6.3		6.1	6.8
Health	9.3	6.1	5.5	5.8		7.2	10.2
Other Services	6.3	3.3	4.2	4.1		4.9	6.1

Source: ELFS-micro-data, WIFO-calculations. – * EU 27 – excluding Bulgaria Poland Sweden and Slovenia, data on individual CENTROPE regions not reported to avoid small case numbers and resulting missing data problems.

This is, however, only due to the low share of part time employment in the EU 10-parts of CENTROPE. In the NUTS 2 regions of Slovakia, the Czech Republic and Hungary the share of part-time employed ranged between 1.8% (Western Slovakia) and 3.0% (Czech Southeast) for men and 4.0% (Western Slovakia) and 10.3% (Czech Southeast) for women. In the Austrian part of CENTROPE, by contrast, the range was between 6.4%

(Burgenland) and 13.3% (Vienna) for men and between 37% (Vienna) and 42.6% (Lower Austria) for women and thus substantially exceeds the EU 27 average.

The labour market of the Austrian CENTROPE therefore has seen a dramatic increase in part time employment of women in the last decade, which is in sharp contrast to the developments in the other parts of CENTROPE, which in 2001 still had part time employment rates of about comparable magnitude to the Austrian levels. This implies that looking only at employment numbers (as done above) will draw a too optimistic picture of the development of the Austrian CENTROPE labour market relative to the other CENTROPE regions, since the number of hours worked have developed much less dynamically than employment has on account of a substantial reduction in average working times, due to increasing part time employment

2.2.3. Sector structure of employment

Some of these differences in part time employment can be explained in terms of sector employment structure of the regions of CENTROPE. According to data taken from the micro-use file of the ELFS from 2009 the CENTROPE in aggregate - on account of a high share of manufacturing employment in its' EU 10-parts – is much more strongly than the average region of the EU specialized on manufacturing and mining. 22.7% of the employed in CENTROPE as opposed to 17.5% of the employed in the EU 27 average are employed in the manufacturing and mining sector. In the Austrian CENTROPE this share is much smaller with 13.7%. Since manufacturing jobs are seldom part time jobs, this may contribute to explaining differences in part time employment among the different parts of CENTROPE.

Aside from a significant specialization in manufacturing the CENTROPE, however also has a slightly higher share of employment in transport, storage and communications (which is due to a higher share of employment in this sector in all parts of CENTROPE), above average employment in hotels and restaurants (primarily due to the Austrian and Hungarian parts of CENTROPE) and an above average share in construction (on account of high shares in the Slovak and Czech CENTROPE). All other sectors showed below average employment shares in 2009, with only the Austrian parts of CENTROPE showing an additional specialization on financial intermediation and real estate services on account of the high share of such employed in the city of Vienna.

2.3. Education Structure of the labour force and unemployment by education groups

2.3.1. Education Structure of the workforce

From the point of view of sector structure CENTROPE therefore – in particular in its EU 10-parts – is a strongly industrially oriented region. This is also reflected in the

Table 2.7: Education Structure in CENTROPE and the NUTS 2-regions of CENTROPE by gender (2010, in %)

	Pre-primary, primary and lower secondary education	Upper secondary and post-secondary non-tertiary education	First and second stage of tertiary education
	Total		
EU 27	23.7	48.6	27.7
CENTROPE Total	10.2	69.5	20.4
Southeast	5.1	76.6	18.4
West Transdanubia	13.1	69.6	17.2
Burgenland	16.5	67.9	15.5
Lower Austria	14.7	67.5	17.8
Vienna	16.6	55.9	27.5
Bratislava region	4.2	60.6	35.2
Western Slovakia	4.7	80.5	14.7
	Male		
EU 27	25.3	49.5	25.3
CENTROPE Total	8.7	71.4	19.9
Southeast	3.4	77.2	19.4
West Transdanubia	11.8	74.0	14.2
Burgenland	13.8	69.5	16.7
Lower Austria	12.4	67.4	20.2
Vienna	15.5	57.1	27.4
Bratislava region	4.5	62.8	32.7
Western Slovakia	3.9	83.8	12.3
	Female		
EU 27	21.7	47.6	30.6
CENTROPE Total	11.9	67.2	20.9
Southeast	7.2	75.7	17.0
West Transdanubia	14.7	64.4	20.9
Burgenland	19.9	66.0	14.1
Lower Austria	17.3	67.6	15.0
Vienna	17.9	54.6	27.5
Bratislava region	3.9	58.2	37.8
Western Slovakia	5.8	76.5	17.8

Source: EUROSTAT.

education structure of its workforce. In general CENTROPE is characterized by a highly qualified workforce that has its strongholds in the secondary and upper secondary education levels. In particular in the regions of the Czech Republic and Slovakia (with the exception of Bratislava region) more than 70% of the workforce has a completed secondary education. The share of population with a tertiary education is, however, below the European average in all regions but Bratislava region. In this region over a third of the workforce has completed tertiary education. The second region with a high share of tertiary educated workforce is Vienna, where over a quarter of the workforce has tertiary education. High shares of the workforce with only a completed primary education (of over 15%) by contrast can be found in Burgenland and in Vienna. In particular in the later region this high share of low skilled workers is due to a substantial immigration of low skilled workers from abroad. CENTROPE's relative comparative advantages in general are thus rooted in a strong orientation on medium skilled human capital segments which is also reflected in its strong industrial base.

2.3.2. Occupation structure of employment

One potential problem that could arise from looking at the structure of the formal education of the workforce is that in some instances (e.g. when they learn "on-the-job") persons may perform jobs, which actually require an education in excess of their formal educational attainment. For this reason the OECD (2007) developed a typology, which assigns a required skill level (according to the ISCED system) to occupations (according to ISCO). Thus for instance according to this typology legislators, senior officials and managers as well as professionals and technicians are considered to perform high skilled job that require at least a first stage tertiary education.

As can be seen from table 2.8 the picture of CENTROPE as a region that has its stronghold mainly in the medium qualified human capital segments is reinforced when considering the occupation structure of the employed.[5] However, the differences in terms of workers working in high skilled occupations between CENTROPE and the EU 27 are substantially lower than in terms of education level of the workforce. 38.1% of the

[5] Unfortunately data on employment by occupations can only be obtained from the ELFS micro-dataset, which at the time of writing this report was only available until 2009 and where serious limitations of the number of observations prevent us from presenting data for individual Austrian and Slovak CENTROPE NUTS 2-regions.

employed in CENTROPE (as opposed to 38.8% in the EU 27) work in occupations which are considered to require a tertiary education. Among this group – reflecting the strong manufacturing base of CENTROPE – technicians with 20.3% of all employed are the most important (and also more important than in the EU 27). This therefore suggests that the upper secondary and post-secondary, non-tertiary education sector in the CENTROPE region provides a form of education that enables workers to perform tasks that are usually performed by tertiary educated persons in other EU regions.

Table 2.8: Occupation Structure in CENTROPE and the NUTS 2-regions of CENTROPE by skill level of occupation (2009, in %)

	Austrian	Czech	Hungarian	Slovak		CENTROPE	EU 27
	CENTROPE						
High skilled occupations	39.8	40.4	27.2	37.9		38.1	38.8
--Legislators, Senior officials & managers	7.2	5.5	5.3	6.4		6.5	8.4
--Professionals	11.8	11.6	10.0	10.8		11.3	13.9
--Technicians	20.8	23.3	11.9	20.7		20.3	16.5
Mediums skilled occupations	50.0	54.3	65.4	54.1		53.6	51.3
--Clerks	15.2	7.1	8.7	7.2		10.6	10.7
--Service & Sales Workers	13.9	10.5	15.5	13.3		13.3	13.9
--Skilled Agricultural Workers	4.4	1.9	2.7	0.9		2.7	4.3
--Craft and Related Trade workers	11.4	20.1	20.5	16.5		15.5	14.0
--Plant and Machine Operators	5.1	14.6	18.0	16.1		11.5	8.5
Low skilled occupations	10.1	5.3	7.4	8.1		8.3	9.8
--Elementary Occupations	10.1	5.3	7.4	8.1		8.3	9.8

Source: EUROSTAT. – Base: Employed Excluding armed forces.

Table 2.9: Education Structure in CENTROPE and the NUTS 2-regions of CENTROPE by gender (2010, in %)

	Pre-primary, primary and lower secondary education	Upper secondary and post-secondary non-tertiary education	First and second stage of tertiary education
	Total		
EU 27	15.8	9.0	5.4
CENTROPE Total	15.3	8.0	3.4
Southeast	22.8	7.6	2.9
West Transdanubia	21.7	7.8	5.2
Burgenland	6.8	3.5	1.8
Lower Austria	7.0	3.5	1.5
Vienna	13.4	7.3	3.7
Bratislava region	15.9	6.8	3.9
Western Slovakia	32.2	13.1	4.1
	Male		
EU 27	15.9	8.8	5.1
CENTROPE Total	16.8	7.9	3.8
Southeast	28.0	7.1	3.0
West Transdanubia	25.2	7.9	7.3
Burgenland	7.5	3.3	1.5
Lower Austria	8.1	3.7	1.5
Vienna	15.9	8.1	3.9
Bratislava region	19.8	7.6	4.4
Western Slovakia	26.6	11.9	5.5
	Female		
EU 27	15.7	9.3	5.7
CENTROPE Total	14.0	8.2	3.0
Southeast	19.7	8.2	2.7
West Transdanubia	18.4	7.7	3.5
Burgenland	6.3	3.8	2.2
Lower Austria	6.0	3.2	1.4
Vienna	11.0	6.4	3.5
Bratislava region	10.9	5.9	3.4
Western Slovakia	36.8	14.8	2.9

Source: EUROSTAT.

In addition – although the data use a NUTS 2 level definition of CENTROPE, which means that the role of Brno as a centre of high skilled employment is severely underrepresented – from a regional perspective the share of workers working in high skilled occupations is highest (with 40.4% of all employed) in the Czech part of CENTROPE. This thus indicates

the substantial employment in this sector in Brno. The only other part of CENTROPE with shares of employment in highly skilled occupations in excess of the EU average is the Austrian CENTROPE where 39.8% of the workers are employed in high skilled occupations, in particular in Austria a large share of workers studying in upper secondary vocational schools (BHS) work as technicians, so that here distortions from the school system play a particularly large role (see country study in chapter 7)

This lower share of workers working in high skilled occupations in CENTROPE relative to the EU 27 is countered by an above average share of medium skilled workers. In CENTROPE 53.6% (as opposed to 51.3% in the EU 27) of the workers work in such occupations. Again reflecting the industrial structure of employment in the region many of these workers (in particular in the EU 10-parts of CENTROPE) are employed as crafts and related trade workers or as machine operators, while service occupations are often underrepresented. By contrast, in the Austrian CENTROPE medium skilled workers are slightly underrepresented and clerks are more important in the occupation structure of the employed than in the EU, while craft and related workers as well as plant and machine operators are less important.

Finally, less skilled occupations are of a lesser importance in the aggregate employment structure of the CENTROPE region as well as in all of the EU 10 parts of CENTROPE, while in the Austrian part of CENTROPE they are slightly more important than in the EU 27 total.

2.3.3. Unemployment by education level

Aside from differences in education systems among countries, which are described in more detail in the country studies on education in chapter 7 of this study, another potential explanation for the noticeable difference in the formal education structure of the workforce in CENTROPE and the more highly skilled use of these workers when employed, are differences in the unemployment rates of workers of different skill groups. In particular low skilled workers are facing substantial difficulties in finding employment both in CENTROPE and the EU 27 in general. According to EUROSTAT the unemployment rate among persons with at most a completed primary education was 15.3% in CENTROPE (and 15.8% in the EU 27) average in 2010. By contrast the unemployment rate among the tertiary educated was 3.4% in the CENTROPE (and 5.4% in the EU 27) average (see table 2.9).

This suggests that the skill gradient in unemployment (i.e. the difference in unemployment rate between the highly and lowly skilled) is somewhat steeper in CENTROPE (11.9 percentage points) than in the EU 27 average (10.4 percentage points) and implies that while the high skilled labour markets in most regions of the CENTROPE were already working almost at full employment levels in 2010 and according to some anecdotal evidence showed signs of shortage in some regions, low skilled unemployment rates remained very high indeed. In consequence there is a substantial mismatch of the skills asked for by employers in the labour market and the skills provided by employees. Therefore retraining low skilled unemployed to increase the supply of high or at last medium skilled unemployed and reducing skill shortages in the high skilled segments of the labour market are an important common problem shared by all CENTROPE regions.

This problem seems to be even larger in the EU 10-part of CENTROPE, where the skill gradient in unemployment rates can reach or even exceed the 20 percentage point mark (in the Czech Southeast) and exceeds 10 percentage points everywhere, than in the Austrian parts, where this skill gradient ranges between 9.7 and 5.0 percentage points.

2.4. Mismatch and Cross-border Mobility

2.4.1. Vacancies

This therefore suggests substantial skill mismatch in the CENTROPE labour markets. Job vacancy data, which in conjunction with unemployment data can provide valuable information on the level of open positions relative to unemployment (i.e. labour market tightness) and thus mismatch in the region is, however, published only annually at the NUTS 2-level. Furthermore this data misses information from the Austrian regions, because Austria is not participating in the optional survey. Nonetheless, the available data suggest substantial long-run differences in labour market tightness between CENTROPE-regions' unemployment-vacancy ratios, with this being particularly low in Bratislava (with 3.1 unemployed per vacancy in 2010) and quite high in Western Slovakia (with 41.9 unemployed per vacancy). Such large differences at short distances suggest a substantial regional problem of mismatch between open positions and unemployed in the CENTROPE. We will return to this problem later (in the next chapter), where will consider mismatch of some selected occupational groups.

Table 2.10: Job vacancies in CENTROPE-regions

	2008	2009	2010	2008	2009	2010
	Number of vacancies			Unemployment vacancy ratios		
Austria	–	–	–	–	–	–
Czech Republic	139,701	48,883	33,964	1.6	7.2	11.3
South East	19,824	5,865	4,274	1.7	9.1	14.5
Hungary	–	27,689	33,053	N/A	15.2	14.4
West Transdanubia	–	1,570	1,988	N/A	24.6	20.6
Slovakia	24,798	17,310	13,424	10.3	18.7	29.0
Bratislava Region	12,701	8,515	6,776	0.9	1.9	3.1
Western Slovakia	6,171	3,956	2,898	9.9	23.8	41.9

Source: EUROSTAT, – = not available.

Furthermore, according to this data there was an obvious break in the unemployment vacancy ration between 2008 and 2009 evidently associated with the economic crisis. Yet the increase in labour market tightness did not stop in 2010 so that the questions arise what factors have contributed to the unequal spatial distribution of labour market tightness and which factors have prevented a reduction in labour market tightness since the crisis.

2.4.2. Mobility

One potential explanation for the large and persistent differences in unemployment vacancy ratios among regions is low cross-border and internal mobility in CENTROPE. In this respect the limited data available from EUROSTAT sources on cross-border and internal commuting suggest that the CENTROPE is a region where both internal (within country) and cross-border commuting rates (as a percentage of the employed at place of residence) are rather high in comparison to other EU 27 regions. In total 10.3% of the employed in the CENTROPE (or 416.5 thousand people) work in another NUTS 2 region (in the same country) and a further 1.8% of the employed at place of residence (or 71.1 thousand people) commute across country borders. By comparison, among all NUTS 2 regions of the EU 27 these percentages are 6.6% and 0.7% respectively. Furthermore the evidence also suggests that the extent of cross-border commuting has increased (by 0.3 percentage points of the employed or around 34.000 people) since enlargement in CENTROPE, as has internal commuting (by 1.3 percentage points or 75.000 persons).

Table 2.11: Cross-border and within country out commuters in the NUSTS 2-regions of CENTROPE 2003-2010 (in thousands)

	2003	2004	2005	2006	2007	2008	2009	2010
	To foreign country							
EU 27	900.6	978.8	1,118.3	1,229.8	1,416.8	1,469.4	1,451.6	1,559.5
CENTROPE Total	36.9	48.3	58.8	66.5	85.4	78.5	71.0	71.1
Southeast	2.7	3.5	4.2	4.4	4.6	3.7	4.0	4.7
West Transdanubia	6.4	7.5	6.9	8.4	9.1	10.4	13.3	14.6
Burgenland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Austria	2.6	3.7	0.0	0.0	3.1	0.0	0.0	0.0
Vienna	4.2	0.0	3.8	0.0	6.1	6.6	6.8	4.7
Bratislava region	2.2	3.1	4.6	5.2	5.1	4.5	3.9	2.9
Western Slovakia	18.8	30.5	39.3	48.5	57.4	53.3	43.0	44.2
	To another region of the same country							
EU 27	11,563.9	11,582.1	12,946.0	13,541.9	13,858.8	13,957.5	14,040.4	14,400.4
CENTROPE Total	340.2	386.6	383.4	381.8	388.3	407.2	388.9	416.5
Southeast	20.6	19.9	22.6	22.7	22.0	19.5	20.2	22.9
West Transdanubia	7.7	8.5	9.5	6.6	8.0	9.5	10.2	13.0
Burgenland	43.7	43.1	41.9	43.4	43.7	43.4	43.4	45.4
Lower Austria	166.4	197.9	192.5	192.9	198.3	215.3	207.9	211.5
Vienna	45.0	61.2	57.9	59.6	57.8	57.3	53.9	61.2
Bratislava region	3.6	3.4	4.3	4.7	3.8	5.4	4.9	4.6
Western Slovakia	53.2	52.6	54.7	51.9	54.7	56.8	48.4	57.9

Source: EUROSTAT.

These high rates of commuting in CENTROPE are, however, strongly shaped by the region's geography as well as historic and institutional ties. For instance the high share of internal commuting is due primarily to Vienna's role as a major basin of attraction for commuters in Austria, which causes Lower Austria and Burgenland (where a substantial part of commuting is also to Graz) to have very high out-commuting rates of about one quarter to one third of the employed at the place of residence. By contrast, internal commuting rates in the EU 10-parts of CENTROPE are substantially lower and exceed the 5% mark only in Western Slovakia on account of commuting to Bratislava region.

Similarly cross-border commuting rates tend to be rather high in the Slovak and Hungarian CENTROPE. In the Slovak CENTROPE, this is primarily due to high out-commuting to the Czech Republic – with which Slovakia formed a country until recently - from Western Slovakia, and in Hungary due to the existence of minorities on both sides of the Slovak-Hungarian border. In addition, special institutional arrangements between Austria and

Hungary (the so called Grenzgängerabkommen) enhance cross-border commuting to Austria.[6]

Table 2.12: Cross-border and within country out commuters in the NUTS 2-regions of CENTROPE 2003-2010 (in % of employed at place of residence)

	2003	2004	2005	2006	2007	2008	2009	2010
	Foreign country							
EU 27	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7
CENTROPE Total	1.0	1.3	1.5	1.7	2.1	1.9	1.7	1.8
Southeast	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.6
West Transdanubia	1.5	1.8	1.6	2.0	2.1	2.4	3.3	3.6
Burgenland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Austria	0.4	0.5	0.0	0.0	0.4	0.0	0.0	0.0
Vienna	0.6	0.0	0.5	0.0	0.8	0.8	0.9	0.6
Bratislava region	0.7	1.0	1.5	1.6	1.6	1.4	1.2	0.9
Western Slovakia	2.4	3.8	4.8	5.8	6.7	6.0	5.0	5.3
	In another region							
EU 27	5.6	5.6	6.1	6.3	6.3	6.3	6.4	6.6
CENTROPE Total	8.9	10.1	9.9	9.6	9.5	9.8	9.6	10.3
Southeast	2.8	2.7	3.0	3.0	2.8	2.5	2.6	3.0
West Transdanubia	1.8	2.0	2.2	1.5	1.8	2.2	2.5	3.2
Burgenland	34.4	35.0	33.4	33.8	32.5	31.9	32.3	33.6
Lower Austria	23.0	27.4	26.4	25.7	25.6	27.3	26.9	27.2
Vienna	6.1	8.6	8.0	7.9	7.5	7.3	6.8	7.7
Bratislava region	1.2	1.1	1.4	1.5	1.2	1.6	1.5	1.4
Western Slovakia	6.9	6.6	6.7	6.2	6.3	6.4	5.7	6.9

Source: EUROSTAT.

With the 1st of May 2011, however, the institutional regime affecting cross-border mobility within CENTROPE changed dramatically, as the derogation periods for the freedom of movement of labour in Austria ended: Thus from this time on citizens of the 10 EU-

[6] In general, however, it should be noted that the extent of cross-border commuting to Austria from other CENTROPE countries is rather low relative to its extent among the new member state regions on account of the remaining restrictions on cross-border labour mobility in Austria (see also: Römisch et al. 2011).

countries[7] that joined the EU on 1st May 2004 (EU 10-countries), who previously needed a work permit to legally work in Austria could assume work without any further legal requirements. Both the Austrian Ministry of Labour, Social Affairs and Consumer Protection (BMASK) as well as most experts expected that this liberalization would result in additional labour supply from the 8 countries affected by the liberalization of about 25.000 persons in 2011.

Table 2.13: Estimates of increase in stock of foreign employees from the EU 10-countries to Austria in time period from May 2011 to December 2011

	December 2011		January 2012	
	Absolute	In % of employees	Absolute	In % of employees
Total Change in Austria	21,736	0.6	23,787	0.7
Of this				
Male	13,518	0.8	15,115	0.9
Female	8,219	0.5	8,673	0.5
Migrant	12,385	0.4	12,816	0.4
Commuter	9,352	0.3	10,365	0.3
to Burgenland	1,816	2.0	1,558	1.7
to Lower Austria	4,445	0.8	4,755	0.9
to Vienna	6,362	0.8	7,236	0.9
from Czech Republic	1,439	0.0	1,481	0.0
from Slovakia	4,219	0.1	4,545	0.1
form Hungary	9,906	0.3	10,561	0.3

Q: AMS-Erwerbskarrierenmonitoring, WIFO-calculations.

While clearly it is still too early to fully analyze the extent and the structure of additional cross-border mobility induced by this liberalization, first results available from the labour market monitoring system of the PES and BMASK (see table 2.13) suggests that the stock of foreign employees from the countries affected and working in Austria had increased by around 24.000 employees (or until 0.7% of total employees) relative to 1st of May 2012 by January 2012 and by 31.500 or 0.9 of all employees relative to January 2011. Thus by and large migration developed as expected in the pre liberalization period.

[7] Note that derogation periods did not apply to Malta and Cyprus in Austria, so that in fact liberalization applied only to 8 of these 10 countries (Czech Republic, Hungary, Slovakia, Slovenia, Poland and the three Baltic countries).

Of these new employees approximately 10.500 were commuters and more than half of all commuters and migrants (13.500) settled in the Austrian CENTROPE, with in particular the Burgenland experiencing a large inflow of 1.7% of its employees in this time period. In addition also a large part of the new foreign workers from the neighboring countries in Austria (around 10.500) were of Hungarian nationality.

2.5. Conclusions

A first „birds-eye“ look at the situation of the labour market in CENTROPE therefore reconfirms many of the findings of previous studies. In particular, CENTROPE is a region that outperforms the EU 27 average in terms of most macro-economic labour market indicators: Unemployment rates have been consistently lower in this region than in other parts of the EU 27 in the last decade and employment growth has been higher as have employment rates. In addition these facts apply to almost all regions of the CENTROPE both in the times before and after the crises.

Despite this overall rather favourable development, this chapter, however, also uncovers a number of new stylized facts and some common challenges in labour market policy. In particular we find that:

1. One common problem shared by almost all of the regions of CENTROPE is the low employment rates of the elder (i.e. persons in the age of 55 to 64 years). While employment rates are higher (by between 2 to 9 percentage points) than in the EU 27 average in the CENTROPE average for all age and gender groups, they are consistently lower (by 6.5 percentage points in average) for the elder. Furthermore this applies to all regions and both genders (although it is more pronounced with females). From a policy perspective this implies that joint cross-border initiatives in the area of active labour market policy and training to increase the employment chances of the elder may be an area for co-operation in cross-border labour market policy
2. the CENTROPE’s relative comparative advantages in general are rooted in a strong orientation on medium skilled human capital segments which is also reflected in its strong industrial base. Almost 70% of the economically in the active in the region (as opposed to 48.6% in the EU-average) have an intermediary (ISCED 3 or 4) education. Although this difference to the EU diminishes somewhat when considering employment by skills required for occupations – which reflects positively on CENTROPE’s education system, since it implies that it provides its students with skills that can also

be used in higher occupations – the general picture does not change. From a policy perspective this therefore implies that guaranteeing and improving the employability of this intermediary educated workforce will be an important condition for continued labour market success in the region, and that therefore aside from cross-border programs focusing on the mobility of the high skilled, similar programs for intermediary education levels are and will be of particular relevance for CENTROPE for some time.

3. Despite low unemployment rates in aggregate, the unemployment rates of the low skilled in CENTROPE are very high (reaching to over 15%) and in particular in the EU 10-parts of CENTROPE skill gradients in unemployment rates are higher than in the EU 27 average. This implies that unemployment problems are disproportionately strongly concentrated among low skilled in CENTROPE. Policies directed at retraining and qualifying the low skilled as well as focusing on life-long learning strategies among these groups are therefore of high importance, when it comes to combating unemployment in the region. Again some of these strategies could be developed in a cross-border context.
4. Preliminary evidence suggests both skill and regional mismatch contribute substantially to unemployment in the region. In particular the regional mismatch component to unemployment is a sign of lacking (cross-border) mobility, which could be combated by programs to increase cross-border mobility.

3. Cross-border effects: analysis of labour market in CENTROPE based on Labour Market Monitoring Tool

Author: Luděk Kouba

3.1. Introduction

One of the results of a labour market analysis based on official EUROSTAT data is therefore, that the cross-border labour market of CENTROPE seems to be plagued by substantial mismatch unemployment. Unfortunately with official data alone it is impossible to further analyze or even quantify this mismatch component. In extension to the previous analysis of the labour market in CENTROPE, this chapter therefore uses data from a new new instrument called the "Labour market monitoring tool in CENTROPE", developed as a joint project of the RDR team at Mendel University, Brno and the CENTROPE Office of the Czech Republic[8], which allows us to focus in more detail on potential spatial mismatch of unemployment in the CENTROPE region.

In particular since in the course of the Regional Development Report project it was noticed that a detailed analysis of the workings of the cross-border labour markets in CENTROPE is a keystone of the pilot project, but that, as described above, regional labour market statistics suffer from serious problems, the project team decided to - in addition of analysing Eurostat and national statistics – also develop a specific tool that enables us to monitor both the labour market situation as well as the changes in this situation in CENTROPE – at least for some selected professional groups - from a cross-border perspective. The aim therefore was to set up a unique and up-to-date dataset that monitors vacancies and unemployed at NUTS 3 level in CENTROPE.

For pragmatic reasons and also on account of limited financial and time resources of the project team it was decided to focus in detail on ten exemplary occupational groups in the labour market. The main criterion for selecting groups was their relevance to the labour market in CENTROPE and the fact that we wanted to in particular generate information on medium skilled workers with a vocational training, which according to the analysis presented in the last part also represent the vast majority of the labour force in

[8] We thank the representatives CENTROPE Office Czech Republic Sylva Talpová and Miroslav Pala for providing us with that data.

CENTROPE. A second criterion was that the chosen occupations should be occupations which were considered to be in short supply in some of the regions of CENTROPE in previous times. According to these criteria the chosen occupations therefore were: cooks, waiters, butchers, social workers, CNC operators, welders, bricklayers, IT specialists, (bus, truck) drivers and logistics workers. [9]

At the time of writing this text, we have complete data for 7 quarters (from the first quarter of 2010 to the 4th quarter 2011 with the exceptions of the 4th quarter of the in the Czech Republic (which was not available to the authors at the time of writing the report) and the first and second quarter of 2010 for the Hungarian CENTROPE (on account of methodological change in collecting data in Hungary at that time).

Among the many potential analyses that could be conducted with the data the aims of this chapter is threefold. First we want to present a descriptive analysis of the situation on the CENTROPE's labour markets based on the data from the labour market monitoring tool, second we want to assess what impact spatial mismatch of unemployed has in CENTROPE, and therefore calculate various versions of the mismatch index which allow us to assess what proportion of unemployment in our selected occupations could be avoided if the unemployed were perfectly mobile across CENTROPE regions. Finally, since the establishment of the freedom of movement of labour movement across national borders in CENTROPE, which occurred on 1 May 2011 falls into our observation period, and since this institutional change was intensively debated prior to liberalisation, we analyze whether regional mismatch unemployment and the relationship between vacancies and unemployed has changed since the 2nd quarter of 2011 across the CENTROPE regions and thus address the question whether whether the granting of freedom of movement of labour has had visible effects on CENTROPE labour markets.

Clearly there are also quite a few limitations to our analysis. These stem primarily from the fact that out of a large number of possible occupations relevant, we can only focus on ten. This clearly implies that we cannot without serious problems extrapolate our findings to the

[9] First results based on this data were presented at the thematic labour market workshop "Monitoring for Better Managing the Shared Labour Market" in October 2011 that was held by the CENTROPE Office Czech Republic under attendance of the representatives of the Labour offices of CENTROPE. A further set of results was presented in March 2012 at the CENTROPE workshop held at Mendel University Brno.

complete CENTROPE labour market. Nonetheless, given that such an analysis has to the best of our knowledge never been conducted for CENTROPE – or indeed any other cross-border region – before, we think that our exemplary analysis of ten occupations can provide important insights on the role of mismatch in cross-border labour markets and can also be used to assess the kinds of additional insights that could be gained if the labour market monitoring tool were extended to other occupations and over a longer time period in the future.

A second limitation are the short time period for which the data are currently available. This is particularly noticeable when it comes to analysing the potential impact of freedom of movement of labour on labour markets, since it prevents us from being able to use more formal, econometric techniques to analyse this question. Our aim with respect to this analysis is therefore to focus on noticeable changes in mismatch and unemployment vacancy relationships in the period since the granting of the freedom of movement of labour only.

The analysis is structured in four sections. The next section provides a basic look at the development of unemployed and vacancies in CENTROPE based on our dataset and also focuses on unemployed/vacancies ratios, which are often considered a key indicator of labour market tightness in many analyses, in CENTROPE. The next section offers alternative measures of to how to measure the potential contribution of regional labour mobility to the reduction of unemployment in CENTROPE. Section 4 by contrast deals with consequences of the labour market liberalization after 1 May 2011, by exploring whether Unemployment vacancy ratios have shown a clear sign of structurl break since the second quarter of 2011. Finally section five concludes.

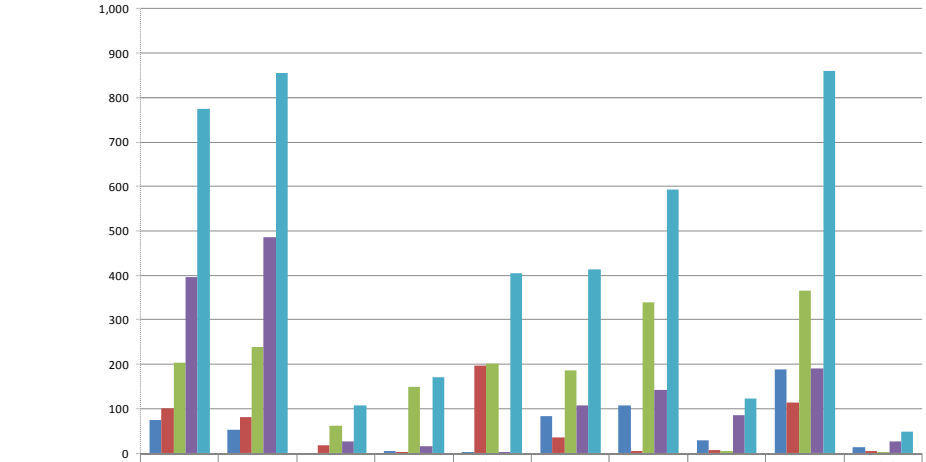
3.2. A look at unemployed and vacancies in CENTROPE

3.2.1. Unemployment and vacancies

The structure of our data allows an analysis of the CENTROPE's labour market in the mentioned ten occupation along three dimensions – across occupations, regions and time. As a starting pint therefore figure 3.1 provides a basic look at the number of unemployed and the number vacancies across 8 CENTROPE regions in the third quarter of 2011 – which is the most recent available observation for which data is available for all

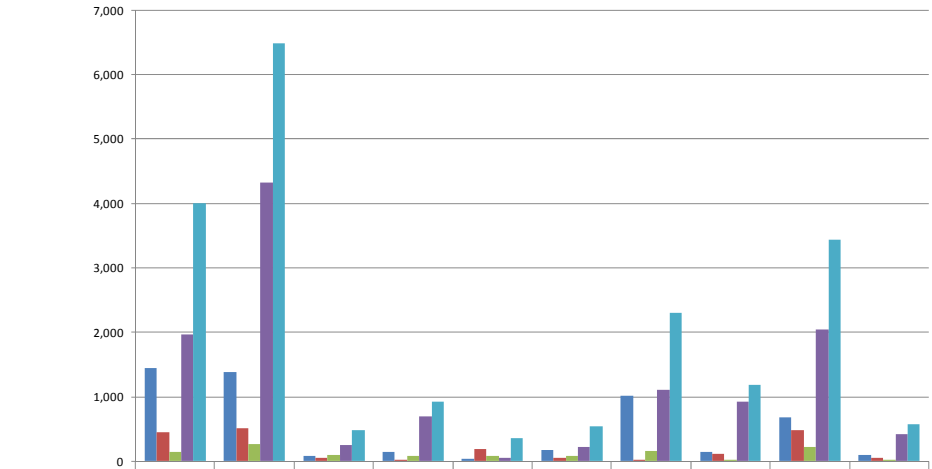
Figure 3.1: Unemployed and vacancies across regions in the 3rd quarter of 2011

Vacancies



	Cook	Waiter	Butcher	Social Worker	CNC Operator	Welder	Bricklayer	IT Specialist	Driver	Logistics Worker
Czech CENTOPE	75	52	0	5	3	84	107	28	188	14
Slovak CENTROPE	100	81	18	1	197	36	4	6	114	5
Hungarian CENTROPE	203	238	62	148	202	186	339	4	366	3
Austrian CENTROPE	397	485	27	16	2	107	142	85	191	26
TOTAL	775	856	107	170	404	413	592	123	859	48

Unemployed



	Cook	Waiter	Butcher	Social Worker	CNC Operator	Welder	Bricklayer	IT Specialist	Driver	Logistics Worker
Czech CENTOPE	1,453	1,388	80	137	32	182	1,022	137	684	93
Slovak CENTROPE	444	507	46	11	187	59	16	109	475	53
Hungarian CENTROPE	143	263	98	89	85	81	155	15	226	10
Austrian CENTROPE	1,961	4,329	250	689	50	225	1,105	925	2,050	423
TOTAL	4,001	6,487	474	926	354	547	2,298	1,186	3,435	579

Source: CENTROPE Office Czech Republic.

regions. As can be seen from this figure both absolute unemployment as well as vacancy numbers vary substantially across both occupations and regions in CENTROPE. These differences reflect differences macro-economic conditions (in the labour market situation) and differences in the size of regions on the one hand such that in general larger regions such as the Austrian CENTROPE in general have a larger number of vacancies and unemployed in most occupations and regions with higher unemployment rates (e.g. the Hungarian CENTROPE) all else equal tend also have higher unemployment numbers and a lower number of vacancies than other regions.

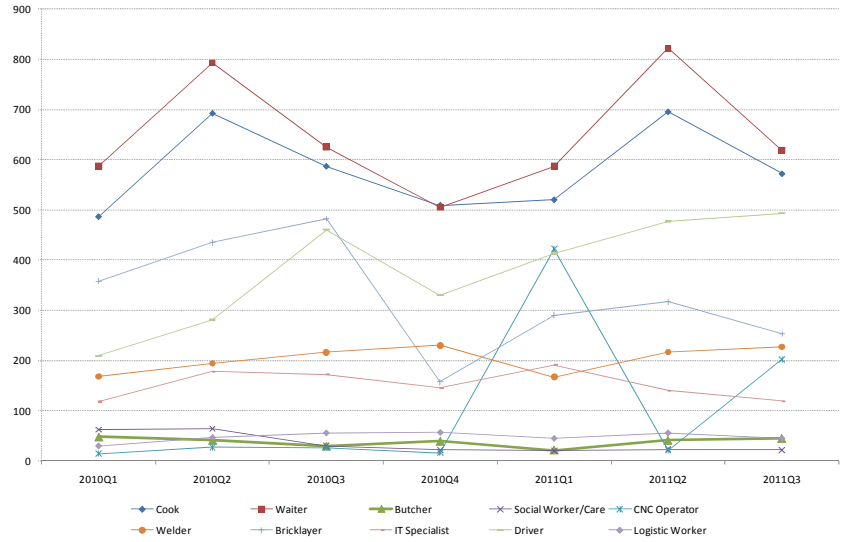
These differences are, however, almost completely swamped in a detailed analysis such as that of figure 3.1 by factors that are obviously specific to both occupation groups and regions and which obviously reflect the structure of regional economies and the structure of labour markets. Thus for instance judging from our data on vacancies waiters and cooks were in high demand in the Austrian CENTROPE in the 3rd quarter of 2011, while in the Hungarian CENTROPE CNC operators welders, bricklayers and drivers were in higher demand than waiters and cooks. In the Slovak CENTROPE CNC operators were particularly looked for and in the Czech CENTROPE welders, bricklayers and IT specialists were professions in high demmand. Similarly also in the 3rd quarter of 2011 unemployment seemed to have been high among cooks and waiters in the Czech and Austrian CENTROPE, while in the Slovak and Hungarian CENTROPE there were also many drivers unemployed. Thus a fact that emerges from our data is that aside from macro-economic influences specific labour markets of certain regions by professions are also influenced by many idiosyncratic factors specific to these regions and occupations. Thus while a macro-economic analysis can give some guidance on general tendencies in the labour market, such an analysis may not be particular revealing for regional labour market actors such as the PES involved in the business of matching unemployed to vacancies.

A second fact that emerges from this data is that in some regions and occupations (e.g. cooks and waiters in Austria in the Czech Republic, drivers in Hungary), a large number of unemployed and vacancies coexist at the same time. This may be indication of mismatch unemployment even within a region and occupation. Such a situation can easily arise if a large set of firms fire workers of a certain occupation, while another (large) set of firms in the same region search for workers of the same occupation in the same region. Therefore

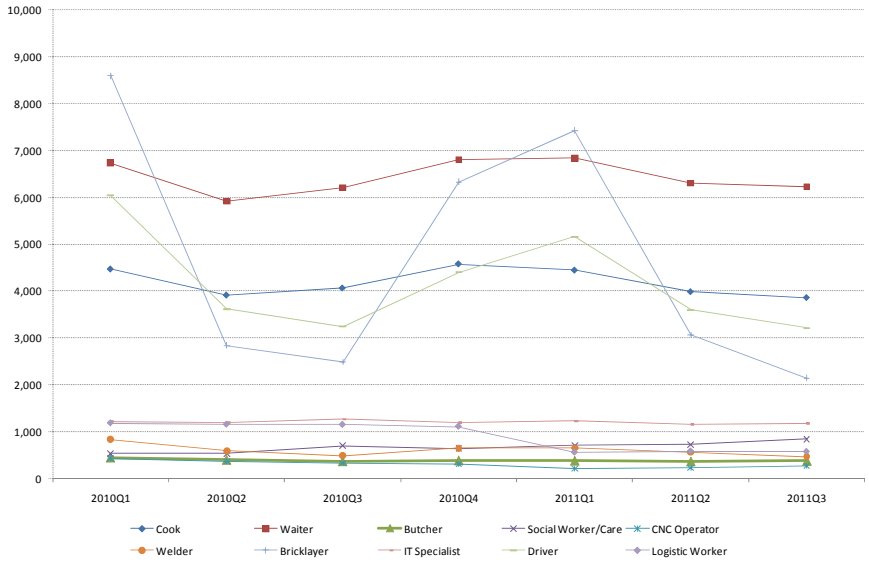
even at the very detailed regional-occupational aggregation we are working at in this chapter we may still be observing some mismatch unemployment.

Figure 3.2: Unemployed and vacancies in CENTROPE by quarter and occupation

Vacancies



Unemployed



Source: CENTROPE Office Czech Republic

A third factor that becomes visible when observing the number of unemployed and vacancies by occupation in the CENTROPE aggregate over time (figure 3.2) is the high and rather heterogeneous seasonality of both unemployment and vacancies in different occupations.[10] Thus for instance – for obvious reasons - there is a very distinct seasonal pattern of both vacancies and unemployment for waiters, cooks and bricklayers, while for IT-specialists this a seasonal pattern is almost absent.

3.2.2. Unemployed/vacancies ratio in CENTROPE

Clearly therefore the richness of our data would in principle allows us to make a number of very detailed studies exploring the unemployment-vacancy relationships over time for individual professional groups and individual regions. But even with our rather restrictive set of only 10 occupations for 8 regions, this would in all likelihood make a rather lengthy report, in which readers might lose sight of the central stylized facts due to the substantial detailed information provided and is also well beyond the scope of the current project.

Table 3.1: Average ratio U/V across occupations and regions

	South Moravia	Bratislava region	Trnava region	Győr-Moson-Sopron	Vas	Lower Austria	Burgen-land	Vienna	CENTROPE Average
Cook	25.75	2.27	9.05	1.01	1.90	5.83	3.46	5.47	6.92
Waiter	23.74	3.18	9.45	2.30	3.75	7.16	4.91	13.43	8.61
Butcher	16.88	1.54	5.55	2.62	1.23	7.18	4.05	45.48	10.95
Social Worker/Care	18.15	1.50	1.29	4.00	3.34	17.76	16.13	47.83	14.33
CNC Operator	21.88	4.68	4.24	0.98	1.25	0.63	0.00	12.96	6.57
Welder	3.07	3.92	16.17	0.40	0.94	2.16	4.14	9.90	5.48
Bricklayer	24.45	1.18	2.93	1.30	3.22	18.96	32.95	19.45	14.02
IT Specialist	3.67	11.40	10.38	3.33	1.14	21.68	14.47	9.80	10.16
Driver	11.15	2.42	15.14	0.82	4.99	16.37	15.86	22.27	12.38
Logistics Worker	8.10	42.38	45.14	1.94	4.51	16.22	10.38	15.47	18.42

Source: CENTROPE Office Czech Republic, own calculations.

Thus rather than analyzing the rough data on regional unemployment and vacancies for each occupation group, we focus on the ratio of unemployment to vacancies. This is often

[10] Note that in figure 3.2 we focus only on CENTROPE regions for which data is available for the time period from the first quarter 2010 to the third quarter of 2011 and thus exclude all Hungarian regions.

considered to belong to the key indicators of labour market statistics, since it is a measure of labour market tightness that reflects the excess supply (unemployed) relative to excess demand (vacancies) in a particular labour market. Table 3.1, shows the average unemployment/vacancy ratio over all quarters in 2010 and 2011 by professions and regions of CENTROPE.

Augmenting the analysis of CENTROPE labour market based on EUROSTAT data in the last chapter, therefore, these data confirm the trends that were described at NUTS 2 level in chapter 2. In that chapter it was shown that in 2010, the unemployment/vacancy ratios varied from 3.1 unemployed per vacancy in Bratislava to 41.9 vacancies per unemployed in Western Slovakia in CENTROPE.[11] In spite of the different level of aggregation, our NUTS 3 data regarding South Moravia are in accordance with the NUTS 2 data regarding the Czech Southeast. Also the ratios concerning Austrian regions confirm the general development at NUTS 2 level: a worse labour market situation in Vienna and considerable disparities among the occupations, in particular, in Burgenland. More important differences between the Eurostat data and our dataset are, however, visible in the case of Hungary where the unemployment – vacancy ratios based on our dataset are relatively low in comparison to the NUTS 2 level data presented in chapter 2. The possible reasons for this are the territorial differences between NUTS 2 and NUTS 3 regions, a potential difference arising from the fact that among in our data only a few selected occupations are considered and also possible methodological differences, in particular in collecting vacancy data.

The table, however, also shows a large heterogeneity with regard to the distribution unemployment vacancy relationships for individual professions in CENTROPE. Thus for instance – even ignoring Hungarian data - the unemployment-vacancy ratios for Logistics workers vary between 8.1 unemployed per vacancy in South Moravia and 45.1 unemployed per vacancy in average in Trnava. Similarly for social workers unemployment vacancy ratios vary between 1.3 in Tranava and 47.8 in Vienna and the differences between the regions with the highest and the lowest unemployment-vacancy ratio is larger than 14 unemployed per vacancy (for welders) in all occupational groups. Such large

[11] In the analysis of chapter 2 the problem was that only part of the NUTS 2 region of Western Slovakia, (Trnava region), is a part of CENTROPE (but not Nitra and Trenčín). The same problem existed with respect to Czech and Hungarian data.

differences are further indication of a significant regional problem of mismatch between open positions and unemployed in CENTROPE.

3.3. Calculating the Mismatch Unemployment in CENTROPE

This high level of mismatch unemployment in CENTROPE provides a potential for internal migration/commuting as a partial solution of the problems on labour market in CENTROPE. This mismatch is first focus of interest in this chapter. In particular in the literature on mismatch unemployment (see e.g. Layard, Nickell and Jackmann 1992) two such indeces are often proposed to measure the extent of mismatch unemployment. The first of these can be calculated from the equation:

$$m_{it} = \frac{1}{2}\sum_{r=1}^{R}\left|\frac{u_{irt}}{u_{it}} - \frac{v_{irt}}{v_{it}}\right| \tag{3.1}$$

Where the two vertical lines in equation (3.1) signal that the absolute values of the differences is relevant and u_{irt} is unemployment in occupation i, in region r, at time t, v_{irt} is vacancies in occupation i, in region r, at time t, u_{it} is unemployment in occupation i, in all regions (i.e. CENTROPE), at time t, v_{it} is vacancies in occupation i, in all regions (i.e. CENTROPE), at time t and m_{it} is the regional mismatch in occupation i at time t.

As also shown in the literature, since a social welfare maximizing planner would allocate unemployed and vacancies across regions so as to equalize unemployment-vacancy ratios across all regions, so that in a social optimum without mobility costs unemployment-vacancy ratios will be equal in all regions. This index therefore measures the share of unemployed workers that are misallocated in the regions relative to the social optimum It will be equal to 0 if a share of unemployed is equal to a share of vacancies of the region in each and every monitored region. By contrast, the index is equal to 1 if all unemployed are located in different regions than the vacancies. A value of for example of 0.5 therefore implies that 50% of the unemployed workers have to be reallocated to achieve a “mobility cost” free social optimum.

The second often used mismatch indicator is given by the equation

$$M_{it} = 1 - \sum_{r=1}^{R}\left(\frac{u_{irt}}{u_{it}}\right)^{1/2}\left(\frac{v_{irt}}{v_{it}}\right)^{1/2}$$

where the notation is the same as above, but where M_{it} is symbol used for the regional mismatch index, in order to differentiate this index from the other one

In contrast to the first index this one measures the fraction (percentage) of hires (unemployed) lost due to mismatch in occupation i at time t under the additional technical assumption of a (Cobb-Douglas) matching function with parameter ½ and the absence of mobility costs. This indicator can therefore be considered as an indicator of the share of unemployment that could be avoided if people were perfectly mobile across regions. A value of 0.5 of this indicator could therefore be interpreted as meaning that unemployment could be reduced by 50% if people were perfectly mobile across regions.

Clearly aside from the technical assumptions necessary to guarantee the interpretation of the second indicator, the strong assumption in interpreting these indicators is that workers are perfectly mobile. This is clearly an unrealistic assumption in a world where moving place of work (or residence) is associated with costs. Nonetheless both indicators show the areas of the labour market where lacking labour mobility (either in the form of commuting or migrations) is most problematic in terms of unemployment and also provide a crude estimate of the unemployment that could at most be avoided by policies that increase mobility.

Table 3.2: Mismatch index 1 in CENTROPE (share of persons misallocated relative to social optimum)

	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2011Q4	Mean
Cook	0.330	0.306	0.357	0.355	0.337	0.288	0.297	0.274	0.318
Waiter	0.253	0.248	0.315	0.294	0.236	0.244	0.320	0.321	0.279
Butcher	0.552	0.447	0.506	0.454	0.447	0.704	0.450	0.503	0.508
Social Worker/Care	0.335	0.340	0.721	0.330	0.422	0.602	0.773	0.757	0.535
CNC Operator	0.572	0.526	0.526	0.461	0.320	0.436	0.368	0.263	0.434
Welder	0.443	0.371	0.348	0.422	0.411	0.363	0.392	0.435	0.398
Bricklayer	0.361	0.387	0.434	0.387	0.330	0.506	0.506	0.483	0.424
IT Specialist	0.166	0.210	0.382	0.325	0.308	0.171	0.157	0.225	0.243
Driver	0.637	0.517	0.419	0.499	0.569	0.501	0.413	0.414	0.496
Logistic Worker	0.442	0.375	0.281	0.287	0.354	0.192	0.202	0.270	0.300

Source: CENTROPE Office Czech Republic, own calculations

Table 3.2 shows the first of these two mismatch indicators.[12] This table shows that IT specialists, waiters, logistics workers and cooks have a relatively low mismatch index in the average of the two years considered here. But even for these groups of workers between 24% to 40% of the workers would have to search for employment in another to achieve an equal distribution of the unemployment vacancy ratio across all CENTROPE regions.

By contrast we can conclude that social workers, butchers and drivers belong to the group of professions with a relatively high mismatch index, where close to or over 50% of the unemployed would have to relocate across regions to achieve an equal distribution of unemployment vacancy ratios among region. These professions thus belong to the group where higher mobility in CENTROPE could potentially reduce unemployment in this region substantially.

One weakness of this first mismatch index is that it only calculates the share of unemployed that have of be moved across regions, but cannot say anything about the share of unemployment that could be avoided through increased mobility. To see this suppose all unemployed are located in region 1 and all vacancies in region 2.. Therefore there is a maximal mismatch and the index is equal to 1. However this does not say what part of unemployment could be avoided by labour mobility. Supposing that there are e.g. 100 unemployed in region 1 and only 1 vacancy in region 2, the mismatch index is still equal to 1 although labour mobility can resolve at most 1 % of the unemployment problem.

In Table 3.3 we therefore calculate the mismatch index according to equation (3.2) above. As explained above this index (under some additional technical assumptions) provides an estimate of the share of unemployment that can at most be avoided by increasing mobility. The table therefore shows the relatively high heterogeneity regarding mismatch unemployment in CENTROPE. Yet irrespective of profession, mismatch unemployment is a relevant factor in CENTROPE. According to the results in table 3.3 in the average of the years 2010 and 2011 - depending on the occupation considered - between 5.5% (for IT specialists) and 24.6% (CNC operators) of the unemployment in CENTROPE could be mediated away if workers were perfectly mobile in the region. Although such perfect mobility is clearly an unrealistic assumption this high and persistent regional mismatch

[12] As far as the methodology is concerned, we had to deal with the problem of missing quarterly data in cases of Hungary (Q1/2010, Q2/2010) and the Czech Republic (Q4/2011). In these cases, we used a simple regression method (OLS) to estimate the missing data.

unemployment in CENTROPE even within closely defined occupations provides some indication of the costs of barriers mobility and the potential gains that could arise if internal migration and commuting (and thus labour mobility) could be increased in CENTROPE.

Table 3.3: Mismatch index 2 in CENTROPE

index2	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2011Q4	Mean
Cook	0.045	0.060	0.128	0.124	0.110	0.096	0.104	0.108	0.097
Waiter	0.021	0.038	0.077	0.058	0.045	0.058	0.095	0.111	0.063
Butcher	0.279	0.076	0.229	0.201	0.235	0.372	0.205	0.222	0.227
Social Worker/Care	0.027	0.039	0.346	0.112	0.172	0.237	0.421	0.406	0.220
CNC Operator	0.138	0.077	0.277	0.339	0.145	0.238	0.111	0.197	0.190
Welder	0.021	0.039	0.155	0.136	0.130	0.139	0.133	0.141	0.112
Bricklayer	0.026	0.080	0.151	0.134	0.086	0.193	0.191	0.301	0.145
IT Specialist	0.015	0.034	0.116	0.066	0.077	0.034	0.045	0.008	0.049
Driver	0.044	0.038	0.147	0.165	0.213	0.178	0.193	0.127	0.138
Logistic Worker	0.359	0.142	0.078	0.134	0.127	0.033	0.043	0.090	0.126

Source: CENTROPE Office Czech Republic, own calculations

Furthermore the average mismatch rate over the years 2010 and 2011 suggest that this regional mismatch unemployment accounts for more than 20% of unemployment for butchers and social workers and for between 10% to 20% of all unemployment for cooks, welders, bricklayers, drivers and logistics workers. This therefore underlines the importance of increasing cross-border mobility not only for highly skilled workers, but also for persons with intermediate apprentice level qualifications.

3.4. The Effects of labour market liberalisation on May 1st on the U/V ratios of selected occupations

Given that freedom of movement of labour was introduced on 1st May 2011, which as shown in chapter two led to an increase in commuting and migration from the CENTROPE countries to Austria and given the substantial shares of regional mismatch found in the last section of this study that could potentially be mediated away by increased mobility it is natural to ask, whether the increased possibilities of mobility since 1st of May have already led to a reduction in mismatch unemployment. Looking at tables 3.1 and 3.2 it seems that there is no compelling evidence of any such positive effects of the freedom of movement

of labour on mismatch unemployment. According to the mismatch indicator calculated in table 3.2 mismatch was higher in 3 out of 10 occupations than in the previous year in the second quarter of 2011, in 4 out of 10 in the third quarter and in 5 out of 10 occupations in the 4th quarter. Similarly, for the mismatch index calculated in table 3.3 mismatch was higher in all occupations in the second quarter of 2011 than in the same quarter of the previous year, in 4 out of 10 in the third quarter and in 6 out of 10 occupations in the fourth quarter. Taken together this suggests that so far freedom of movement of labour did not have any clear mismatch reducing effect on CENTROPE's labour markets.

A second way in which freedom of movement of labour could have affected labour markets in CENTROPE is by increased labour mobility having increased labour market tightness (i.e. the unemployment-vacancy rate) in the receiving regions (i.e. the Austrian CENTROPE) and reduced this tightness in the sending regions (i.e. the EU 10-parts in CENTROPE). In table 3.4 we therefore report the change in the unemployment vacancy ratio in a certain quarter of 2011 to the same quarter of the previous year. As can be seen from this table, there are only few signs of a strongly increased unemployment vacancy ratio since times of enlargement:

- In Lower Austria unemployment vacancy ratios reduced for each and every quarter in all of the professions analysed in this chapter only among bricklayers. In this profession, however increases were substantial and amounted to 10.5 unemployed per vacancy in the average of the 2nd to the 4th quarter of 2011. Aside from this there are also some signs of a modest increase of unemployment-vacancy ratios for cooks, waiters and IT specialists, which however, vary substantially across the quarters observed.
- In Burgenland, by contrast, cooks and waiters have experienced a steady increase in their unemployment – vacancy ratios since the granting of freedom of movement of labour. In the average of the 2nd to the third quarter increases in unemployment to vacancy ratios relative to the previous years in these professions amounted to 1.6 and 2.0 unemployed per vacancy. In addition to these groups also drivers and logistics workers experienced an increase in their average unemployment-vacancy ratios, but as in Lower Austria these increases were not stable over time.
- In Vienna finally there are only very few signs of increases in unemployment vacancy ratios, since the granting of the freedom of movement of labour in the 2nd quarter of 2011. In all professions except for cooks and logistics workers unemployment vacancy

ratios dropped in the average of the 2nd to the fourth quarter of 2011, and even in those professions where unemployment-vacancy ratios increased this increase was not stable over quarters.

Table 3.4: Change in U/V ratio relative to previous years in Austrian CENTROPE regions

	2011Q2	2011Q3	2011Q4	average
	Lower Austria			
Cook	–0.2	–0.2	1.6	0.4
Waiter	–0.1	0.1	1.1	0.4
Butcher	2.0	–1.5	–0.4	0.0
Social Worker/Care	7.2	–0.3	–8.6	–0.6
CNC Operator	–	–	–	–
Welder	–1.2	–0.7	–2.9	–1.6
Bricklayer	3.6	4.1	23.9	10.5
IT Specialist	4.1	–21.3	–6.2	–7.8
Driver	–4.0	0.8	3.9	0.2
Logistic Worker	–5.8	–7.2	0.9	–4.0
	Burgenland			
Cook	1.8	0.6	2.4	1.6
Waiter	2.8	0.6	2.5	2.0
Butcher	–1.9	–0.7	0.1	–0.8
Social Worker/Care	–	–	–	–
CNC Operator	–	–	–	–
Welder	–7.2	0.4	3.1	–1.2
Bricklayer	0.3	1.8	–2.3	–0.1
IT Specialist	–4.0	1.0	–5.3	–2.8
Driver	0.4	3.8	–2.8	0.5
Logistic Worker	–	3.0	–2.7	0.2
	Vienna			
Cook	0.6	–0.1	–0.3	0.1
Waiter	–1.3	–3.7	–12.1	–5.7
Butcher	–32.6	–19.6	–33.8	–28.7
Social Worker/Care	–30.5	–106.9	–66.4	–68.0
CNC Operator	–	–	–	–
Welder	–12.2	–5.8	–22.9	–13.6
Bricklayer	–9.8	–6.3	–23.5	–13.2
IT Specialist	–1.2	–2.2	–2.1	–1.8
Driver	–9.5	–10.8	–29.1	–16.5
Logistic Worker	4.9	1.5	–4.1	0.8

Source: CENTROPE Office Czech Republic, own calculations. Note: Table reports absolute change in unemployment vacancy ratio relative to the same quarter of the previous year, - = data not available due to either 0 unemployed or vacancies in that profession.

Table 3.5: Change in U/V ratio relative to previous years in Austrian CENTROPE regions

	2011Q2	2011Q3	2011Q4	average
	Czech CENTROPE			
Cook	2.5	–7.8	–	–2.7
Waiter	0.3	2.4	–	1.3
Butcher	–9.5	–80.0	–	–44.8
Social Worker/Care	26.7	10.9	–	18.8
CNC Operator	17.3	–24.3	–	–3.5
Welder	–0.6	0.1	–	–0.2
Bricklayer	–4.1	–1.0	–	–2.5
IT Specialist	0.3	2.7	–	1.5
Driver	–6.0	–4.1	–	–5.1
Logistic Worker	–3.9	–1.1	–	–2.5
	HUNGARIAN CENTROPE			
Cook	–	–0.08	0.75	0.3
Waiter	–	–0.60	0.26	–0.2
Butcher	–	0.06	–0.44	–0.2
Social Worker/Care	–	0.06	–4.22	–2.1
CNC Operator	–	–0.08	2.55	1.2
Welder	–	0.03	0.34	0.2
Bricklayer	–	–0.03	–2.09	–1.1
IT Specialist	–	–2.00	–3.50	–2.8
Driver	–	–0.55	1.15	0.3
Logistic Worker	–	–3.00	–2.00	–2.5
	Slovak CENTROPE			
Cook	1.73	0.94	–4.04	–1.6
Waiter	0.37	0.50	–7.39	–3.4
Butcher	–1.99	–1.64	–22.91	–12.3
Social Worker/Care	0.00	11.00	57.00	34.0
CNC Operator	–2.11	–7.00	–81.60	–44.3
Welder	4.23	–0.27	1.24	0.5
Bricklayer	0.00	–22.00	–32.00	–27.0
IT Specialist	13.33	8.06	–0.33	3.9
Driver	–4.76	1.24	4.75	3.0
Logistic Worker	–	–45.95	–59.29	–52.6

Source: CENTROPE Office Czech Republic, own calculations. Note: Table reports absolute change in unemployment vacancy ratio relative to the same quarter of the previous year, - = data not available due to either 0 unemployed or vacancies in that profession or missing data (for the fourth quarter 2011 in the Czech CENTROPE and the 2nd quarter 2010 for the Hungarian CENTROPE.

This evidence leads us to conclude that there is no general and easily visible impact of the increased migration both in sending and receiving countries. In Lower Austria the

unemployment vacancy ratio increased noticeably relative to the same quarter of 2010 for bricklayers (by around 10 unemployed per vacancy) after accession (i.e. in quarters 2, 3 and 4 of 2011), in Burgenland similar trends can be seen for cooks (by 1.6 unemployed per vacancy), waiters (by 2.0 unemployed per vacancy) and drivers (by 0.5 unemployed per vacancy), while in Vienna few effects are visible. The labour market effects of the immigration to Austria since 1st May 2011 most likely remained focused on individual occupations (such as in construction and gastronomy) and individual regions (in particular Burgenland).

This conclusion is also corroborated by the development of unemployment vacancy ratios in the EU 10-parts of CENTRROPE. Table 3.5 reports the results of the same kind of analysis as conducted for the Austrian CENTROPE in table 3.4 for the EU 10-parts of CENTROPE. As stated above – since the EU 10-countries are the sending countries in migration since the 1st of May 2011, we would expect unemployment-vacancy ratios to fall in these countries since the second quarter of 2011.

This is indeed the case for most professions in most of the EU 10-parts of CENTROPE. In the Czech Republic unemployment-vacancy ratios in the average of the last three quarters of 2011 fell in almost all occupations except for social workers and waiters. The same applies to all professions in the Slovak Republic except for social workers, welders, drivers and logistics workers, and for all professions in the Hungarian CENTROPE but cooks, CNC operators, welders and drivers. Yet, the patterns of these reductions disaccord with those of migration patterns to Austria since the 1st of May 2011. As shown in chapter 2 the strongest increase in foreign workers from the EU 10-CENTROPE countries to Austria came from Hungary, while Czech and Slovak workers played only a minor role. Yet the reductions of unemployment-vacancy ratios for almost all occupations were larger in these countries than in Hungary. This lack of correlation with the extent of emigration also suggests few to no effects of the end of derogation periods on the labour markets of the sending regions.

3.5. Summary and conclusions

The Labour market monitoring tool in CENTROPE showed that there is a relatively high heterogeneity regarding distribution of labour supply and labour demand across CENTROPE. The analysis showed that there is a relatively high heterogeneity regarding distribution of labour supply and labour demand across CENTROPE and that in the

average of the years 2010 and 2011 – depending on the occupation considered – between 5.5% (for IT specialists) and 24.6% (CNC operators) of the unemployment in CENTROPE could be mediated away if workers were perfectly mobile in the region. Although such perfect mobility is clearly an unrealistic assumption, this high and persistent regional mismatch unemployment in CENTROPE even within closely defined occupations provides some indication of the costs of barriers mobility and the potential gains that could arise if internal migration and commuting (and thus labour mobility) could be increased in CENTROPE.

Furthermore, the average mismatch rates over the years 2010 and 2011 suggest that this regional mismatch unemployment accounts for more than 20% of unemployment for butchers and social workers and for between 10% to 20% of all unemployment for cooks, welders, bricklayers, drivers and logistics workers. This therefore underlines the importance of increasing cross-border mobility not only for highly skilled workers, but also for persons with intermediate apprentice level qualifications. Particularly for CNC operators and welders but also for social workers, butchers and drivers, there are potentials to reduce the unemployment by increased cross-border mobility in CENTROPE.

As regards the labour market liberalization in CENTROPE, an analysis of the changes in unemployment vacancy ratios for the 10 selected occupations since the second quarter of 2010 suggests no general and easily visible impact of the increased migration both in sending and receiving countries. In Lower Austria the unemployment vacancy ratio increased noticeably relative to the same quarter of 2010 for bricklayers (by around 10 unemployed per vacancy) after accession (i.e. in quarters 2, 3 and 4 of 2011), in Burgenland similar trends can be seen for cooks (by 1.6 unemployed per vacancy), waiters (by 2.0 unemployed per vacancy) and drivers (by 0.5 unemployed per vacancy), while in Vienna few effects are visible. Furthermore in the important sending regions of the Hungarian CENTROPE only few reductions in unemployment-vacancy ratios are visible. This leads us to conclude that the labour market effects of the immigration to Austria since 1st May 2011 most likely remained focused on individual occupations (such as in construction and gastronomy) and individual regions (in particular Burgenland).

4. Trends in Education Indicators in CENTROPE (an analysis based on Eurostat Indicators

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4.1. Introduction

Aside from analyzing the labour market situation in CENTROPE a second subject of study in this report is the education system in CENTROPE. Our approach to this topic is similar to that concerning labour markets. First in this chapter we shortly focus on the "stylized facts" concerning the education system in CENTROPE that can be obtained from EUROSTAT data. Since these stylized facts, however, can only be derived for NUTS 2 level regions with this data source, we also conduct an analysis on student mobility in CENTROPE which is based on a data set that was specially collected for the purpose of the CENTROPE regional development report project in the next chapter. Finally, in chapter 7 we also present a series of case studies on the education system in individual parts of CENTROPE.

These case studies highlight the differences both in the (mostly national) institutional set-up of education systems, where in particular the Austrian education system differs from the other countries' through its emphasis on the two track dual education system and the Czech System differs from the others from the others on account of providing much larger autonomy to regions and schools than does the system of most other countries. Furthermore these studies also highlight the differences with respect to the level, depth and integration of education strategies developed in CENTROPE.

4.2. Development of student numbers in different levels of the school system in CENTROPE

Aside from the many differences highlighted by these case studies there are, however, also some common challenges and developments shared by all regional education systems of CENTROPE. These apply mainly to the development of student numbers. These are shaped by a number of countervailing tendencies. The first of these are demographic developments. Since one of the consequences of demographic ageing in CENTROPE has been a decline in the number of children at school age, this all else equal leads to declining student numbers. The second of these influences is the trend towards

higher education. This is amongst others also influenced by the tendencies of the economy to require increasing numbers of more highly educated workers, and thus leads parents and students to choose more academically oriented school careers as well as a longer duration of education. This in effect tends to increase student numbers in particular in higher education institutions. The third effect comes from societal changes (such as e.g. increasing female participation in the labour force that has changed the role of the family in education) and impacts of an ethnically increasingly heterogeneous population.[13] These have led some policy makers and many analysts to increasingly also stress the importance of early childhood education and to parents in all regions increasingly preferring education in full day education institutions. These changes thus shape the relative demand for certain forms of education.

4.2.1. Pre-primary education

For instance when considering the enrolment in pre-primary education (in the top panel of table 3.1) we see that enrolment rates have increased in most of the CENTROPE regions in the last decade. This is somewhat in contrast to the demographic developments in CENTROPE regions, which would suggest decreasing participation in pre-primary education on account of the falling number of children in CENTROPE (see Frank 2012 for a description of past and future demographic changes in CENTROPE). Yet demographic trends do play some role in the development since the strongest increase in students in this form of education (by around +9000) is found in Vienna, which is also the only CENTROPE region where the number of under 15 year olds has increased between 2001 and 2010, while the only decrease in the number of students in this form of education (of about -4.500) was found in Western Slovakia. With respect to this region Frank (2012) also finds that the population of under 14 year olds dropped by around 18.000 in Trnava (which is only a part of Western Slovakia).

[13] It should be stressed that these changes are relevant to very different degrees in the different parts of CENTROPE. Thus for instance the changing role of females in the family is most severely felt in the Austrian parts of CENTROPE where female labour force participation has increased substantially in the last decades. In those parts of the CENTROPE that have a communist past – where female labour force participation was historically higher, - such changes are less severe, but are still felt.

Table 4.1: Development of Student numbers in pre-primary and first stage basic education in CENTROPE (in thousands)

	2003	2004	2005	2006	2007	2008	2009	2010
	Pre-primary education (level 0)							
EU 27	13,573.9	13,363.9	13,765.1	14,066.7	14,216.9	14,401.2	-	-
CENTROPE Total	240.1	238.7	238.8	235.6	236.9	242.3	249.6	256.7
South East	47.5	47.8	47.7	46.9	47.6	48.5	50.3	52.4
West Transdanubia	30.5	30.0	29.8	29.6	30.0	29.8	30.1	30.7
Burgenland	7.8	7.5	7.4	7.5	7.5	7.7	7.8	8.3
Lower Austria	46.5	44.8	45.1	45.0	45.6	47.5	50.1	51.3
Vienna	40.2	41.0	41.8	42.8	43.4	45.5	48.0	49.3
Bratislava region	16.5	16.5	16.6	16.3	16.4	17.0	17.5	18.2
Western Slovakia	51.0	51.1	50.3	47.3	46.4	46.3	45.9	46.6
	Primary education or first stage of basic education (level 1)							
EU 27	28,963.0	29,023.5	28,844.7	28,526.8	28,385.7	28,288.6	-	-
CENTROPE Total	394.4	378.5	363.1	351.4	344.6	338.3	334.2	332.0
South East	92.8	87.5	82.4	77.5	75.8	75.3	75.4	75.9
West Transdanubia	43.2	41.7	40.0	38.2	36.5	35.7	35.5	35.4
Burgenland	11.4	11.1	10.8	10.7	10.5	10.4	10.2	10.2
Lower Austria	73.3	72.0	70.2	69.0	67.0	65.2	64.1	64.0
Vienna	63.7	63.0	62.7	62.3	63.4	62.8	62.8	62.4
Bratislava region	24.3	22.6	21.2	20.5	20.1	20.0	19.9	20.1
Western Slovakia	85.8	80.4	75.8	73.0	71.2	68.9	66.2	64.0

Source: EUROSTAT.

Aside from demography, however, institutional and societal changes that reflect the general re-assessment of pre-primary education seem to have been another important influence on the development of student numbers in this form of education. In particular in Austria a number of provinces have introduced offers for a free Kindergarten year, and in Hungary recently reforms have been put in place that formally make Kindergarten compulsory from the age of three (see country studies in chapter 7). Unsurprisingly therefore regions like Lower Austria experienced an increase in the number of children in pre-primary education even though they too experienced substantial declines in the

population aged 15 or younger in the last decade. In West Transdanubia, by contrast student numbers in pre-primary education increased only very modestly since 2003.

Table 4.2: Development of Student numbers in lower and upper secondary stage education in CENTROPE

	2003	2004	2005	2006	2007	2008	2009	2010
	Lower secondary or second stage of basic education (level 2)							
EU 27	23,841.3	23,564.6	23,397.2	22,892.1	22,283.9	22,193.6	-	-
CENTROPE Total	452.5	448.7	441.0	429.5	411.6	396.2	379.2	363.4
South East	83.7	82.4	81.2	80.1	75.2	71.0	66.2	62.2
West Transdanubia	48.4	47.9	47.3	45.9	44.3	42.7	41.1	39.5
Burgenland	12.2	12.1	12.1	11.9	11.7	11.4	11.2	11.0
Lower Austria	74.8	76.3	75.7	74.1	72.6	71.6	70.3	68.2
Vienna	68.4	70.5	71.2	71.3	70.7	70.2	69.0	67.4
Bratislava region	37.2	35.7	34.0	31.9	29.8	27.9	26.0	24.8
Western Slovakia	127.9	123.8	119.6	114.3	107.3	101.3	95.4	90.3
	Upper secondary education (level 3)							
EU 27	25,069.4	25,573.2	26,036.7	22,205.4	22,085.5	22,002.4	-	-
CENTROPE Total	408.4	420.6	423.9	420.7	423.0	416.2	411.1	404.2
South East	82.0	82.3	82.6	82.0	82.2	81.0	80.1	78.8
West Transdanubia	52.8	53.6	54.0	53.6	53.7	52.7	52.3	52.3
Burgenland	11.7	11.9	11.7	12.2	12.0	11.7	11.8	11.5
Lower Austria	62.8	62.9	64.2	64.7	65.3	65.5	65.1	63.2
Vienna	66.6	67.5	69.9	70.7	74.6	74.6	74.7	74.5
Bratislava region	36.8	39.1	38.3	36.9	36.0	34.8	33.8	32.2
Western Slovakia	95.7	103.2	103.2	100.7	99.2	95.8	93.3	91.7

Source: EUROSTAT.

4.2.2. Primary and lower secondary education

Developments are markedly different in education levels that traditionally belong to the area of compulsory education. While in these areas reforms have also taken place in most CENTROPE countries (e.g. with respect to school organization or curricula), demographic trends are clearly the most important influence on the development of student numbers.

Therefore in all CENTROPE regions the number of students in primary education has declined. The largest declines are found in regions that have experienced the largest reductions in population under the age of 15 in the last decade (e.g. South Moravia, Trnava, and Lower Austria) and the smallest declines in the region in Vienna, where the population under 15 has still increased in the time period considered here.[14]

The same applies also to lower secondary education, also here demographic developments are the most important influence factor on student numbers. Student numbers in these types of schools declined most strongly in regions where demographic decline in the age cohort that visits these schools (i.e. South Moravia, Trnava, and Lower Austria) was most severe, while it almost stagnated in Vienna in the last decade (see upper panel of table 3.2.)

4.2.3. Upper secondary education

By contrast, the development of the number of students in upper secondary education has varied substantially more among the CENTROPE regions (see bottom panel of table 3.2). In this school type reducing cohort sizes (i.e. a lower number of residents in the relevant age groups) have tended to push the student numbers down, while the trend towards increased educational attainment has increased the share of persons participating in this form of education and thus has also pushed student numbers upward. In the Czech Southeast and in the two Slovak CENTROPE regions the downward pressure resulting from declining cohort sizes have prevailed the upward push from higher participation rates, so that student numbers have tended to decline in the last decade. This tendency was, however, modest only – relative to the declines in compulsory school students. Decreases amounted to no more than 4,000 students in each of these regions.

In Burgenland and Western Transdanubia, by contrast, downward demographic tendencies and upward trends just about cancelled out, so that student numbers almost stagnated. (The declines in this region were less than 500 students each.) In Lower Austria and Vienna (where demographic decline was least pronounced), finally, student numbers in this form of education continued to increase in the last decade.

[14] Note that although our data here are at the NUTS 2 level our results are also corroborated by the country studies of chapter 7, so that here it is fair to speak of the NUTS 3 regions relevant for this study.

In the total of the NUTS 2-CENTROPE-regions therefore the decrease in the number of students in this form of education over the time period 2003 to 2010 was around 3,500 students or around 1% of the students and therefore rather mild, when compared to reductions in compulsory students, which often exceed the 10% mark.

4.3. Student numbers in the University System in CENTROPE

When it comes to assessing the education system in CENTROPE probably the most important part of the analysis is the university system, however. The reason for this is that this part of the education system provides the fundamental source of comparative advantage to knowledge-based economies such as the CENTROPE, which are highly dependent on a highly skilled workforce if they want to compete with more low skilled and low cost locations in other parts of the world. Here indicators with respect to the tertiary education system in the CENTROPE regions provide some evidence of this economy's potentials in terms of innovative capacities. In particular as has been shown both in Rozmahel et al, 2010, as well as Csizmadia et al, 2012) university student numbers in percent of the population have consistently exceeded those of the EU-average in the last decade.

Table 4.3: First and second stage of tertiary education (levels 5 and 6, ISCED)

	2003	2004	2005	2006	2007	2008	2009	2010
EU 27	17,761,762	18,232,921	18,530,167	18,782,520	18,884,191	19,040,174	–	–
CENTROPE	311,159	328,596	343,178	365,211	386,967	404,868	422,895	451,431
South East	60,291	66,966	70,443	70,570	75,835	82,078	87,144	91,716
West Transdanubia	28,486	31,732	33,902	34,358	32,427	29,554	27,768	26,448
Burgenland (AT)	1,412	1,345	1,336	1,596	1,597	1,669	1,840	1,993
Lower Austria	6,221	6,602	6,755	7,495	7,768	11,788	14,056	15,312
Vienna	12,2783	12,6052	12,5331	13,6076	141,090	142,885	151,196	172,115
Bratislava Region	53,045	54,143	60,041	64,924	71,571	76,799	77,355	79,676
Western Slovakia	38,921	41,756	45,370	50,192	56,679	60,095	63,536	64,171

Source: Eurostat, – = not available.

4.3.1. Student numbers and fields of specialization

Furthermore as shown in table 3.3, which reports the number of students of both stages of tertiary education (i.e. including all three university levels – bachelor, master and Ph.D.

programs) using the ISCED[15] classification, student numbers in tertiary education have also rapidly increased in CENTROPE in the last decade. While in the total EU 27 in 2008 there were about 7% more students than in 2003 in CENTROPE the number of students increased by over 30% in the same time period.[16] This therefore – in conjunction with the falling student numbers in compulsory education and the stagnating ones in upper secondary education suggests that CENTROPE is also becoming increasingly attractive for students from other parts of the respective countries (or Europe) and is thus rapidly developing into a university centre of over-regional importance.

Table 4.4: Field of training of students in tertiary and upper secondary education in CENTROPE (2009)

	Tertiary education (ISCED 5 - 6)		Upper Secondary Education (ISCED 3 - 4)	
	CENTROPE	EU	CENTROPE	EU
General programs		1.8	41.6	48.7
Teacher Training	10.8	7.6		0.5
Humanities languages Arts	11.6	10.8	3.0	2.4
Foreign Languages	4.8	3.8		0.2
Social Sciences	38.7	40.6	24.3	12.2
Science Mathematics	2.2	1.6		2.0
Life Sciences	3.5	3.7		0.5
Physical Science	2.2	3.2		0.3
Computer Science and use	5.3	5.6	2.2	2.6
Engineering Manufacturing and Construction	3.6	1.9	2.5	2.0
Agriculture and Veterinary	10.8	13.7	4.1	3.8
Health and Welfare	5.3	4.4	19.0	8.8
Services		1.3		15.8

Source: European Labour Force Survey, micro-dataset. Notes: figure shows share of students in total involved in training in the respective field.

[15] ISCED – International Standard Classification of Education.

[16] Comparable statistics on education are not available for all regions at NUTS 3-level. Thus table 4.3 describes the NUTS 2-level. This is not such a big problem, however, since most of the universities are located in the big cities in CENTROPE. This is for instance the case of the Area Jihovýchod (South East) in which almost all universities are situated in South Moravia region – mainly in Brno.

In addition data taken from the micro-dataset of the European Labour force survey suggests that the students studying in tertiary education in the region, more often than the students in the EU27 average study in teacher training, humanities and languages. This thus reflects very strongly the structure of students in the Austrian CENTROPE, where it is often criticized that students only rarely study in technical fields. However, due to the presence of two other large university towns (Brno and Bratislava) this weakness does not necessarily apply to the CENTROPE as a whole, since above average shares of students can also be found in science and mathematics and engineering, manufacturing and construction. In the upper secondary education system, – reflecting the specifics of the national education systems in CENTROE (see country studies in chapter 7), – in comparison to the EU 27 average very many students study in schools specialized in social sciences and in health and welfare, by contrast.

Table 4.5: First stage of tertiary education, programs that are theoretically based/research preparatory or giving access to professions with high skills requirements (level 5A, ISCED)

	2003	2004	2005	2006	2007	2008	2009	2010
EU 27	17,255,581	17,707,347	18,006,776	18,265,725	18,359,029	18,541,382	–	–
CENTROPE	270,445	287,605	301,177	323,680	345,595	365,089	377,822	399,757
South East	49,604	55,074	58,284	59,177	64,373	70,206	75,155	79,191
West Transdanubia	27,017	29,778	31,446	31,478	30,173	26,930	24,788	23,443
Burgenland	975	1,032	1,032	1,269	1,378	1,518	1,565	1,548
Lower Austria	3,573	4,099	4,099	4,804	5,371	9,704	11,113	11,557
Vienna	106,916	110,379	110,379	120,179	124,375	127,731	131,957	148,191
Bratislava Region	46,576	48,376	53,482	59,192	65,692	71,194	71,835	74,035
Western Slovakia	35,784	38,867	42,455	47,581	54,233	57,806	61,409	61,792

Source: Eurostat, – = not available.

4.3.2. Students by level of tertiary education

In addition, table 4.5 provides an overview over the number of students at the first stage of university education (bachelor + master programs) in CENTROPE. It shows that first of all Vienna, Bratislava and South Moravia (Brno) are the centers of tertiary education in CENTROPE. In all these regions the number of university students increased substantially. The numbers almost doubled in the past decade in South Moravia and

Bratislava, due to the increased activities of private universities and a tendency of governments to increase the number of students at the first stage of tertiary education in line with the Bologna process, and increased by almost 50% in Vienna.[17]

Table 4.6: Second stage of tertiary education leading to an advanced research qualification (level 6, ISCED)

	2003	2004	2005	2006	2007	2008	2009	2010
EU 27	506,181	525,574	523,391	516,795	525,162	498,792	–	–
CENTROPE	20,621	20,698	21,874	22,689	24,157	23,188	23,515	28,475
South East	5,442	6,007	6,426	5,843	6,103	6,280	6,426	6,682
West Transdanubia	200	233	283	330	331	346	326	338
Burgenland	–	–	–	–	–	–	–	–
Lower Austria	–	–	–	–	–	–	–	–
Vienna	8,517	8,509	8,509	9,711	10,590	9,877	10,295	14,707
Bratislava Region	4,780	4,386	4,944	5,035	5223	4,937	4,772	4,879
Western Slovakia	1,682	1,563	1,712	1,770	1,910	1,748	1,696	1,869

Source: Eurostat, – = not available.

Finally, considering the statistics with respect to the second stage of tertiary education (i.e. Ph.D. courses) in table 4.6, we see that the increase in the number of students in these programs, which lead to an advanced research qualification, increased somewhat more modestly in CENTROPE than the first stage of tertiary education. Nonetheless judging from the available data from EUROSTAT sources (which, however is very volatile and thus suggests low quality), the number of students in these education programs increased more rapidly in CENTROPE (by 12%) than in the EU 27 (where it stagnated) in the time period 2003 to 2008 and also in 2008 relative to the population more students were studying in CENTROPE at this level of education than in the EU 27 average. In CENTROPE almost 0.3% of the total population was studying in such programs in 2008, in the EU 27 the respective share was 0.1% of the population. This suggests that thanks to the presence of

[17] Note that we start our analysis in the year 2003 to avoid potential contamination of our results due to the introduction of student fees in Austria in 2001. These resulted in the withdrawal of a number of students, who were matriculated but did not study, and thus artificially reduced the number of students,

three large university centres in the region also high level university education plays a more important role in the education system of CENTROPE than in the EU 27 average.

This general tendency is, however, associated with substantial differentiation within the region. In Czech Southeast (i.e. South Moravia) student numbers in the highest level of education increased each year except for a small decline year in 2006. Also in the Bratislava region the number of Ph.D. candidates increased – although by slightly less than in South Moravia. In Vienna the number of Ph.D. students stagnated between 2001 and 2005. Since then the number of Ph.D. students increased by more than 50% until 2010.[18] Furthermore also in the regions where no large centers of university education are located (West Transdanubia and Western Slovakia) student numbers increased, although here changes although large in percentage terms in absolute terms only account for a few hundred students each.

4.4. Life-long Learning

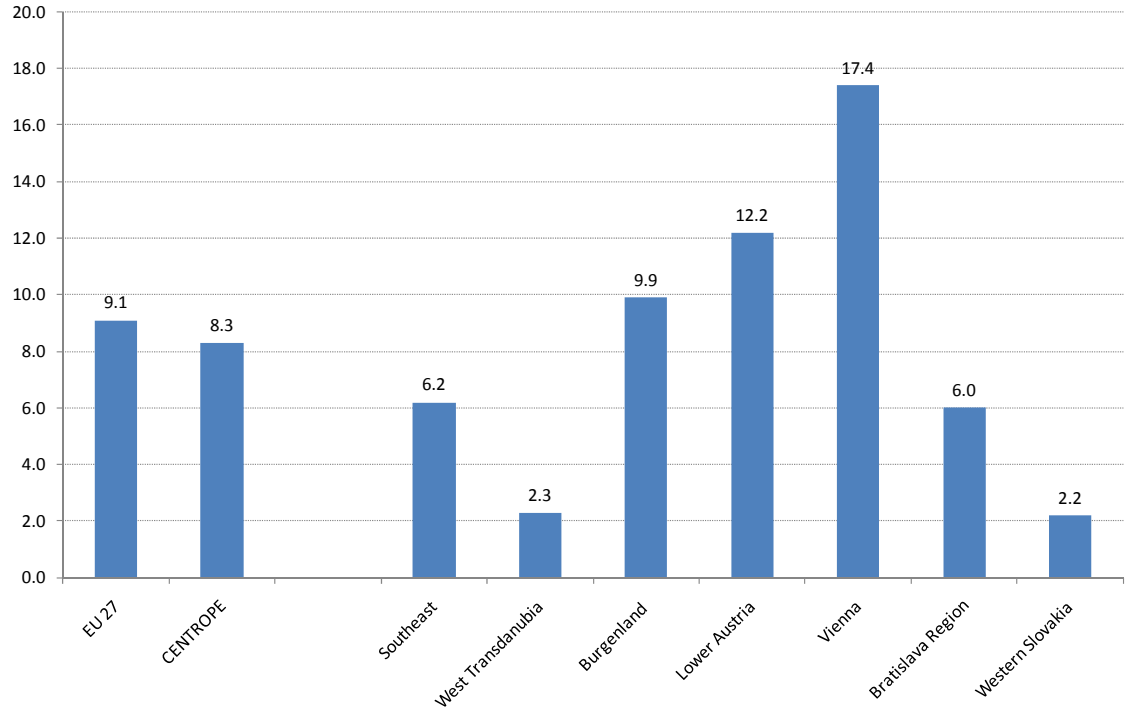
Finally, a last component of the education system that has received increased attention in the last decades on account of the increasing importance of continued training is life-long learning. According to the definition of the European Union this can be measured by the share of population in the age of 25 years to 64 years, that participated in formal (full- or part-time) training in the four weeks before the interview in the European Labour Force Survey. Judging from the most recent data available, which stems from 2010, the number of people involved in life-long learning is still rather low in CENTROPE, when compared to the remainder of the EU 27. In CENTROPE only 8.3% of the population in the age between 25 and 64 years took part in some form of formal training, while in the EU 27 the percentage was 9.1% and in some of the most advanced European economies (such as Sweden and Denmark) even some 20% of the population were involved in such activities (see Figure 3.1).

This below average share of life-long learning activities in CENTROPE is primarily due to a low participation in the EU 10-parts of CENTROPE. In Austria between 9.9% (in Burgenland) and 17.4% (in Vienna) of the population took part in life-long learning

[18] This change may in part be associated with changes in the eligibility for students of universities of applied sciences to study at Ph.D. level at universities in Austria in the time period considered here.

activities, [19] in the EU 10-parts of the region this share reached only 6.0% in the Czech CENTROPE and Bratislava and was below the 3% both in the rest of the Slovak and in the Hungarian parts. This therefore suggests substantial room for improvement in terms of implementation of lifelong learning strategies in CENTROPE. Joint initiatives to increase participation in life-long learning could therefore present another area of co-operation in CENTROPE.

Figure 4.1: Participation in Lifelong learning activities in CENTROPE in 2009



Source: European Labour Force Survey, micro-dataset. Notes: In accordance with the EU definition this figure shows the share of persons aged 25 to 64 taking part in formal education (full or part time) in the four weeks before the interview.

[19] It should, however, be noted that Austrian participation rates in life-long learning are probably overstated in the ELFS due to the wording of the question, which – in contrast to the questionnaires in other countries - includes the examples of drivers licenses and chi-gong courses for formal training. It is believed that this wording increases positive response rates by 3 to 5 percentage points.

4.5. Conclusions

In sum a first appraisal of the education system in CENTROPE based on the available EUROSTAT data suggests that - while trends in the number of students in the school system are influenced by a number of countervailing influences such as demographic developments, trends towards attaining higher levels of education and a changed perception of the role of early childhood education in the society in general – the university system is definitely one of the most important advantages of this region relative to other EU regions.

The results indicate that there are more university level students per inhabitant in this region than in the EU average, that student numbers have increased more rapidly in this region than in the EU 27 average in the last decade and that the region has increasingly assumed over-regional importance as a centre of university education in the last decade. In addition our results also suggest that the share of doctoral students in the population is also higher than in the EU 27 and that aside from a specialization in teacher training, humanities and languages, there is also a weaker specialization in sciences, mathematics and engineering. Taken together these results therefore suggest that while - as shown elsewhere (Csizmadia, 2012) - the CENTROPE's university system is still at some distance from top locations in terms of research output, in terms of teaching the system has been performing rather well in the last decade.

For economic policy this therefore implies that increased co-operation amongst universities with the aim of improving the joint standing of the CENTROPE's university system, increased student exchange and development of cross-border curricula, could be initiatives that could further strengthen this system and help to boost comparative advantage of the region of the whole.

While the university system is therefore an advantage of the region relative to the EU 27, preliminary results also suggests that in other parts of the education system CENTROPE also still has some disadvantages. This applies in particular to life-long learning, where participation is still very low in the EU 10-parts of CENTROPE and some way from the most advanced countries in Austria. Joint initiatives to increase participation in life-long learning could therefore present another area of co-operation in CENTROPE

5. Cross-Border Effects: Survey on Student Mobility Potential in the CENTROPE Region

Author: Petr Rozmahel

5.1. Goals and Methodology of the Survey

As shown in the last chapter – thanks to the presence of three large university towns in the region (Bratislava, Brno and Vienna) – there is a large number of university students in CENTROPE. At the same time ensuring and increasing the interregional mobility of students and researchers is one of the central aims of the EU's strategy on the European Research area[20] as well as in most cross-border policies at the regional as well as the municipality level. In this chapter we therefore provide some evidence of the extent, potential for and factors influencing the cross-border mobility of university students in CENTROPE. This evidence stems from a questionnaire that was conducted among students studying in CENTROPE in the spring of 2011.

This survey was designed in order to collect data that would shed some light on the factors determining student's mobility intentions as well as the extent of student mobility in CENTROPE. Its main goal was to assess the attractiveness of CENTROPE for student mobility and to identify and analyse factors influencing the reasons for choosing CENTROPE as a potential place for a study abroad.

5.2. Methodology and Sampling

The data was collected by means of an on-line questionnaire which was distributed by e-mail with a link to a website containing the questionnaire. The on-line survey was processed at the Mendel University in Brno in the frame of the program ReLa (Research Laboratory) with a co-operation of Department of Marketing and Business at the Faculty of Business and Economics. In order to guarantee a high response rate it was decided to

[20] For instance the EC Communication "Towards a European Research Area" (EC, 2000) identified increasing the number of mobile researchers and students in Europe as a central objective for constructing the European Research Area (ERA) and the Commission's Green Paper on the European Research Area (EC, 2007) reinforces this by stressing the importance of a high level of mobility of researchers and students between countries and institutions for the realisation of the ERA (see also EC, 2008, p.119).

keep the questionnaire as short as possible. It contained 15 focused questions using open format, closed format, multivariate and rating scale questions[21]. The estimated time to fill out the questionnaire was 8 minutes.

The questionnaire was structured into three blocks of questions:

- In the introductory part students were asked on their personal characteristics (e.g. gender) and some information on the university and they were studying at as well as on their field of study (university details, study discipline). In addition also a question was posed on the satisfaction of the respondent with the home university.
- The second part of the questionnaire dealt with previous personal experiences of studying abroad (experiences with foreign study programmes, area the foreign studies, country for foreign study, reason for choosing the place of studying abroad, satisfaction with the host university and a comparison of the home and the host university).
- The final section examined the future intentions on studying abroad and also asked about the factors influencing the decision to study abroad where we were particularly interested in the reason for choosing locations in the CENTROPE rather than outside the CENTROPE for study abroad. Questions in this part were therefore concerned with whether the respondent considers studying abroad, which were his/her preferred destinations, the reasons for choosing this preferred destination and for considering CENTROPE as a potential place for study as well as the reasons for rejecting CENTROPE as a destination.

In the survey we focus on the university student mobility intentions within CENTROPE, thus our sample is drawn from among the university students in CENTROPE. This choice of sampling was made for a number of reasons. The first of these was that a number of previous studies have shown that mobility is highest among highly educated and young persons as well as university students. Therefore focusing on students, we are able to focus on the most mobile segment of both the population as a whole as well as on the most mobile among those that are still in education. A second reason was that university students are often considered a core target group for policies designed to increase mobility in the knowledge economy as defined in the Lisbon Strategy, so that this group of students may also be considered to be of particular interest to cross-border policy makers.

[21] The questionnaire is provided in the appendix to this study

Given that over 60 public, private and state universities operated in CENTROPE in the academic year 2010/2011 (see Csizmandia et al., 2012), our aim was to cover only the largest and most important institutions from all regions within CENTROPE. Furthermore, we also tried to take into account all branches of study including social, technical, natural sciences and arts. The data were collected for about four months (form December 2011 to March 2012) and were distributed though a number of channels.

- First bulk e-mails were used – In this form of distribution direct bulk e-mails, to addresses of students provided by some of the universities in the region were used. This was originally considered to be the most effective (and our preferred) way to collect data. However, an official confirmation of the university authorities is needed to use this way of contacting the students officially and not all of the universities sampled could (for legal reasons) provide us with a list of e-mail addresses of their students, so that this sampling strategy was primarily used with the universities located in Brno, where it proved to be the most effective and fastest way to collect data. In this case an e-mail containing an explanatory text and a direct link to the web site with the on-line questionnaire was sent to the respondents, and respondents could answer directly to the mails.
- Second in some cases notice boards at the universities information systems were used. Here students were made aware of the existence of the questionnaire on the University's information system and could fill out the questionnaire by clicking on a link. This less aggressive way of addressing the respondents was used when the university officials could not provide an official agreement for using bulk e-mails. This way of sampling proved to be substantially less effective for collecting data than the bulk e-mails.
- Third social networks were used – In this case students were addressed via social networks such as Facebook. This proved to effective when the university students could not be addressed through the notice boards neither at the university information system nor through bulk e-mails. This method therefore was our primary way to address students at universities where no possibility for direct posting was available.
- Finally in some cases also personal addressing and snowballing were used. Here personal contacts at partner universities at the CENRTOPE region were used to address the students, and respondents were asked to send the web-link to the questionnaire to friends and acquaintances. Nevertheless, this approach delivered only a very limited number of responses.

In total through these methods 3 775 completed questionnaires were received from the CENTROPE region. However, the distribution of completed questionnaires across countries is rather unbalanced, since 90% of respondents come from the Czech part of CENTROPE. The reasons for this are firstly, that at the Brno universities – due to personal contact of the research team - officials could agree with distributing the questionnaire via bulk e-mails, while universities in other countries could not provide for this possibility. A second reason was that process of collecting data from the non-Czech CENTROPE regions took quite a long time due to winter holidays and examination periods. Still, the research team managed to obtain a sample of respondents enabling an analysis of respondents from all parts of CENTROPE. In sum 133 completed questionnaires from Austria, 97 from Hungary, 131 from Slovakia and 3414 from the Czech Republic from 10 universities in CENTROPE (see table 5.1) were collected.

Table 5.1: CENTROPE universities participating in the survey

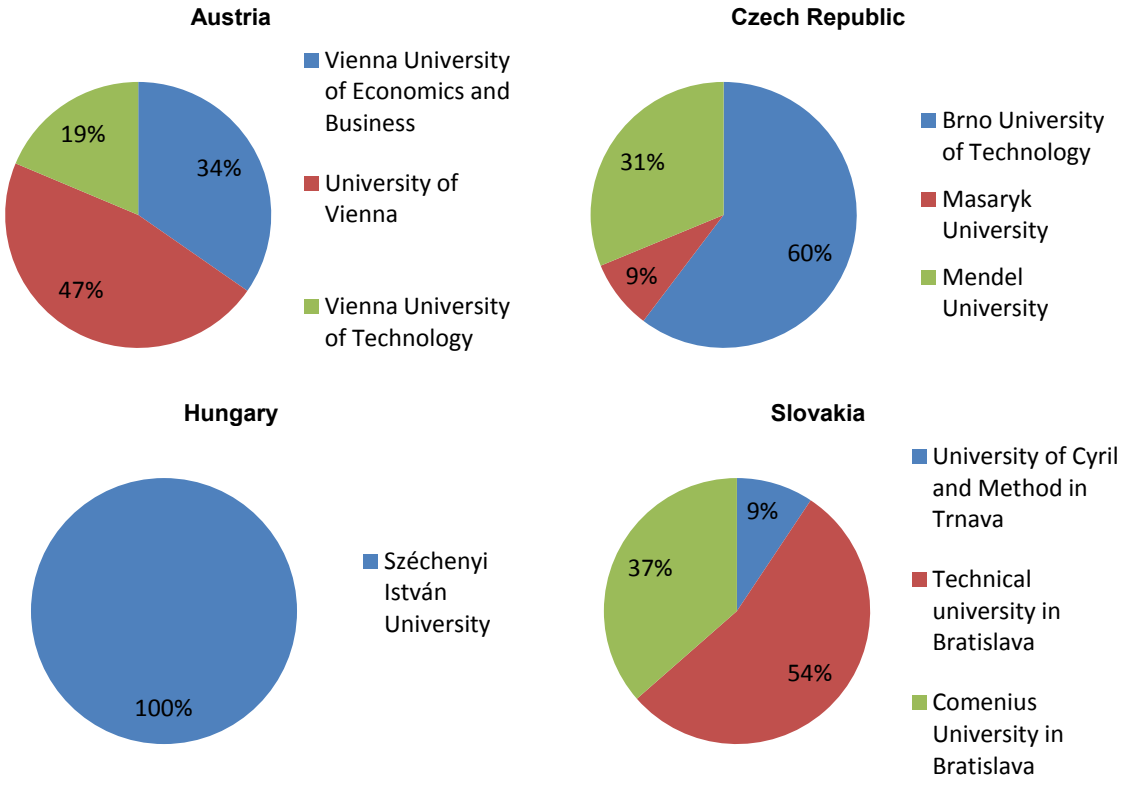
University	City, Country
University of Economics and Business Administration (WU)	Vienna, Austria
University of Vienna	Vienna, Austria
Technical University Vienna	Vienna, Austria
Brno University of Technology	Brno, Czech
Masaryk University	Brno, Czech
Mendel University in Brno	Brno, Czech
Széchenyi István University	Györ, Hungary
University of Cyril and Method in Trnava	Trnava, Slovakia
Commenius University in Bratislava	Bratislava, Slovakia
University of Technology in Bratislava	Bratislava, Slovakia

Source: Own survey.

The analysis of the results is divided into three parts. In the first part the basic characteristics of the respondents and their universities are summarised. In the second part the past experiences of the CENTROPE students with studying abroad are examined. Here also the factors determining the selection of target destinations and a comparison of hosting and home universities in terms of education and services are conducted. Finally, the last section focuses on an analysis of mobility intentions of university students in CENTROPE, where both the wish to study abroad in another CENTROPE country as well as to study in another country outside CENTROPE are considered. This part also analyzes

the reasons for rejecting CENTROPE as a target destination for a foreign study. In addition in the appendix more detailed results on a country to country basis are provided.

Figure 5.1: Representation of respondents by university



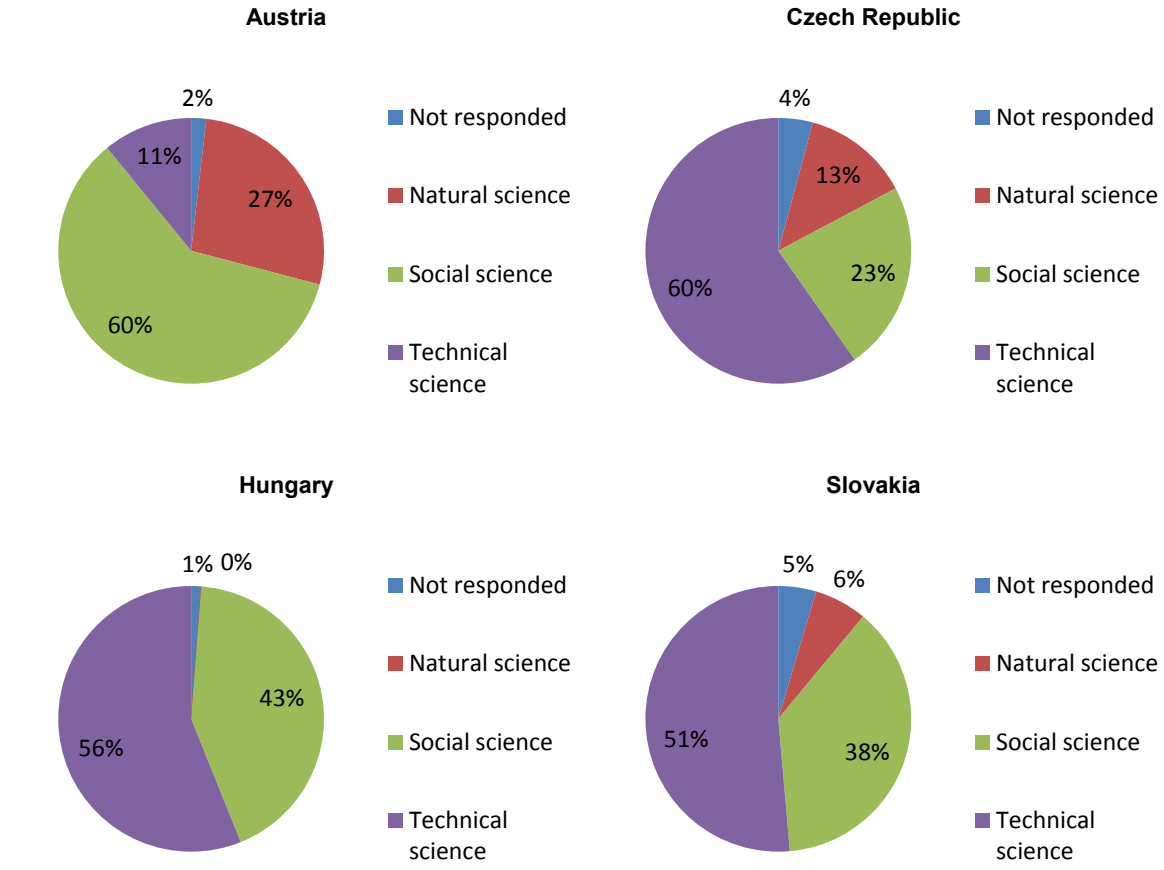
Source: Own Survey.

5.3. Characteristics of interviewed Students and sample structure

In total respondents from one Hungarian and three universities each of the Austrian, Czech and Slovak CENTROPE participated actively in the survey. The students of our sample therefore come from the large and locally important universities in the region, while responses from smaller and private universities were not sampled (see Figure 5.1). As a consequence of the universities sampled students of natural, technical and social sciences participated in the survey. In the Czech, Hungarian and Slovak CENTROPE – reflecting the structure of students in the region (see Chapter 4) mostly students of technical sciences completed the on-line questionnaire. In Austria mainly students of social sciences participated in the survey. In part this also reflects the structure of students in the region,

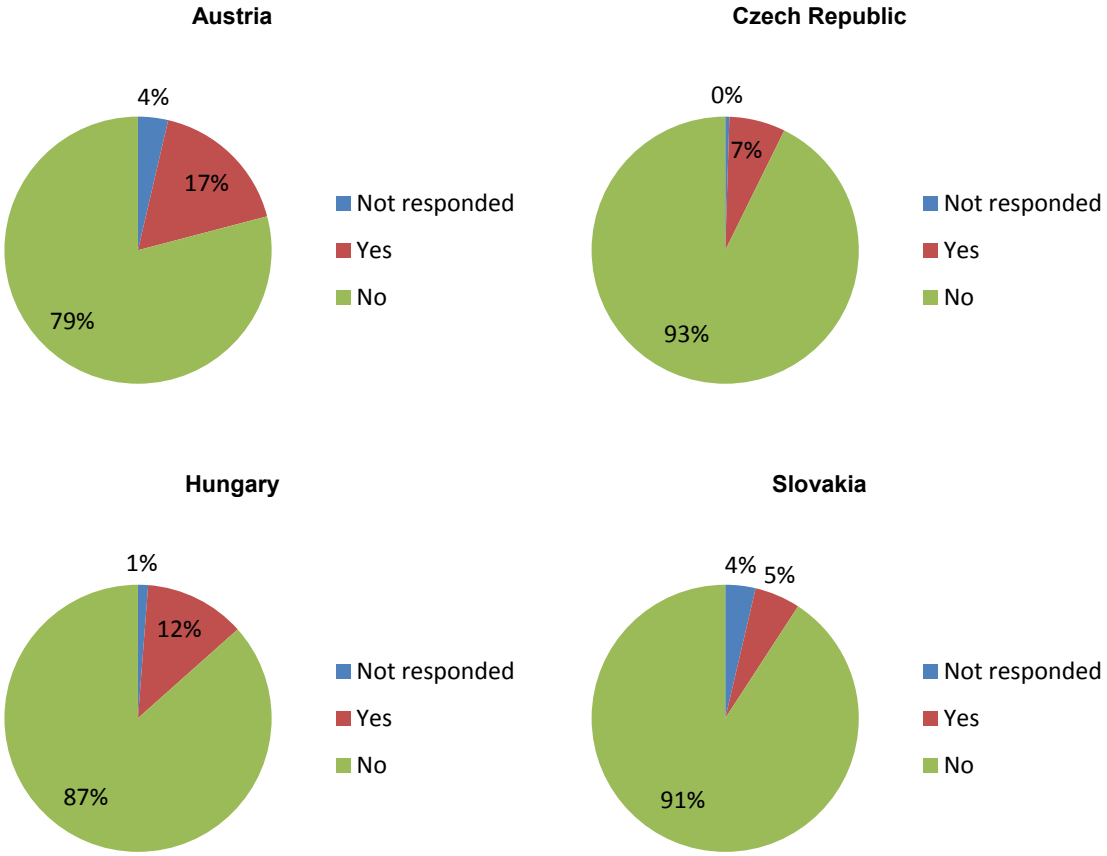
but is also due to the fact that one of the universities (The University of Economics and Business Administration, Vienna) where a large part of the sample in Austria comes from exclusively teaches in social sciences. Thus clearly our questionnaire results are not based on a representative sample and must therefore be considered to be only a first attempt at researching the mobility intentions of students in CENTROPE.

Figure 5.2: Representation of respondents by the field of study



Source: Own Survey.

Figure 5.3: Previous experience with studying abroad.
(Have you taken part in a foreign study exchange program in the past?)



Source: Own Survey.

5.4. Previous Experience with Studying abroad

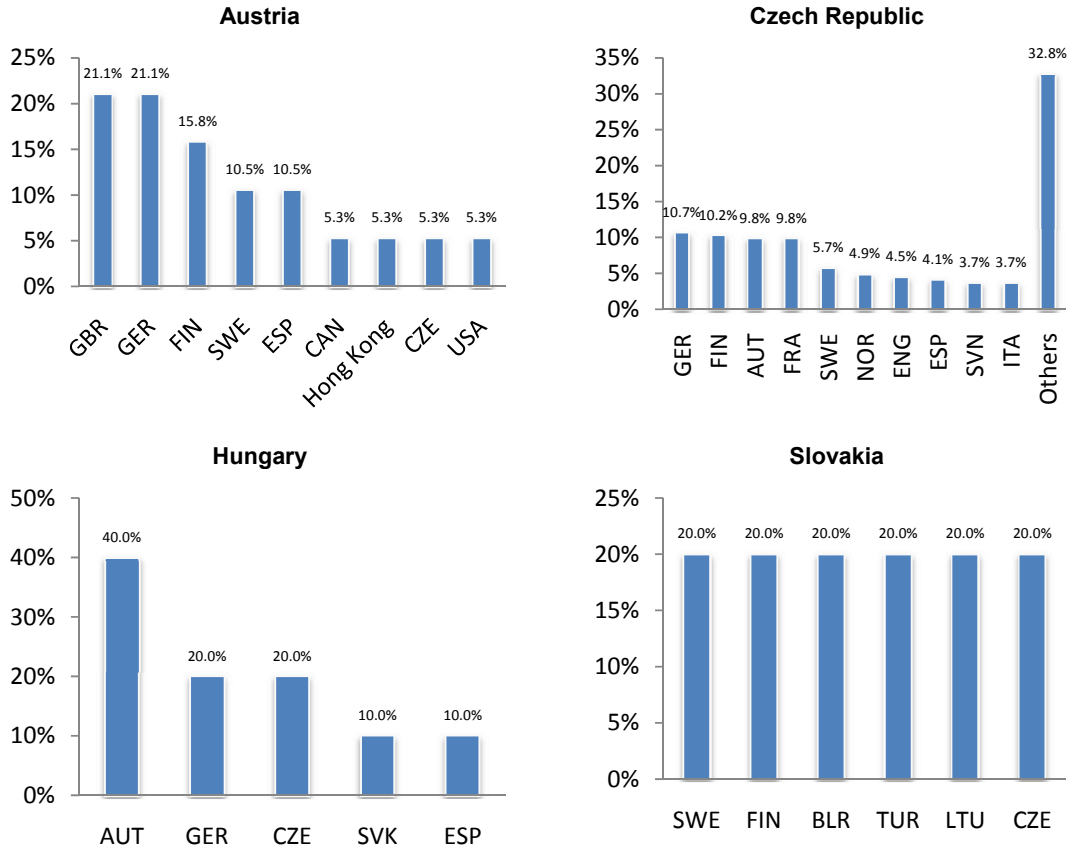
5.4.1. Destinations countries and reasons for choosing the destination country

Nonetheless a number of interesting findings emerge from the questionnaire. For instance The second part of the questionnaire evaluates previous experiences of respondents with studying abroad. The results show that the Austrian students have most experience with studying abroad relative to students from other parts of CENTROPE since 17% of Austrian respondents already went through a foreign stay in the past. Also Hungarian students seem to be more active in attending of the foreign study programmes than student from

other parts of CENTROPE, since 12% of the Hungarian students have experience with studying abroad.

By contrast, Czechs and Slovaks appear to be rather immobile since only 7% and 5% of them, respectively, state that they have attended a study stay abroad in the past. This thus indicates a lower participation in foreign studies among students from the EU 10-parts of CENTROPE which could be due to historical reasons but could also indicate lower motivation, more worries or fewer opportunities to study abroad for the students from these regions of CENTROPE.

Figure 5.4: The most popular destination countries for students with previous experience of studying abroad



Source: Own Survey.

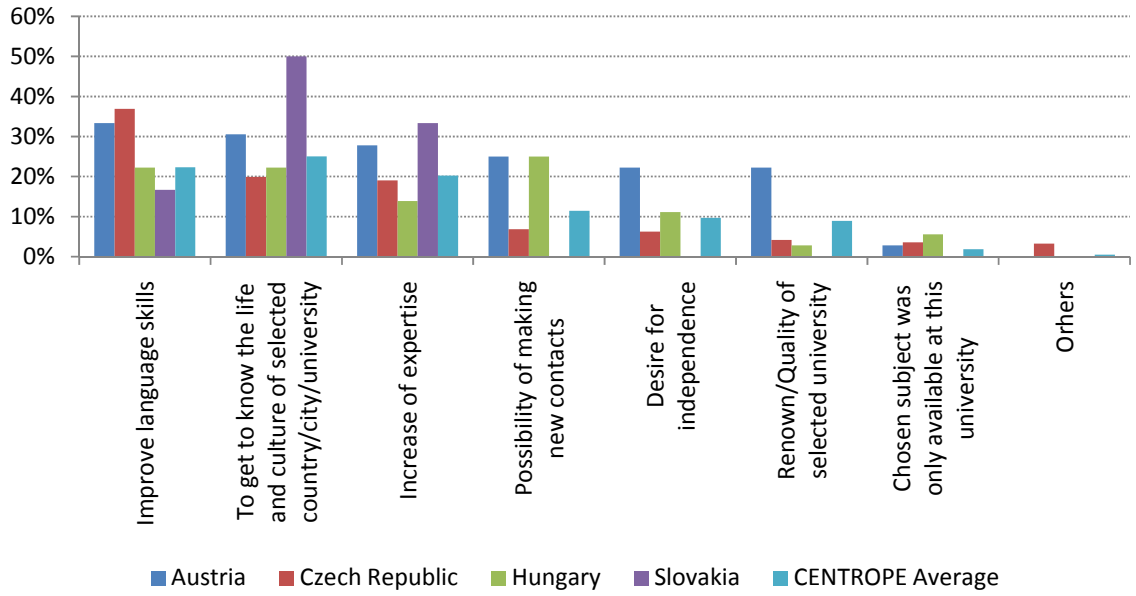
Aside from the differences in the participation rates in studies also the preferred countries of destination for such studies and the reasons for choosing this country vary rather widely among the students: Beginning with Austrian part of CENTROPE, more than 20% of Austrian students chose Great Britain and Germany as a target destination of their completed foreign studies. Finland with 16% and also Sweden and Spain with more than 10% also belong to the popular destinations related to the past foreign stays in Austria. The highest ranking CENTROPE country among Austrian students (the Czech Republic) by contrast ranks at about the same rank as the US, Honk Kong and Canada, with only one of the students in our sample having ever studied in another CENTROPE country. Also as shown in the figure in the appendix and figure 5.5 the most important reason for the students from the Austrian universities situated in CENTROPE was the improvement in the language skills and more than 30% of Austrian respondents wanted to get to know the life and culture in foreign countries. Increase of expertise and the possibility of making new contacts were the other frequent answers in the Austrian part of CENTROPE too.

In contrast Germany, Finland, Austria and France were the most usual target destinations of the foreign stay for the South Moravian students. Among these students - for which our sample is large enough to allow more reliable estimates - only Austria featured among the top ten countries for previous experience with studying abroad among the CENTROPE countries. Furthermore, in the Czech part of CENTROPE the students attended foreign study programs mainly in order to improve their language skills. This motive was equally important to the motives of getting a possibility to get to know culture and life of the host country and to increase their expertise in the field of study. Only 7% of the students with experience of studying abroad indicated that the possibility of making new contacts was a reason why they studied abroad.

In Hungary by contrast Austria is a more popular destination for studying abroad and students also have more experience in Czech and Slovak universities. A share of 40% of responding students studying in Hungarian part of CENTROPE who attended the foreign study abroad chose Austria as a target destination. Identical shares of 20% of the responding Hungarians attended the study stays in Germany and the Czech Republic. Surprisingly for the Hungarian students the most important factor to study abroad was possibility to make new contacts abroad. After that they indicated improving the language skills and the possibility to getting to know the life and culture as other important factors for their decision.

Finally, in the Slovak Republic where, however, on account of a small sample and a low share of students studying abroad we only have very few observations on students with an experience of studying abroad, students studied in Sweden, Finland, Belarus, Turkey, Lithuania and naturally in the Czech Republic. They mostly studied abroad to get to know the life and culture in the chosen country since 50% of responding students checked this reason. Also 30% of responding Slovaks indicated an increase of expertise and improving the language skills to be an important reason of their foreign study.

Figure 5.5: Reasons for students' choice of foreign study place

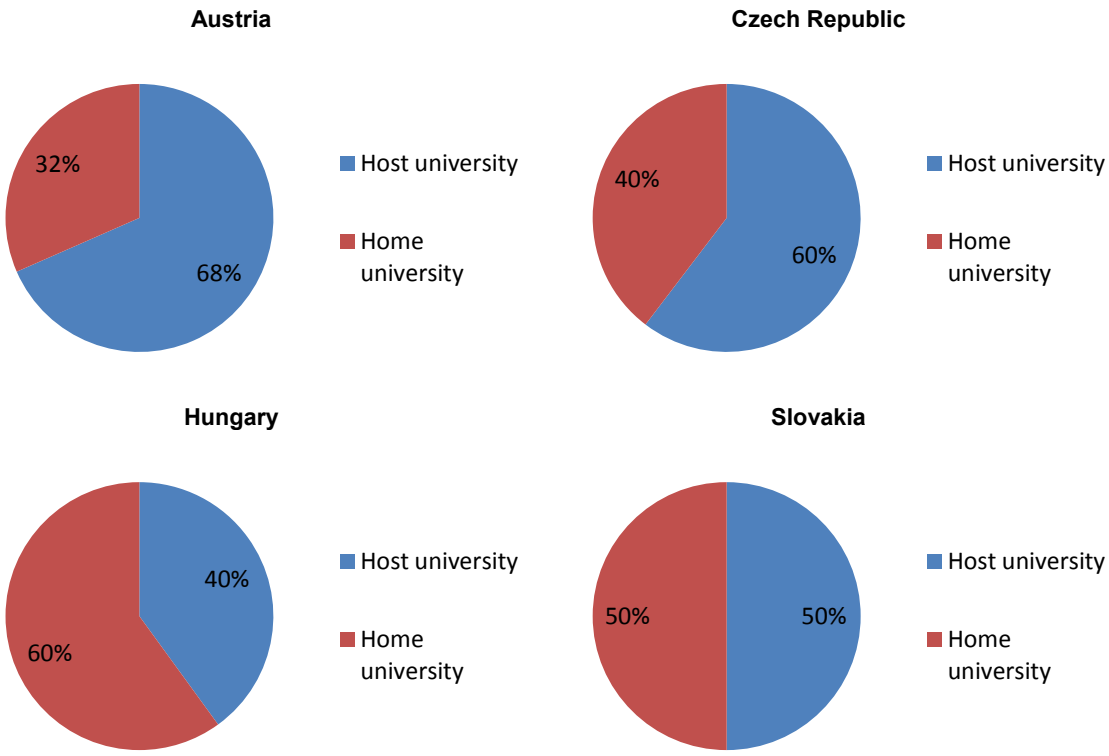


Source: Own Survey-

In sum therefore it can be concluded from the available evidence on the previous experience with studying abroad – which is however admittedly based on only few observations for most CENTROPE countries – that for students of CENTROPE in general experience with studying in other CENTROPE countries is rather rare and that countries such as Germany and Great Britain but also somewhat more surprisingly Finland and Sweden are more popular than other CENTROPE countries. The big exception seems to be the Hungarian CENTROPE, where experience with studying in all of the CENTROPE countries (but in particular in Austria) seems to be much more prevalent. Furthermore among the reasons for choosing a university abroad the possibility to get to know the

language, as well as the possibility to get to know a foreign culture and way of life and the increase in expertise in the field of study are the most important reasons for studying abroad among CENTROPE students.

Figure 5.6: Satisfaction comparison: content and form of education in host and home universities



Source: Own Survey.

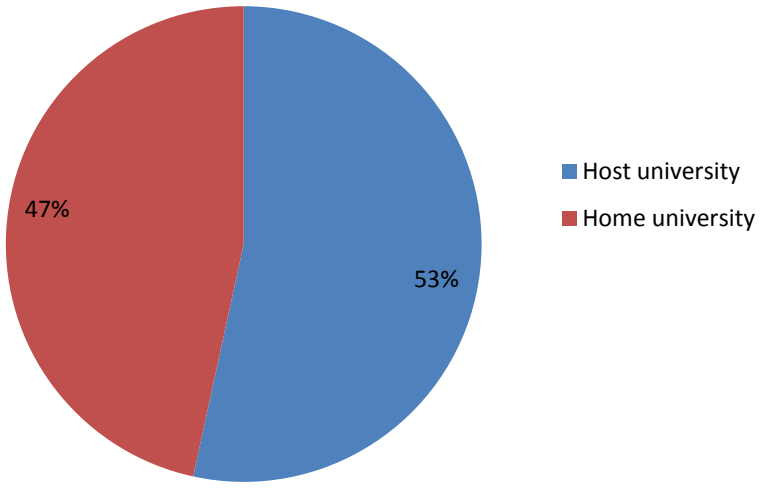
5.4.2. Satisfaction with the foreign universities relative to the home universities

There are also interesting differences with respect to the satisfaction of students with the host relative to the home university. The Austrian and Hungarian students despite their higher activity in attending foreign study programs, also more strongly appreciate the quality of home university. When comparing the home and host university 68% of Austrian students preferred the content and form of education in the home university, and 58% preferred the level of services provided at home. By contrast only 32% of them liked university facilities at the home university more than abroad (see figure 5.6 and figures in

the appendix). Among the Hungarian students also the majority of the respondents (60%) appreciated the content and form of education as well as level of services at the home university more than in the host university and as in Austria only the university facilities were evaluated better in the hosting university.

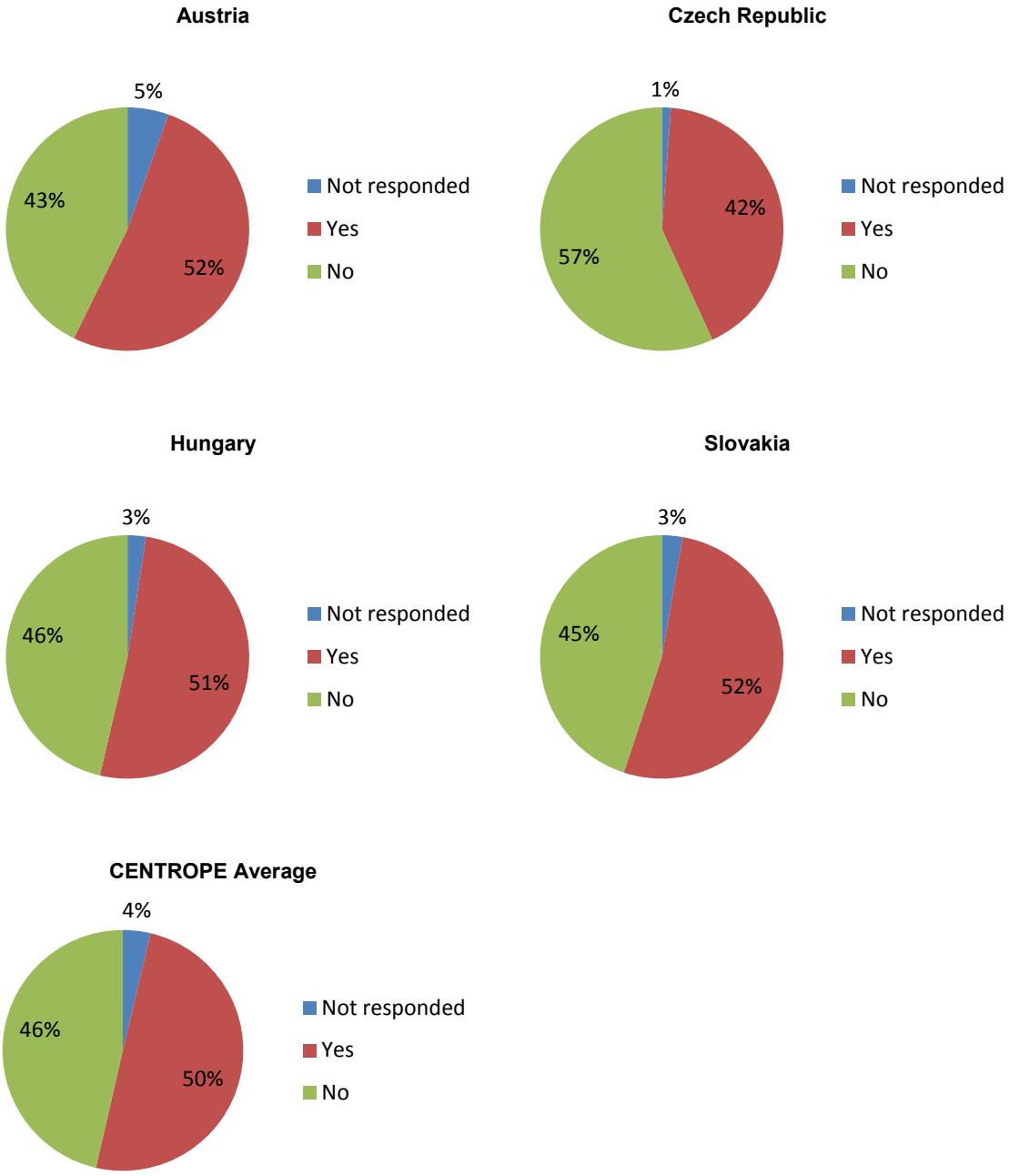
By contrast, the Czechs and Slovaks who attended foreign stay appreciated the foreign university. In particular students of the Slovak part of CENTROPE appreciated both the form and content of education and the level of services in the host and home institution about equally and also university facilities at the hosting university were evaluated equally. Czech students are even more critical of their home universities. The majority of them (60%) appreciated the form and content of education at the hosting university more than at home, half of them also prefer the facilities at the university abroad and more than 62% of them were more satisfied with the level of services at the hosting university. The interviewed Czech students are therefore rather critical of their home universities. This negative attitude of Czech students, which account for 90% of our sample, also leads to the students of the CENTROPE in average being rather critical of their home institution (see Figure 5.7)

Figure 5.7: Satisfaction comparison: content and form of education in host and home universities (CENTROPE average



Source: Own Survey.

Figure 5.8: Is the respondent considering studying abroad in the future?



Source: Own Survey.

5.5. Plans to Study abroad

5.5.1. Intentions to study abroad

The last and for our purposes central part of the questionnaire focused on analysing the mobility intentions of students and factors influencing the decision to study abroad. It includes a question on whether the respondent has considered the possibility of studying abroad in the future, information on preferred destinations, reasons for choosing certain destinations, and reasons for considering and not considering other CENTROPE countries as destinations of the foreign study. In particular the question of mobility intentions allows us to assess the potential of student mobility in CENTROPE. In this respect the responses reflect the answers to the question on pervious mobility to some degree (see figure 5.8):

- The Austrian students seem to have the highest mobility potential since 52% of them are considering studying abroad in the future. In addition to that we have to recall that 17% of the responding Austrian students already attended the foreign study program in the past.
- Contrary to Austria, only 42% of the students studying at the South Moravian universities consider studying abroad in the future. Together with 7% of students who attended the foreign stay already this implies a substantially lower potential of the South Moravian university students to study abroad.
- A half of Hungarian CENTROPE students (51%) respondents plan to study abroad in the future.
- Similarly 52% of students from Bratislava and Trnava regions consider studying abroad.

In summary, therefore as already with previous mobility experience, the students studying at the Central and Eastern European parts of the CENTROPE region seem to be less motivated or more worried or have fewer possibilities to study abroad. In the CENTROPE total, however, 43% of the CENTROPE students plan to study when we take the unweighted average in our survey and around 50% do so when weighting results with total student number in the individual CENTROPE regions

5.5.2. Preferred target countries

Finding a high potential of mobility of students studying at the universities in CENTROPE the survey then focused on a potential of the CENTROPE region to be a target destination

of foreign student stays. The questions in the final part of the questionnaire therefore concentrated on assessing attractiveness of the universities seated in the CENTROPE region among the CENTROPE students.

Table 5.2: Preferred destinations of foreign study exchange (%)

	Great Britain	Germany	Finland	France	Italy	USA	Netherlands
Austria	35,1	43,9	7,0	7,0	8,8	29,8	19,3
Slovak Republic	33,3	15,8	17,5	15,8	7,0	10,5	5,3
Czech Republic	17,4	11,3	8,1	7,1	2,0	7,5	3,3
Hungary	26,2	31,0	7,1	0,2	7,1	14,3	4,8
CENTROPE Average	30,4	29,3	9,9	8,8	6,8	19,4	11,6
	Spain	**Sweden**	**Hungary**	**Slovakia**	**Austria**	**Czech Republic**	
Austria	15,8	3,5	0,0	8,8	x	8,8	
Slovak Republic	15,8	14,0	0,0	x	8,8	7,0	
Czech Republic	7,5	6,3	0,8	2,3	7,2	X	
Hungary	16,7	0,2	x	11,9	38,1	7,1	
CENTROPE Average	14,2	6,5	0,2	5,5	6,2	6,4	

Source: Own Survey.

The results (see table 5.2) indicate that other CENTROPE countries are not the most preferred destinations for most students in CENTROPE, when considering where to study abroad. As with results for previous mobility Great Britain and Germany are the most attractive places to study abroad. Apart from these countries, the United States are also favourite destination for all four CENTROPE nationalities. The Austrian students also prefer Netherlands, which is in line with indicated preference of English speaking countries, since the Dutch universities are well known for their high quality of the English study programs. Spain is also an attractive destination for the Austrian students. Slovak students by contrast consider Finland to be an attractive place to study. In addition to natural beauties of the country, this may also be due to Finnish universities providing high quality English study programmes. The preferences of South Moravian students seem to be distributed quite equally among the countries. Great Britain is the most attractive destination for the Czechs. By contrast, Italy is considered as one of the less attractive places to study.

The only CENTROPE region where students seem to have a strong preference for studying in another CENTROPE country are the Hungarian parts of CENTROPE. For Hungarian students Austria is the most popular place to study, 38.1% of the interviewed studying in the Hungarian CENTROPE can imagine studying in Austria, 11.9% in Slovakia, and 7.1% in the Czech Republic. Among CENTROPE students from other countries other CENTROPE countries are less attractive. Only 16.6% of the interviewed students in the Austrian CENTROPE, 15.8% of the students in the Slovak CENTROPE and 10.5% of the students in the Czech CENTROPE could imagine studying in another CENTROPE country.

Table 5.3: Preferred destinations as a percentage of those who seriously consider studying in the CENTROPE region (multiple answers possible; %)

	Austria excluding Vienna (Eisenstadt, Krems, St. Pólten, Wr. Neustadt)	Vienna	Slovak CENTROPE (Bratislava, Trnava)	Czech CENTROPE (Brno)	Hungarian CENTROPE (Györ, Sopron, Szombately)
Austria	X	X	47,6%	81,0%	45,2%
Slovak Republic	66,7	75,4	X	38,6	31,6
Czech Republic	66,1	73,9	26,5	x	28,4
Hungary	85,7	95,2	52,4	66,7	x
CENTROPE Average	68,8	77,3	42,3	66,4	37,9

Source: Own survey.

Furthermore, among the (few) CENTROPE students that are considering to study in another CENTROPE country the students highlighted Vienna as the most attractive place to study. Also other Austrian destinations aside from Vienna remains very attractive place to study for students from CENTROPE. In addition also Austrian and Hungarian students, but surprisingly few Slovaks, could imagine studying in Brno and the Hungarian CENTROPE is about as popular among the Czech CENTROPE students as the Slovak CENTROPE.

In summary, therefore Great Britain and Germany are the most attractive places to study abroad for CENTROPE residents. In addition to these countries the United States, Netherlands and Finland belong to favourite student destinations among students of CENTROPE. These findings indicate a strong preference for English speaking countries or

countries that offer good English language study programs as the target destinations by the CENTROPE students, since all the countries listed above (except perhaps Germany) provide quality English study programs at the tertiary level.

5.5.3. Reasons for choosing the preferred country and reasons for not choosing CENTROPE

This strong preference for English speaking destinations is also confirmed when considering the answer to the question why a respondent did not want to study in another CENTROPE country. While following the results for previous mobility, increasing expertise, improving language skills and the possibility to make new international contacts were the most frequently stated reasons for studying abroad in general and a desire for independence was not an important reason to go study abroad for the responding students (see table 5.4), the respondents also often stated that the CENTROPE was unattractive for them because they preferred to study in an English speaking country (between 32% and 49% of the students) or because they preferred destinations further away (between 12% and 40%).

Table 5.4: Reasons for foreign study exchange (%)

	Increase of expertise	Improve language skills	Renown/Quality of selected university	Possibility of making new contacts	To get to know the life and culture of selected country/city/university	Desire for independence
Austria	82,5	75,4	36,8	61,4	29,8	26,3
Slovak Republic	61,4	77,2	50,9	77,2	70,2	49,1
Czech Republic	67,1	86,9	29,5	77,6	76,1	39,8
Hungary	73,9	83,3	45,2	90,5	69,1	28,5
CENTROPE Average	73,5	78,7	39,4	70,6	52,0	34,9

Source: Own Survey.

The data in table 5.5 however also sheds some light on other weaknesses of CENTROPE as a target destination for student exchange. In particular there seems to be a low awareness of the quality of CENTROPE universities, so that the students expected a low prestige or bad quality of the university (between 29% and 44% of the students). Roughly a fifth of students do not consider the universities in CENTROPE to be generally well

known and prestigious enough and another fifth of the students is of the opinion that the region's universities are not of high enough quality. This suggests that CENTROPE universities have a prestige problem, when trying to attract foreign students – at least from other parts of CENTROPE. On the positive side, however, only few students (between 2% and 7%) had problems with lacking exchange programs or bilateral agreements on student exchange in CENTROPE

Table 5.5: Reasons why studying in the CENTROPE region is not attractive for respondents

	I prefer studying in English-speaking countries	I do not consider the region universities to be well known and prestigious enough	I do not consider the region universities to be of high enough quality	Non-existence of bilateral agreement between chosen university in listed region and home university	I prefer studying in a location further away from home
Austria	31,6	22,8	21,0	7,0	14,0
Slovak Republic	47,4	19,3	19,3	1,8	33,3
Czech Republic	48,5	18,2	18,1	5,0	40,0
Hungary	42,9	14,3	14,3	4,8	11,9
CENTROPE Average	39,8	20,4	19,5	5,1	24,0

Source: Own Survey.

5.5.4. Summary and Conclusions

In sum therefore, the survey conducted among students of CENTROPE showed that most of students participating did not attend a foreign exchange study yet, but that around a half of the respondents had serious plans to attend an exchange study program in the future. This implies a high potential of mobility of the CENTROPE students. Increase in expertise, improving the language skills and the possibility to make new international contacts were the most frequently stated reasons for studying abroad. The most preferred countries for such a stay abroad, however, are the UK, Germany, Finland, France and the US.

Among CENTROPE students other CENTROPE countries are less attractive. Only 16.6% of the interviewed students in the Austrian CENTROPE, 15.8% of the students in the Slovak CENTROPE and 10.5% of the students in the Czech CENTROPE could imagine studying in another CENTROPE country. The only region where students are more prone to study in other CENTROPE countries is the Hungarian CENTROPE where 38.1% of the interviewed can imagine studying in Austria, 11.9% in Slovakia, and 7.1% in the Czech Republic. Furthermore within CENTROPE Vienna, the Austrian regions and South Moravia were indicated as the most attractive places to study.

The survey also showed the reasons why some of the respondents prefer other countries and regions to study than CENTROPE. Preference of English speaking countries and low prestige of universities located in CENTROPE appeared to be the main cause of rejecting CENTROPE as a target destination for student exchange programs.

Choosing other CENTROPE regions as a target destination therefore seems to crucially depend on the awareness for the CENTROPE universities as prestigious education institutions and the possibility to study in English. These factors can be determined positively by appropriate policy at the university as well as regional and municipality levels in order to improve interregional student mobility within the CENTROPE region. Therefore the results of the survey also provide a basis for formulating a number of general as well as concrete policy recommendations for authorities. Here increasing the awareness for and prestige of the local universities by spreading information on the CENTROPE region, building the partnerships and elimination the cross-border information barriers should be the main intermediate goal of regional and municipal policies. In addition to that authorities should also support CENTROPE universities to establish complete English study programs at the bachelor, master as well as doctoral levels. In this respect the cases of Finland or the Netherland, which are also small countries with little spoken languages but are more attractive for CENTROPE students that want to study abroad than the individual CENTROPE countries, suggest that such a policy can indeed be successful.

PART Two: Stock Taking on Labour Markets, Human Capital and Education in CENTROPE (Country reports)

6. Labour market in CENTROPE

Peter Huber

6.1. Austria

Austria traditionally is an EU country with a low unemployment and a high employment rate. For instance in 2010 according to the official ILO definition the annual unemployment rate amounted to 4.4% (which was the lowest among the EU countries) and the employment rate reached 71.7% of the active aged population (aged 15 to 64), which was the 4th highest in the EU. Despite this the Austrian labour market is also characterized by some more problematic developments. Here in particular the low employment rate of the elder (55-64 years), which was only 42.4% in 2010, but also the rather large gender differences in terms of payment and employment rates as well as the deficits in the labour market integration of foreign born residents in Austria have been repeatedly criticized.

Table 6.1: Key Indicators of the labour market situation in the Austrian CENTROPE in 2010

	Employment Rate (15 to 64 years)	Employment rate (55 to 64 years)	Unemployment Rate
	Total		
Austria	71.7	42.4	4.4
Eastern Austria	70.1	42.2	5.4
Burgenland	71.3	37.5	3.9
Lower Austria	72.3	42.3	3.6
Vienna	67.8	42.9	7.3
	Males		
Austria	77.1	51.6	4.6
Eastern Austria	75.1	52.1	5.9
Burgenland	77.6	50.4	3.7
Lower Austria	77.6	51.7	3.8
Vienna	72.3	52.8	8.2
	Females		
Austria	66.4	33.7	4.2
Eastern Austria	65.1	32.9	4.9
Burgenland	64.9	24.4	4.1
Lower Austria	67.0	33.3	3.4
Vienna	63.5	34.1	6.4

Source: EUROSTAT.

Within Austria the NUTS 1 region of Eastern Austria or equivalently the Austrian CENTROPE (which encompasses the provinces of Burgenland, Lower Austria and Vienna) is a region with relatively high unemployment rates and below average employment rates by Austrian standards. This is primarily due to the high unemployment rate in the capital city of Vienna, which has experienced substantial structural change and also demographic growth in the last two decades, but also to the low employment rate (in particular for women and the elder) in Burgenland, which is related to the more rural peripheral character of many parts of this province and the high seasonality of both employment and unemployment in this region. Among the provinces of the Austrian CENTROPE therefore only Lower Austria has both above average employment rates and below average unemployment rates. In this region only the employment rates of the elder (55 to 64 year olds) is lower than in the Austrian average. This is in part due to the industrial nature of this region, since the heavy restructuring of industry in this region in the 1990s and early 2000s was in part solved by substantial early retirements.

6.1.1. Institutions dealing with labour market issues

The low unemployment and high employment rates in Austria are usually attributed to a combination of the competitiveness of the country's industry, a successful implementation of flexicurity policies and a strong focus on active labour market policy. According to the annual report of the ministry of labour, social affairs and consumer protection (BMASK 2011) it is expected that a total of € 2.2 billion were spent on labour market policy in 2011. In 2008 (which is the last year for which data is available) Austria spent 0.67% of its GDP for active labour market measures, which despite the low unemployment rate is slightly above the OECD average of 0.64%. Therefore per percentage point of the unemployment rate only Denmark, the Netherlands Norway and Belgium spend more on active labour market policy than Austria among the OECD countries.

According to the Austrian constitution labour market policy is a responsibility of the national government in Austria. As stipulated in the Austrian Labour Market Promotion Act (Arbeitsmarktförderungsgesetz) the minister of labour, social affairs and consumer protection (BMASK) is responsible to use all available resources to achieve and retain full employment and guarantee the functioning of the labour market.

Table 6.2: Institutions dealing with labour market policy in Austria

Institutions	Main Activities / Comptences
National level	
Ministry of Labour, social affairs and consumer protection (BMASK)	- Has the overall responsibility for conducting labour market policy in Austria - Controls, supervises and provides finances to PES
Public employment service (AMS)	- Implements active labour market policy according to the guidelines of the ministry - Provides placement services and pays unemployment insurance benefits - Provides job guidance and consulting for enterprises - Implements other relevant labour market policies (e.g. permission of employment of third country citizen)
Social Partners	- Are responsible for wage bargaining - Are represented in the directorate of the national and regional PES
Ministry of economy, family and youth	- Has important competences related to labour market policy (e.g. economic policy, competition policy etc.)
Bundessozialamt	- Is an agency of the ministry of labour, social affairs and employment protection with the task of integrating disabled persons. - Is also responsible for rehabilitation measures
Regional Level (Vienna)	
Provincial PES	- Implements active labour market policy, provides placement services and administers social security payments - Adapts labour market policy to regional needs - Co-ordinates labour market policy with regional actors
WAFF	- Co-ordinates regional employment pact in Vienna - Administers labour market relevant projects for the city of Vienna - Provides consultancy to workers and enterprises
City of Vienna	- Has important competences related in economic policy
Regional Level (Burgenland)	
Provincial PES	- Implements active labour market policy, provides placement services and administers social security payments - Adapts labour market policy to regional needs - Co-ordinates labour market policy with regional actors
WIBAG	- Co-ordinates regional employment pact in Vienna - Implements economic policy measures for the province of Burgenland
Land Burgenland	- Has important competences related in economic policy
Regional Level (Lower Austria)	
Provincial PES	- Implements active labour market policy, provides placement services and administers social security payments - Adapts labour market policy to regional needs - Co-ordinates labour market policy with regional actors
Verein für Jugend und Arbeit	- Co-ordinates regional employment pact - Implements projects directed to prevent social exclusion of youths
Land Niederösterreich	- Has important competences related in economic policy
Ecoplus	- Implements economic policy measures for the province of Lower Austria
Local Level	
Communes	- Have competence in labour market related issues
Regional PES	- Administers and implements labour market policy, provides social payments
Local Employment Initiatives	- Initiate activities of a more local character

Source BMASK, ZSI, own research.

The duties of the ministry of labour, social affairs and consumer protection vis a vis the public employment service (PES- Arbeitsmarktservice) are regulated in the Labour Market Service Act (Arbeitsmarkrtservicegesetz). This states that labour market policy is allocated the tasks of contributing towards the avoidance and elimination of unemployment while preserving social and economic principles and thus working towards balancing the supply and demand for workers to as great an extent as possible and in an economically meaningful and sustainable way. In particular the goals of Austrian labour market policy are:

- Achieving and maintaining full employment.
- Keeping older employees in work for longer.
- Taking active measures to raise the level of qualifications and of equal opportunities.
- Increasing transparency in the labour market.
- Developing human resources.
- Re-activating the unemployed.
- Combating long-term unemployment.

Active and passive labour market policy at the national level

The PES is responsible for implementing national active and passive labour market policy, the objectives of which are detailed in the labour market policy guidelines of the ministry,[22] by providing free placement services for the unemployed and implementing active labour market policy. Furthermore the PES also is responsible for the payment of unemployment benefits as well as a number of other social payments and can advise the government on active labour market policy. It is therefore the central actor in implementing active and passive labour market policy and administers sizeable funds devoted to this objective in Austria. It also commands over a highly differentiated set of instruments (that include

[22] These guidelines state the priorities of active labour market policy instruments in terms of target groups and are listed in the annual English language publication on labour market policy in Austria (see e.g BMASK, 2011 p9f) and are closely linked to (but somewhat more specific than) the employment guidelines of the Europe 2020 strategy.

consultancy, qualification and training measures and job creation programs[23]) (see table 6.2) and a highly differentiated set of target groups. Its programs and projects are continually monitored and the PES is also considered a forerunner among the government organizations in terms of formal evaluations of its policy.

Table 6.3: Active and activating labour market policy of the AMS and the Ministry of the Economy and Labour (BMWA)

	Expenditures(in million €)			Cases		
	2008	**2009**	**2010**	**2008**	**2009**	**2010**
Total	1,790.2	2,146.2	2,288.0	857,238	1,231,338	1,125,238
including:						
Qualification measures	611.8	699.7	687.0	716,315	896,150	894,529
Promotion of education	360.9	444.4	431.2	164,227	206,156	217,707
Child care allowance	5.6	4.1	4	11,241	9,134	8,830
Company integration subsidies	73.9	82	116.5	27,068	29,135	37,261
Non-profit employment projects	47.2	56.4	40.5	5,753	7,079	6,303
Socio-economic enterprises	70.3	79.9	82.0	14,620	18,050	20,465
Subsides for women	425.9	490.3	495.6	449,579	553,603	550,143
People with disabilities	140.2	151.0	145.6	119,848	135,321	143,855

Source: BMASK (2011) Note data are including apprentice training bonus and short-time working, but exlude company related labour market subsidies.

Table 6.4: Important laws for labour market policy

Law	**Content**
Labour Market Services Act	Defines the role, activities and organization of the Austrian PES
Labour Market Policy Financing Act	Provides the legal basis for the use of active labour market policy instruments and placement services
Unemployment Insurance Act	Regulates the Austrian unemployment insurance system
Employment of Foreign Citizens Act	Regulates the procedures and conditions for employing foreign (third country) citizen in Austria

Source BMASK, own research.

[23] As a rule of thumb around 60% of the PES funds for active labour market policy are spent on training measures, 30% on employment creation schemes and a further 10% on consultancy.

Active and passive labour market policy at the regional level

The PES is organized into 9 provincial organizations (Landesgeschäftsstellen – LGS). These are headed by a directorate composed of the social partners and (according to §12 AMSG) are responsible for setting the priorities of labour market policies on a regional level as well as co-ordinating labour market policies with regional policy makers (provincial governments and social partners). For this purpose each provincial organization also has a number of regional offices (Regionalgeschäftsstellen – RGS) which implement the objectives set by the provincial organization. In sum therefore the provincial PES organizations, which are in essence independent organization under national ownership, are the main players in the field of active and passive labour market policy in the Austrian regions, while regional governments traditionally – as also foreseen in the constitution – had only a very small role in this field.

In the last decades, however, provincial governments have also been increasingly involved in labour market policy as they provided substantial financial resources to active labour market policy. This participation of the provinces usually takes the form of provinces providing additional funds to the PES to conduct additional policy interventions that are usually also administered through the PES. Institutionally this has resulted in the establishment of so called territorial employment pacts (TEPs) in all of the Austrian provinces. These usually are partnerships involving the provincial government and the PES and also a number of further partners (such as social partners, actors in education policy, communes or regional business support agencies) which serve the broader co-ordination of regional active labour market policy (of the PES) and economic policy (of the provinces) as well as the co-ordination of regional funds in active labour market policy. Furthermore, in some cases provinces also founded own organisations that implement provincial active labour market policies in co-operation with the PES. For instance the Wiener ArbeitnehmerInnenförderungsfonds (waff)[24] is a central actor with respect to the administration such labour market projects in Vienna.[25] Its duties are to – in co-operation with the PES – analyze the development of the Viennese labour market and to design and implement individual labour market projects.

[24] According to its activity report this organization had a budget of € 58 million in 2010.

[25] On a more local level a number of more small scale employment initiatives also exist in Vienna as well as in Lower Austria and Burgenland. These, however, mostly have only very limited funds and competencies and as a rule are involved in rather local projects. Since many of these initiatives are supported by national or provincial funds and since a detailed description of these initiatives would make this report rather long, we do not describe these initiatives in detail here.

Employment and social policy

While the provincial PES is therefore undoubtedly the most important actor in terms of active and passive labour market policy on a regional level a number of other institutions are relevant for fields that are important to labour market policy in Austria. Thus for instance the Austrian social partners have an important role in determining wages (which however are negotiated at the national level in Austria) while the provincial governments have substantial competencies in fields such as enterprise support and innovation policy (see Csismadia et al., 2012 for a description), while the community level has some competencies in social policy. Finally, the Bundessozialamt, which also has provincial head offices, is a further actor in labour market policy. This is an agency of the ministry of labour, social affairs and employment protection with the task of integrating disabled persons which also administers rehabilitation measures after work accidents, and is of some importance when policies aimed at integrating disabled persons are considered.

Clearly this multitude of actors requires some co-ordination, which, however, due to the decision making structure of the PES – which closely involves the social partners – and the participation of the provincial governments in active labour market policy is usually considered less problematic in Austria than in many other fields of policy. Furthermore to some extent this co-ordination is also taken over by the co-ordination office of the regional territorial employment pacts which exist in all provinces of Austria. These on demand of their partners work on a wide variety of topics by linking labour market and employment policies with other policies, such as for example social, educational, structural and economic policies and are also increasingly involved in other policies than only regional labour market and structural policy.[26]

6.1.2. Labour Market Strategies and Policies

The national level

On a strategic level Austrian labour market policy is carried out according to the targets set by the ministry of Employment, Social Affairs and Consumer Protection for the PES in

[26] Note that these pacts are rather small organizations devoted primarily to co-ordinating actors. They are therefore rarely staffed with more than one full-time person and have only very few own competences. In the current structural fund period they are, however, also involved in activities relating to the inclusion of marginalized groups (i.e. Priority 3b of the OP ESF Austria).

2010 (see box 1). These targets are closely linked to the Austrian national reform program's chapter on the core objective of employment, which aims at achieving an employment rate of 77 to 78% among the population aged 20-64 by increasing employment prospects of the elder (through reducing access to early retirement, improving access to health services for the elder, special training programs and awareness building), women (by improving childcare facilities, preventing gender segregation in vocational training, improving career prospects of women in the public sector) as well as targeting youths, migrants and less qualified (by guaranteeing vocational training places, increased training, career counseling, focusing migration policy on more highly qualified workers and supporting projects dealing with diversity management). Furthermore, some of the objectives also relate to the headline target of reducing poverty and social exclusion, where the government aims to make a contribution of 235.000 persons to the EU-wide objective of reducing risk of poverty and social exclusion, primarily by integrating persons that have not been on the labour market (by combating long term unemployment, better health care, improving childcare facilities, and improving the labour market situation of migrant women).

In addition these goals also closely link to the National Action Plan for Integration, which outlines the Austrian strategy for improving the integration of the foreign born population in Austria and the National Action Plan for Gender Equality in the labour market. The former document represents a broad based strategy of the government with respect to integration policy which focuses on 7 strategic areas of action (language and education, work and occupation, laws and values, health and social affairs, intercultural dialogue, sports and free time activities and housing and regional dimensions). It inter alia calls for the PES to take more consideration of the target group of migrants and to offer improved language training to migrants. The later document by contrast sets up a detailed strategy that aims at (and designs measures to) improving the equal treatment of both genders on the labour market by diversifying the current gender specific educational and career paths, increasing labour market opportunities, increasing the number of women in leadership positions and reducing the gender pay gap in Austria.

Furthermore, the PES goals also link up to the strategic reference framework 2007 – 2013, which under the heading of employment strategies orients labour market policy to improve the skills of the elderly, increase training among the unemployed, improve the integration of handicapped persons in the labour market and to create and secure possibilities for

lifelong learning[27] as well as to the operational program for the ESF for the period 2007 to 2013 in which two of the five objectives (increasing the adaptability of employees and enterprises and reducing unemployment) are implemented by the PES, while two objectives (social Integration of handicapped persons and persons distant from the labour market, territorial employment pacts) are administered by the ministry of labour social affairs and one further priority (lifelong learning) is administered by the ministry of education, art and culture as well as the ministry for science and research.

Box 1: Targets of Austrian labour market policy

The targets of Austrian labour market policy are:

- to counteract the exclusion of persons or groups of persons in the labour market in the interests of equal opportunities;
- to ensure that periods of unemployment are as short as possible, preferably by placement in job vacancies;
- to integrate persons threatened by long-term unemployment into the labour market as sustainably as possible with the aid of labour market policy tools;
- to attempt to (re-)integrate persons into working life at an income- and qualifications level which is as high as possible;
- to strongly promote the equal treatment of the sexes and to counteract gender-specific labour market segregation;
- to further increase the effectiveness and efficiency of measures;
- to further develop early intervention;
- to make the specialist occupational potential of persons with migrant backgrounds visible and usable;
- to fill job vacancies as quickly and fittingly as possible;
- to offer advice and support for the preparation towards taking up self-employment and/or ending a period of unemployment;
- to keep people in employment as far as possible, also with the aid of labour market policy tools;
- to make use of periods of involuntary under-employment (e.g. short-time working, seasonal unemployment) to acquire skills and obtain qualifications;
- to conceive and offer qualifications programs and qualifications which are suited to the respective target groups and which have a promising future;
- to examine and improve the quality and sustainability of skills training;
- to provide an adequate subsistence income during skills training;
- to further develop the instrument of individual advice and support for jobseekers with frequent/longer periods of unemployment with the goal of achieving improved and more sustainable labour market integration (e.g. via targeted comprehensive support during the reintegration process – case management);
- to offer companies advice so that they can create and promote new working hours models and new opportunities to obtain skills/qualifications for their employees, whereby particular focus should be placed on the gender-specific distribution of working hours;
- to push for early notification of unemployment with a strong emphasis on self-service – without the limitation of other services;
- to increase transparency in the labour market;
- to intensify customer orientation and to offer precisely matched placements;
- to ensure the quality and transparency of the IT system

S: BMASK (2011) p 9.

[27] One strategic area of labour market policy laid down in the strategic documents, that is not dealt with in the PES goals, is that of territorial co-operation. This is, however, dealt with on the program of territorial employment pacts, that is administered directly by the ministry of labour, social affairs and consumer protection.

The regional level

While therefore at the national level quite a number of official strategy documents exist that deal with labour market policy or subfields of labour market policy, at the regional level – due to the important role played by the PES in implementing regional labour market policy – only very few such encompassing strategy documents exist. Aside from the regional development strategies that exist in all of the Austrian provinces, which are, however, more strongly focused on issues of spatial planning and economic policy and therefore usually only touch upon issues of labour market policies by stating rather general and unspecific objectives, the major source for regionally differentiated labour market strategies in Austria are the operational programs (OP) for EFRE funds[28] and in the case of Burgenland, which is the only phasing out region in Austria also the separate OP for ESF.

For instance in Vienna the operational program foresees an own labour market subactivity under the priority "integrative urban development". In this activity the goal is to revitalize deprived urban areas, where labour market problems are concentrated by reducing social segregation and providing both training measures as well as employment projects in these areas.[29] In Lower Austria by contrast the OP foresees job creation activities through increasing the competitiveness of industry and tourism and through strengthening innovative activities.

The only region in the Austrian CENTROPE where a detailed and binding regional labour market strategy exists is Burgenland, which as a phasing-out region also has a separate operational programming document for the ESF. This document is, however, strongly influenced by the national operational program for ESF. It focuses on three priorities:

- Improving the adaptability of the workforce and enterprises – in this priority particular emphasis is given to increasing the qualification of the workforce (and in particular of the employed).
- Integration in the labour market and social integration – under this priority activities for unemployed persons and for handicapped and socially excluded persons are foreseen.

[28] Given the objectives of EFRE programs the measures planned in these funds, however, relate to only some specific areas of labour market policy and thus fall short of a full-fledged integrated strategy

[29] To finance this activity the city Vienna uses the possibility of cross-financing activities that actually should be financed by the ESF.

With respect to the first of these activities particular emphasis is put on reducing gender differences (which as shown in the introduction are particularly large in Burgenland). The second activity by contrast also focuses on ethnic minorities (which are the Gypsy and Croatian minority in Burgenland)

- Support structure, Knowledge creation and transfer and labour market partnerships – this priority focuses on strengthening human capital[30] (where the aim is to orient the region in the direction of a learning region) and further developing the existing co-operation structures (i.e. the territorial employment pact) in Burgenland

Cross-border initiatives

Finally, the strategic reference framework 2007 – 2013 also mentions cross-border and transnational co-operation both in the area of ESF as well as EFRE funded programs. In this context also labour market policy is mentioned as a potential field for cross-border and transnational co-operation, for which, however, only rather general objectives (such as the preparation of labour markets to the end of derogation periods with respect to the new member states and the improvement of qualifications) are mentioned. These objectives are, however, concretized in the programming documents for cross-border co-operation under the European Territorial Co-operation objective. In these documents usually strong emphasis is given to the topics of education, qualification and integration of labour markets as well as social integration.[31] Furthermore the transnational programs for Central Europe also provides for a separate activity under the title “Fostering Knowledge Development” which aims at creating transnational education networks, implementing joint cross-border human resource management systems, developing instruments for managing migration and brain-drain and establishing co-operation between training facilities and labour market organizations.

[30] This area is also closely linked to the OP for EFRE in Burgenland where investments in training programs and education are mentioned under the priority infrastructure and sustainable development.

[31] Further concretization in this area is documented by the actual projects in this framework (e.g. FAMO, which develops a cross-border labour market monitoring instrument or ÜBI, which develops a cross-border labour market initiative between Vienna and Bratislava).

6.1.3. Methodology

As in most EU countries in Austria there are two different methods of measuring unemployment rates. The first of these is the (official) definition according to the ILO-EU methodology; the second is the national definition, which is frequently used in many business cycle analyses.

The source for unemployment rates according to the ILO definition is the Austrian Labour Force Survey (ALFS), which is a quarterly questionnaire of around 20.000 households (40.000 individuals), that is representative for the population at a NUTS2 level in Austria.[32] According to this method of measurement persons that state that they either were in paid employment for at least one hour in the week preceding the interview or that interrupted their continued employment in the week preceding the interview (e.g. due to holidays, maternity leaves or illness)[33] are considered to be employed, while persons, who a) are not employed b) have been actively seeking for employment in the week before the interview and c) would be available for employment within two weeks are considered unemployed in the questionnaire.[34] All persons that are neither employed nor unemployed, finally, are not considered to be part of the labour force. The unemployment rate is given as the ratio of the unemployed to the labour force (i.e. employed + unemployed). For regional considerations it is also important to note that in the ALFS both employment and unemployment are measured at the place of residence (i.e. at the place where a person lives)

The sources for calculations according to the national method are the social security files and registered unemployment at the PES. In particular according to the national method employment is measured in the social security files. The employed therefore include all employment contracts of dependent employees paying full social security contributions. This implies that relative to ALFS data a number of important groups are not included in this definition. These groups include employees earning salaries lower than the minimum

[32] Note that for regional levels below the NUTS 2 level ALFS is not representative.
[33] In detail persons with an interruption of employment are considered employed only if this interruption lasted less than 3 months, or if the interruption has lasted for more than 3 months but the employer is still paying more than 50% of the salary. Therefore persons on maternity or sickness leave from an existing employment relationship are also employed.
[34] In addition also persons who were not searching for employment because they have already found a workplace are considered unemployed if the expected date of starting work is more than three months from the date of interview and the person would be available for other employment in the next two weeks.

necessary to be eligible for social security contributions (currently € 376,26 per month**)** and all self-employed except for persons on a short term personal service contract. Furthermore the statistics count employment contracts not persons. Therefore persons employed in more than one employment contract are double counted.[35] Finally, in contrast to the ALFS definition employment relationships are counted at the place of work (i.e. the location of the employer). Since the social security data is coded at the enterprise level this implies that for firms that have more than one establishment in the same province, it is impossible to allocate their employees to a region below the provincial level.[36]

The unemployed, by contrast, are measured as registered unemployed at the PES excluding persons participating in active labour market measures, receiving advance payments for pensions and early retirement and persons looking for a position as an apprentice. In contrast to the employment statistics these unemployment figures are measured at the place of residence of the employed.

To calculate the unemployment rate according to the national statistics the labour force is proxied by taking the sum of the employed according to the social security files and the unemployed and the unemployment rate is given as the share of the labour force that is unemployed.

6.1.4 Labour Market Analysis based on national statistics

Long term factors influencing employment and unemployment

Figure 6.1 provides some information on the employment growth as well as the unemployment and vacancy rate in Austria according to the national statistics. As can be seen from this picture and as also already mentioned in the introduction to this part of the study the Austrian CENTROPE is historically a region with an above average unemployment rate in Austria. This is primarily due to above average unemployment in Vienna, where a combination of structural change causing low employment growth and increased labor supply, due to in-migration have increased unemployment rates substantially. High unemployment rates – which were actually above the Viennese level until 2002 - can also be found in Burgenland, where high seasonality and the rural

[35] This is particularly relevant for persons on maternity leave if they work during their maternity leave and for part time employed

[36] This problem does not arise at a provincial level because the social security system differentiates between province of work..

peripheral character of the province lead to a substantial increase of regional unemployment. The only region in which unemployment rates are at about the Austrian average in the Austrian CENTROPE is Lower Austria.

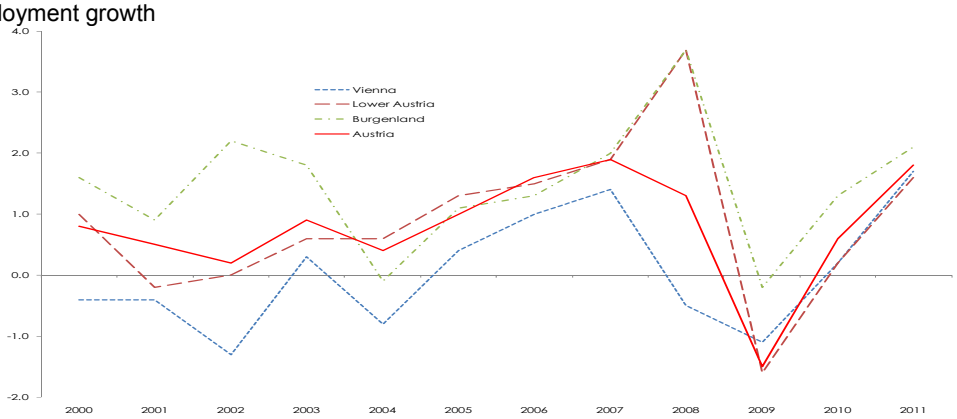
These differences in unemployment rates are, however, also associated with substantial differences in terms of long-term employment growth and vacancy rates as well as the structural, cyclical and seasonal components in unemployment levels. Thus for instance historically Vienna has been marked by rather slow employment growth in the last two decades. Again the underlying reason for this once more the substantial structural change that has been associated both with a – by Austrian standards high productivity growth – and a substantial de-industrialization of the city in the last two decades (see Mayerhofer, 2007 for a detailed analysis of this de-industrialization process). This has resulted in a process of jobless growth in this time period.

Similarly, also Vienna is historically marked by low vacancy rates. This, however, is mostly caused by measurement problems in the vacancy rate. As discussed above the vacancy statistics in Austria only measure vacancies registered with the PES and thus ignore any other search channels of enterprises such as search through media and personal contacts. These search channels, however, play a disproportionately large part of the vacancies in the dense urban labour market of Vienna. So that actual vacancies are more substantially underestimated in Vienna than in other regions.

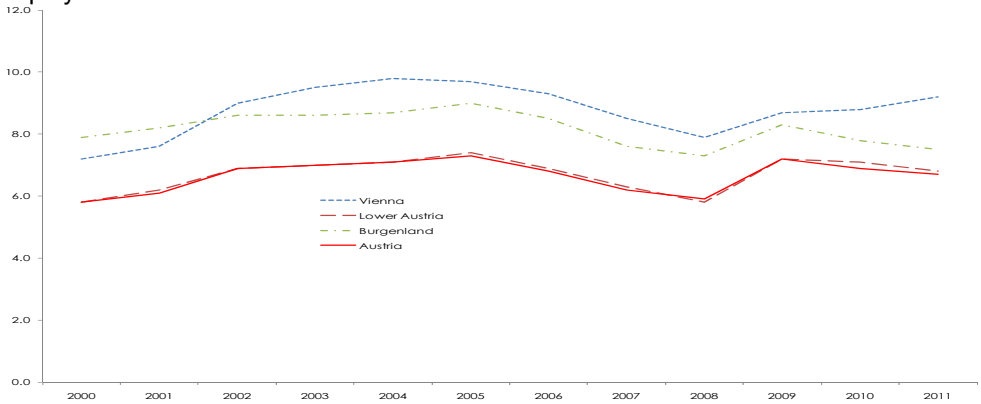
In contrast to Vienna the Burgenland is a labour market that has been characterized by higher than average employment growth until to 2004 and again from 2007 onwards and also above average vacancy levels until 2007. Thus in contrast to Vienna the high unemployment rates in Burgenland are less due to weak growth of labor demand (where indeed the Burgenland for most of the late 1990s and early 2000's as well as from 2007 on was the fastest growing Austrian NUTS 2 regions in terms of employment) but are more strongly associated with labor supply side developments. Here in particular the female employment rate, which was still very low at the start of this millennium in Burgenland, has caught up substantially to the European average in the last decade (Huber et al., 2009).

Figure 6.1: Unemployment rate, vacancy rate and employment growth in the Austrian CENTROPE Regions

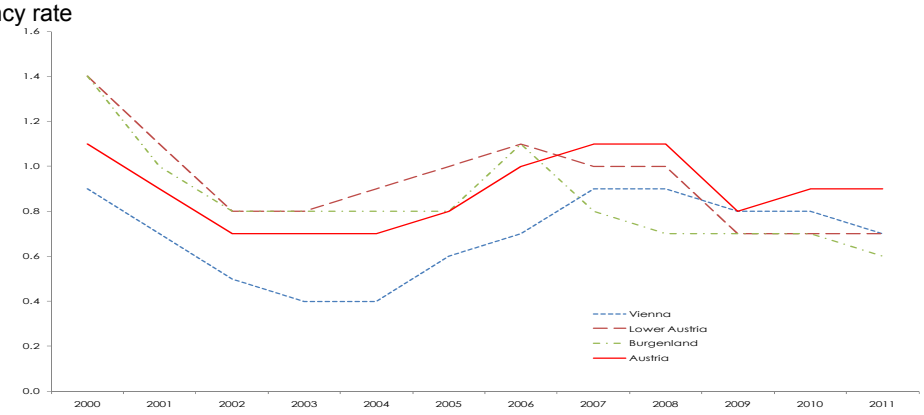
a) Employment growth



b) Unemployment rate



c) Vacancy rate



S: AMS – Österreich, Hauptverband der österreichischen Sozialversicherungsträger (HVSV), WIFO-calculations. Notes: Employment growth measured in % to previous year, unemployment and vacancy rate measured in % of Labor Force.

Finally, Lower Austria is a region where employment growth has been just about in the Austrian average in the last decade and where vacancy rates –were also slightly higher than in the Austrian average until 2007 but slightly below the Austrian level since then. While the later fact is difficult to interpret in light of the severe measurement problems that exist with the Austrian vacancy rates, the former development (of about average employment growth) in part also reflects the substantial internal heterogeneities that exist within the region. In particular although having a high share of industrial regions, Lower Austria is also the region located around the city of Vienna, so that a substantial part of its territory is covered by suburban regions, that in their labour market characteristics are quite similar to the urban labour markets of Vienna, while some of the most northern regions such as the northern Wein- but in particular the northern Waldviertel as well as some of the more alpine regions in the South-West of Lower Austria are rural peripheral regions that may be considered to be even more peripheral than many of the parts of Burgenland.

The importance of mismatch Unemployment and the location of the Beveridge Curve

The differences in the underlying reasons for regional differences in the long term developments of the labour market situation can also be seen in the location of the Beveridge curve in the Austrian regions (Figure 6.2). This curve shows the vacancy and unemployment rate that co-existed in a particular region at a particular point in time. This co-existence of unemployment and open positions is a result of the fact that the attributes of the unemployed (e.g. their skills) do not match the attributes of the open positions in the labour market. The curve thus shows mismatch unemployment (i.e. the number of vacancies needed to sustain a certain number of unemployed) in regional labour markets: The further out towards the right this curve is located in the diagram the higher is mismatch unemployment (i.e. the more vacancies are needed to attain a certain unemployment level in a certain labour market).

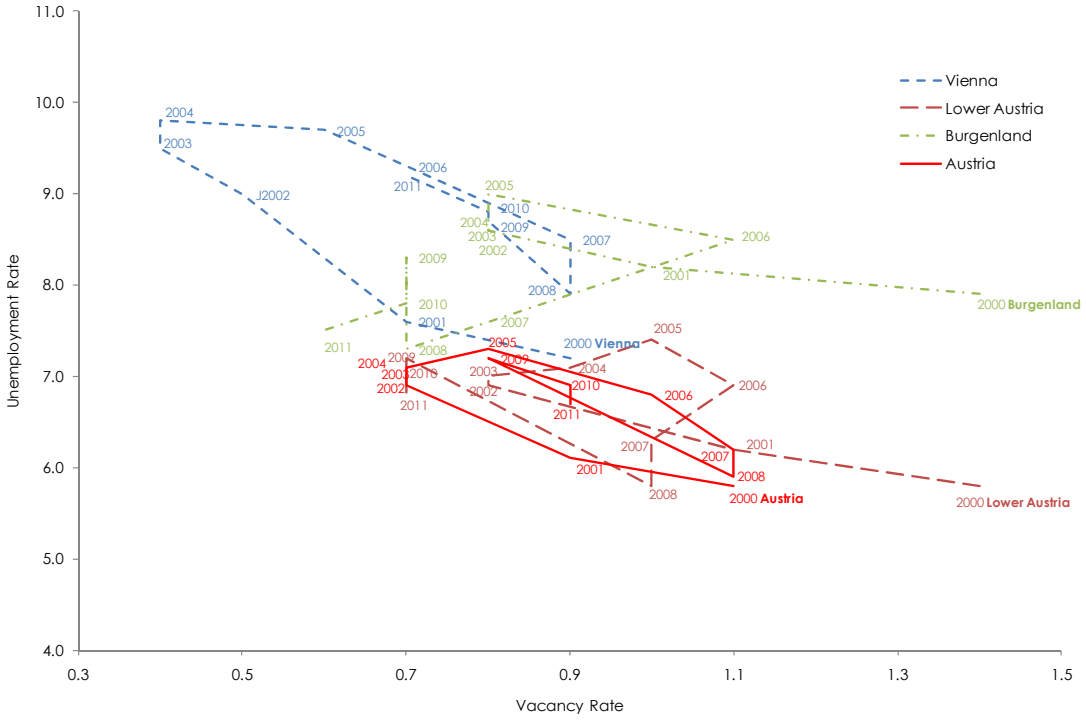
As can be seen from the figure the Viennese Beveridge curve has shifted outward substantially in the last decade, so that by 2010 it lay well above the Austrian average. As a consequence one may therefore conclude that a part of the high unemployment rate in Vienna is due to the fact that for a given level of unemployment Vienna needs substantially more vacancies than the average region, due to the mismatch of the skills of the unemployed and the open positions (see Riesenfelder, 2009 for a detailed study of

mismatch in Vienna). This therefore fits in well with the findings of substantial structural change in Vienna in previous analyses.

The situation is exactly opposite with the Burgenland, where the Beveridge Curve has shifted inward together with the reduced employment growth advantage of this region in the last decade. By 2011 thus mismatch unemployment was therefore not such an important issue in Burgenland as in Vienna.

Finally, in Lower Austria the location of the Beveridge Curve has not experienced any sizeable shifts as in the other two provinces in the last two decades and also its location suggests that mismatch unemployment is of an about similar magnitude as in the Austrian average.

Figure 6.2: Beveridge Curve (simultaneous occurrence of vacancies and unemployment) in the Austrian CENTROPE Regions



S: AMS – Österreich, Hauptverband der österreichischen Sozialversicherungsträger (HVSV), WIFO-calculations. Notes: Employment growth measured in % to previous year, unemployment and vacancy rate measured in % of Labor Force.

Cyclical Impacts and the effects of the crisis 2009

Aside from these long term factors that influence the relative position of regions in terms of employment growth unemployment rates and vacancy rates, the development of regional employment and unemployment as well as vacancies is, however, also influenced by business cycle and seasonal fluctuations. In this respect the role of the business cycle can best be exemplified by the developments in the year 2009 and the aftermath. As can be seen from the employment development in figure XXX the cyclical response to this crises differed markedly among the regions of the Austrian CENTROPE.

Thus for instance employment growth dropped from its record high (of 3.7%) in the last decade in 2008 to its lowest level of (-1.6%) in 2009 in Lower Austria. This mirrors the strong effect of the crisis in industrial regions, which are to a much larger extent dependent on export markets in economic developments, than urban and rural regions that have a much larger share of employment in non-tradable services and are therefore less strongly affected by global recessions. The improvement of economic conditions in Lower Austria in the recovery following the crisis of 2009, however, was also faster than in other regions of the Austrian CENTROPE. Lower Austrian employment growth basically followed the national trends in 2010 and 2011. Cyclical variations therefore play an important role in determining the employment development in Lower Austria

In Vienna, by contrast, cyclical variations are of a lesser importance. This can be exemplified by the fact that 2009 was the only year in the last decade in which employment growth was more favorable in Vienna than in Lower Austria. However, in Vienna also recoveries are usually somewhat weaker. Therefore as of 2010 Vienna's employment growth was already lower again than in Lower Austria. Furthermore, despite the recent recovery also the unemployment rate continued to increase in Vienna ever since 2009 and reached 9.2% in 2011.

Burgenland, finally, is a case that is located somewhere in between: here the cyclical component of the labour market situation is less important than in Lower Austria but more important than in Vienna. Thus the employment growth reduction in 2009 was noticeably more moderate in 2009 (from 3.7% in 2008 to -0.2% in 2009) than in Lower Austria but higher than in Vienna and in the subsequent recovery the employment growth advantage of the Burgenland over the Austrian average declined. In 2011 employment grew by 2.1% (relative to 1.8% in the Austrian average) in 2011

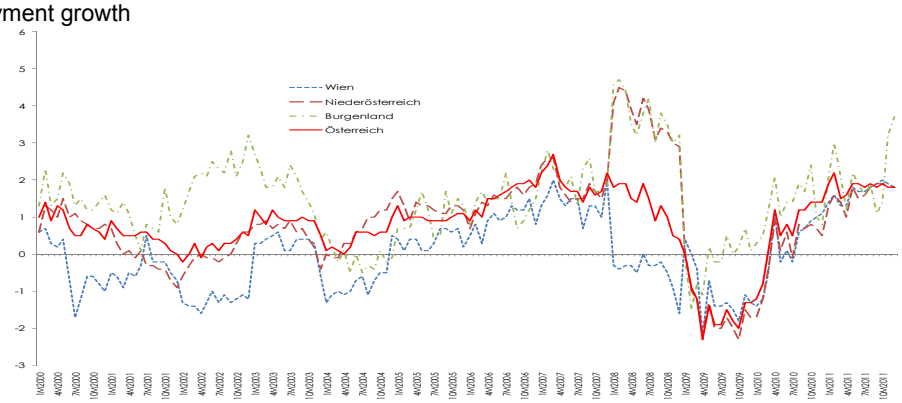
Seasonal factors of employment and unemployment

In consequence cyclical factors are more important in determining the labour market situation in Lower Austria than in the other 2 regions of the Austrian CENTROPE. Seasonality is, however, another important factor impacting on the labour market situation in the Austrian CENTROPE regions. This is best illustrated by the development of monthly regional unemployment rates shown in Figure 6.3. As can be seen from this Figure in all of the Austrian CENTROPE regions unemployment is highest in the months of December and January of a year while it is lowest in the period Mai to July of a year. This is therefore a communality of all of the Austrian CENTROPE regions and puts them apart from some of the more western provinces of Austria, where due to a strong specialization in winter tourism, the seasonal pattern of unemployment is twin peaked with low values being reached in Mai to July and in December to January.

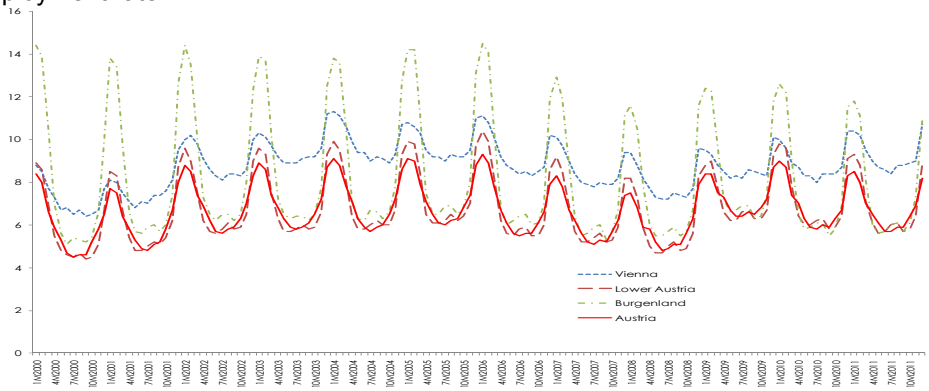
The importance of the seasonal fluctuations in determining regional unemployment rates, however, varies widely across the Austrian CENTROPE regions. In Burgenland the difference between the summer and the winter peak in unemployment rates is somewhere between 5 to 6 percentage points and reached only 5.5% to 5.6% in the summer months of 2011 (which is about the same level as Lower Austria) but up to 11.1% (which is the highest in the Austrian CENTROPE) in the winter months. In Lower Austria the differences between the summer and winter unemployment rates are much less pronounced and amount to around 3 to 4 percentage points, while in Vienna, finally, this difference is between 1 to 3 percentage points, so that in this region seasonality has only a minor impact on the average annual unemployment rate.

Figure 6.3: Unemployment rate, vacancy rate and employment growth in the Austrian CENTROPE Regions (monthly data)

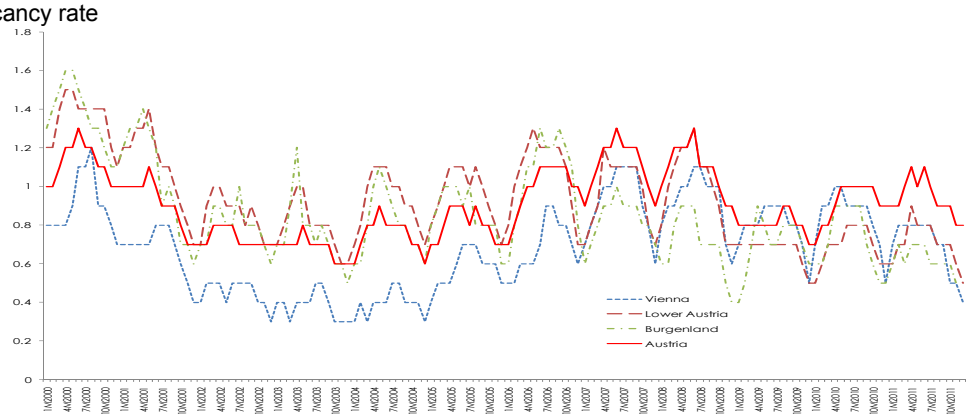
d) Employment growth



e) Unemployment rate



f) Vacancy rate



S: AMS – Österreich, Hauptverband der österreichischen Sozialversicherungsträger (HVSV), WIFO-calculations. Notes: Employment growth measured in % to previous year, unemployment and vacancy rate measured in % of Labor Force.

District Level Unemployment Rates

Table 6.5: District level unemployment rates in Austria 2002 - 2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Burgenland										
101-Eisenstadt	5.4	5.6	5.8	6.1	5.6	5.2	4.5	5.1	5.0	5.0
102-Mattersburg	6.5	6.5	6.6	7.1	6.6	5.9	5.8	6.8	6.8	6.1
103-Neusiedl am See	5.8	6.1	6.0	6.3	5.7	5.1	5.1	5.5	5.2	5.5
104-Oberpullendorf	7.4	7.5	7.4	7.3	6.9	6.5	6.1	7.2	7.0	6.7
105-Oberwart	10.0	9.9	9.5	10.1	9.7	8.9	8.9	9.9	9.2	8.8
106-Stegersbach	7.7	7.9	7.1	7.1	6.6	5.9	6.6	7.9	7.0	6.9
107-Jennersdorf	6.3	6.2	6.0	7.2	7.0	6.1	6.2	7.9	5.9	6.0
Lower Austria										
301-Amstetten	5.0	4.9	4.9	5.3	4.8	4.1	3.6	5.9	5.6	4.7
303-Baden	7.2	7.3	7.5	7.7	7.0	6.6	6.4	7.8	7.8	7.7
305-Berndorf - St. Veit	6.6	6.8	7.6	7.6	6.6	5.8	5.6	7.9	7.4	6.9
306-Bruck/Leitha	4.1	4.4	4.8	5.2	5.0	4.8	4.8	5.7	5.7	5.5
308-Gänserndorf	5.2	5.6	5.8	6.3	6.0	5.7	4.9	5.9	6.1	6.2
311-Gmünd	9.3	8.8	8.3	9.6	9.3	8.8	8.5	9.9	9.2	8.6
312-Hollabrunn	5.5	6.1	6.1	6.5	6.6	6.4	6.2	6.5	6.1	5.9
313-Horn	5.3	5.5	5.4	5.6	5.5	5.4	5.3	5.7	5.4	5.5
314-Korneuburg	4.5	4.7	5.1	5.8	5.2	4.5	4.2	4.9	4.7	4.7
315-Krems	6.8	6.6	6.6	6.9	6.4	5.6	5.2	6.5	6.3	6.2
316-Lilienfeld	5.7	5.3	5.5	5.8	4.9	4.3	4.7	6.7	6.5	6.4
317-Melk	5.2	5.1	5.1	5.4	4.9	4.2	4.0	5.6	5.1	4.5
319-Mistelbach	5.7	5.8	5.9	6.1	5.8	5.4	4.8	5.4	5.2	5.1
321-Mödling	5.1	5.3	5.7	5.8	5.1	4.8	4.6	5.4	5.6	5.7
323-Neunkirchen	7.1	6.9	6.4	6.5	6.0	5.7	5.8	7.5	7.5	7.0
326-St. Pölten	6.8	6.6	6.9	7.0	6.7	6.1	5.7	7.2	7.2	6.9
328-Scheibbs	4.9	4.8	4.8	4.9	4.4	3.5	3.4	5.1	4.9	3.7
329-Schwechat	6.1	6.4	6.8	7.3	6.9	6.3	5.3	6.6	6.6	6.4
331-Tulln	4.6	4.6	5.0	4.9	4.7	4.4	4.2	5.1	5.2	4.8
332-Waidhofen/Thaya	8.7	8.5	8.4	9.1	8.6	8.5	8.4	8.7	7.7	6.6
333-Waidhofen/Ybbs	4.4	4.4	4.2	4.4	3.8	3.1	3.2	5.7	5.3	3.9
334-Wr. Neustadt	7.3	7.8	8.0	8.3	7.5	6.9	6.3	7.9	8.0	7.7
335-Zwettl	5.6	5.5	5.2	5.8	5.9	5.3	5.3	6.1	5.7	5.6

Source: HSV, AMS, Arbeitsmarktdatenbank, BMASK, (Erwerbskarrierenmonitoring), WIFO-calculations.

In sum, therefore, despite the fact that the Austrian CENTROPE in general is a region with mostly above average unemployment rates, a more detailed analysis suggests that the underlying reasons for this differ markedly between regions. In Burgenland seasonality is noticeably higher than in the Austrian average and contributes substantially to above average unemployment rates. In Vienna by contrast in recent years mismatch unemployment seems to have become a major problem, while in Lower Austria it is a

higher cyclical vulnerability that drives much of the variation in the labour market situation over time.

The large importance of economic structure in determining the relative regional unemployment rates in the Austrian CENTROPE can also be seen from unemployment rate data on the level of labour market districts (NUTS 4 level) provided on annual basis in Austria[37]. According to this data for instance in Burgenland the labour market district with the lowest regional unemployment rate in the whole time period was the urban district of Eisenstadt, while the district with the highest unemployment rate was Oberwart, which is more rural-peripheral in nature. Similarly in Lower Austria the highest unemployment rate in all years from the year 2000 to 2011 was registered in Gmünd, which again is located in the northern Waldviertel and thus one of the more peripheral regions of Lower Austria. In addition also the districts with the lowest unemployment in Lower Austria in each and every year since 2000 except for 2009 were Waidhofen an der Ybbs and Scheibbs, both of which have a strong industrial base.

Similarly the close link of cyclical sensitivity of the region with its degree of specialization on industry seems to be apparent. Thus for instance the districts with the lowest unemployment in Lower Austria could not retain their position in 2009 and also all districts, whose unemployment rates rose by more than 2 percentage points in 2009 relative to 2008 (Amstetten, Berndorf, Lillienfeld, Waidhofen and der Ybbs) were districts with a strong manufacturing base (in particular in machinery and metalworking industries, which were strongly affected by the crisis). However, these districts were also relatively rapid in recovering from the crisis since in most of them (all but Lillienfeld) their unemployment rate reduced by more than 1 percentage point between 2009 and 2011, a reduction that was achieved in only three other Lower Austrian districts (Gmünd, Melk, Scheibbs).

[37] Note that according to the regionalization of Austria the NUTS 4 level are political districts, labour market statistics are, however, provided on the level of labour market districts only because these are the regional breakdowns on which the PES operates. These districts differ from political districts in a number of important details of which the most important is that large urban regions are usually collapsed with their environs in labour market districts.

6.2. Czech Republic

Luděk Kouba, Nikola Najman

6.2.1. Institutions dealing with labour market issues at national level

The main authority dealing with the Czech labour market is the **Ministry of Labour and Social Affairs** which main task is the management of social system. The Ministry provides methodological guidance for other subordinates administrative bodies and institutions dealing with the labour market issues: Labour Offices, Czech Social Security Administration, State Labour Inspection Office, Regional Labour Inspectorates and Office for International Legal Protection of Children.

The Ministry of Labour and Social Affairs supervises following government-funded organizations: the Research Institute for Labour and Social Affairs, the Institute for Occupational Safety Education, the Occupational Safety Research Institute and the Institution of Technical Inspection and Social Care Establishment for Handicapped.

In addition, the Ministry carries out conceptual, methodical and other activities in the area of wages and income policy, European integration and international affairs, labour and social legislation as well as collective bargaining. The Ministry is responsible particularly for:

- Social policy
- Social security
- Employment
- Labour legislation
- Occupational safety and health
- Equal opportunities of women and men
- Migration and integration of foreigners
- European Social Fund and other social or labour related issues.

The Research Institute for Labour and Social Affairs: The main purpose is conducting applied research on labour and social affairs issues at a regional, national and international level. Other activities are: to provide consulting services for users of research outputs, to organize seminars and conferences and to publish professional materials.

The Occupational Safety Research Institute: The main activities are scientific research, verification and application of methods of risk prevention related to work activities, transfer of knowledge to practice and expert education. The Institute is also involved in operational research – monitoring of the current state and trends in Occupational Safety and Health, keeping and up-dating on the data and overall statistics related to Occupational Safety and Health. The Institute also provide professionally managed services as working conditions risk analysis, expertise advisory care etc.

The Institute for Occupational Safety Education: It was founded as an institute which helps to implement strategic plans of government in the area of education.

The Institute of Technical Inspection: The key objective is to control the safety of technical devices.

The Czech Social Security Administration: It is the largest financial organization in the Czech Republic with the budget of EUR 28 billion. One of the main tasks of the Czech Social Security Administration is to collect and enforce payable social security premiums, which includes pension insurance, sickness insurance and a contribution to the state employment policy. The Czech Social Security Administration also includes the Medical Assessment Service which assesses the health condition and work ability of citizens for the purposes of sickness and pension insurance, state social support and long-term care benefits. They also check the assessment of temporary work inability made by treating physicians.

State Labour Inspection Office (located in Opava)**:** It is the state administration body which main task is to inspect labour law obligations, including regulations on occupational safety and health protection.

List of laws[38]

The labour contracts in the Czech Republic are governed by the labour law consisting of, in particular, three main acts:

The Labour Code (Act No. 262/2006 Coll.,) – is the Czech Republic's essential regulation in the area of labour law. It regulates, in particular, the following labour law relations: the

[38] This list is elaborated according to Kuncová, R. Labour Law Regulations Valid in the Czech Republic. 2010.

way of origination, duration and termination of employment, working discipline, working conditions, working hours, breaks at work, overtime work, night work, sick leave etc.

The Employment Act (Act No. 435/2004 Coll.) – regulates the provision of the state's employment policy, which aim is to attain full employment rate and protection against unemployment, fair treatment and ban on discrimination in the course of persons asserting their right to employment, the activities performed by labour offices and their powers, the assessment of natural persons' health condition and healthcare providers' cooperation with the assessment of their health condition, the right to employment.

The Collective Bargaining Act (Act No. 2/1991 Coll.) – regulates the collective negotiations between the trade unions and employers, the participation of the state, as the case may be, the purpose of which is the conclusion of a collective agreement.

Furthermore, the Labour Code is linked to the **Act Stipulating Further Requirements for Health and Safety at Work** (Act No. 309/2006 Coll.), which focuses on specific requirements on occupational health and safety in labour law relations as well as the provision for the protection of health and safety at work or the provision of services outside labour law relations.

The Labour Inspection Act (Act No. 251/2005 Coll.) – regulates the establishment and position of labour inspection authorities as supervisory authorities in the area of protection of labour relations and working conditions, the powers and competences of the labour inspection authorities as well as the rights and duties applying to the inspection and sanctions in the event of violating the required duties.

The Sickness Insurance Act (Act No. 187/2006 Coll.) – this act regulates the sickness insurance covering illnesses and cases pregnancy and maternity etc.

The Social Security Act (Act No. 100/1988 Coll.) – guarantees to all citizens a right to social security.

6.2.2. Strategies and policies on labour market issues at national level

National Action Plan For Employment for the period 2004-2006. The principal objective of this initial government plan dealing with employment policy was to support economic growth and employment by stimulating higher productivity and competitiveness.

The National Action Plan stated that the labour market in the Czech Republic, as well as in other EU Member States, is characterized by insufficient mobility and flexibility of the workforce. The improvement of this situation requires the implementation of measures aimed to increase the flexibility of the labour market and real wages. And these statements are, unfortunately, still fully topical. Another valid statement says that the problems on the labour market are, in a considerable, extent of a structural nature and even economic growth higher than the potential cannot resolve them.

The government stressed a necessity to expand the active employment policy. Besides developing the existing instruments (socially expedient jobs, jobs for the benefit of the community, etc.), other new instruments were introduced. It was expected that these measures can positively affect a reduction in the time being needed to find a new job and a fall in frictional unemployment. In order to reduce regional disparities on the labour market, the support for the creation of new jobs available to investors who decide to invest in regions with an unemployment rate in excess of 14% was emphasized.

Further to it, these cross-sectional objectives were defined:

- full employment
- improvements in the quality and productivity of labour
- reinforcement in social cohesion and inclusion.

National Reform Programme 2007-2013. The subsequent strategies and policies on labour market at national level are in accordance with the National Reform Programme 2007-2013, which was adopted to fulfil the Lisbon strategy. This programme focuses on 3 main areas: macroeconomic issues, microeconomic issues and employment. The National Reform Programme is co-financed by European Union Funds. This strategy is an elementary base for follow-up European, national and regional strategies.

In the contemporary Czech Republic, an important role within the labour market policies has the **operational programmes,** which are divided among 3 main objectives:

Convergence objective: economical and social development of underdeveloped regions which includes all regions except Prague (8 thematic programs – 21.23 billion EUR and 7 regional operational programs – 4.66 billion EUR)

Regional competitiveness and employment objective: support of regions that don’t get aid from convergence objective (Prague-2 operational programs0,42 billion EUR)

European territorial cooperation objective: support for cross-border, interregional and transnational cooperation of regions (0,39 Billion EUR)

Operational Program Human Resources and Employment: It is a multi-thematic operational program mainly financed within the Convergence objective. It is focused on reduction of unemployment through an active policy in labour market and professional education. The modernization of public administration, public services and international cooperation is financed within the Regional Competitiveness and Employment objective. The budget is 1.84 billion EUR plus another 0.32 billion EUR from Czech public sources. They are 6 areas of support: Adaptability (525.4 million EUR), Active labour market policy (605.8 million EUR), Social Integration and Equal Opportunities (398.6 million EUR), Public Administration and Public Services (195.1 million EUR), International Cooperationce (39 million EUR) and Technical Assistance (73.5 million EUR)

6.2.3. Institutions dealing with labour market issues at regional level

The institutions dealing with labour market issues at regional level are usually subordinated to the Ministry of Labour and Social affairs. Besides them, the South Moravian Region and the Statutory City of Brno significantly affect the development on regional labour market. Main institutions specialized for labour market issues are:

Labour Offices. In the South Moravian Region, there are in total 7 labour offices: two of them are located in Brno – for the districts Brno-city and Brno-countryside. The other are located in the district towns – Blansko, Břeclav, Hodonín, Vyškov a Znojmo. They are focused mainly on employment, protection of employees during employer´s insolvency and national social aids. Regional Labour Offices prepare all documents needed for new concepts and programs in the area of employment policy for the Ministry of Labour and Social affairs and evaluate the situation on labour market. These institutions also cooperate with Regional or local authorities, Czech social security administration, employers and others.

Regional Labour Inspectorate for the South Moravian and Zlín Regions. Registered office in Brno, operates within the territory of the South Moravian and Zlín regions. The main purpose is the prevention and the best possible preparation to overcome consequences of accidents and injuries at work. It is managed by the State Labour Inspection Office. There are 8 Regional Labour Inspectorates in the Czech Republic.

South Moravian Centre for International Mobility. The South Moravian Centre for International Mobility is a specialized non-profit organization which encourages talented students and researchers based in the South Moravian Region. The South Moravian Centre for International Mobility was founded on 15th December 2005 by the Council of the South Moravian region, Masaryk University Brno and Technical University Brno. Over time, Mendel University in Brno and University of Veterinary and Pharmaceutical Science Brno became members as well.

A bit more indirect impact on South Moravian labour market, the institutions such as the Regional Development Agency of South Moravia, South Moravian Innovation Centre etc. have.

6.2.4. Strategies and policies on labour market issues at regional level

The **Development Strategy for the South Moravian Region** is a fundamental document formulating an approach towards obtaining support for the development of its region for a longer time horizon. This document defines the strategic targets for the development of the region as a whole and specifies the important measures to fulfil the targets. The Development Strategy is also the basic framework for the update of the project section of the South Moravian Region Development Programme.

Within the priority 3 Human Resources, a subsequent global target for the priority field Inhabitants and labour market is defined: “A modern, open society, the source of which is a cultivated, sound human potential, developed efficient and flexible labour market with a quality qualified and competitive manpower, creating conditions for the integration of socially excluded groups of inhabitants.” This global target is elaborated in way of six specific targets.

The Strategy for Development of Human Resources in the South Moravian Region 2007-2013 develops the main aims and basic principles for the area of human resources and labour market. The vision says: "The South Moravian Region as a dynamically developing region which, in accordance with the principles of sustainable development, has at its disposal an effective and competitive economy based on modern technology and high added value, a high level of education with an emphasis on the preparation and use of high-quality human resources, maintains an acceptable environment and countryside,

has a modern farming system, maintains regional cultural features, makes full use of its favourable geographic position on important continental axes and its tourist potential, and channels its process of suburbanisation."

The strategic aims are:

- well-qualified, flexible and competitive human capital generated by education and the innovative potential of the South Moravian Region
- the adaptability and competitiveness of human resources in the South Moravian Region
- an effective employment policy including the subsequent introduction of equal opportunities and the integration of socially-excluded population groups whilst respecting the principles of sustainable development.

6.2.5. Methodology

We can find two databases in the Czech Republic, from which unemployment figures can be gained. Therefore, it is necessary to distinguish between the data regarding the registered unemployment and the data regarding general unemployment rate when comparing their development.

The data about registered unemployment rate are published by the Ministry of Labour and Social Affairs based on the statistics of individual job centres. The data about the number of unemployed are available on an annual, quarterly and monthly basis for territorial subdivisions up to level NUTS 4. The monthly statistics are available up to the level of individual municipalities (NUTS 5) and they are available on the 6th working day of the following month. They are quickly updated and, from a territorial point of view, contain very detailed statistics.

The registered unemployment rate is calculated as the ratio of job seekers registered at the job centre and the labour force. An important change in the methodology happened in the monitored period (years 2000 to 2011). The unemployment rate was calculated as the number of registered job applicants to the number of employees in the national economy according to the Labour Force Survey (VŠPS) + registered job applicants at the job centre, by the middle of 2004. From the second half of 2004, it was only the so-called available unplaced registered candidates (available is someone that can start work immediately) to the number of employed according to VŠPS + the number

of foreign workers + the number of registered available job seekers. This methodology change logically led to a reduction in the unemployment rate, when the national average fell by about 1 percentage point and the same value reduced unemployment in the South Moravian region (from 11.3 to 10.3 %).

For international comparison it is preferable to use a general unemployment rate, which is monitored by the Czech Statistical Office (CZSO), based on the Labour Force Survey. The scope of the investigation and employment and unemployment indicators fully meet the definition of the International Labour Organisation (ILO) and Eurostat methodological recommendations. The subjects of the investigation are usually all people living in residential homes[39]. Survey results are available on an annual and quarterly time period basis up to the level NUTS 3[40]. The quarterly data are available two months after the reference quarter's statistical yearbooks are issued with almost a year's delay.

More than 2,200 homes are selected for the purposes of the VŠPS in the South Moravian region. The selected home is investigated for 5 consecutive quarters, which achieves a consistency of survey in the following quarter and a comparison possibility of the respondent results for the whole house for the same period the previous year. The 20% of households is changed in selection each quarter. The obtained results are subsequently applied to the entire population living in the monitored area and are available as quarterly averages.

According the ILO definition of an employed person is a person over 15 years of age that worked at least 1 hour for a wage, salary or other remuneration during the surveyed week, or the person was not at work but had a formal job attachment. The main criterion for inclusion among the employed is developing any remunerated work activities. It is not decisive if the work activity of these people has a permanent, temporary, seasonal or occasional character. It does not matter whether the surveyed people had one or more concurrent jobs, studied simultaneously or received a pension.

An unemployed person is considered a person that, during the surveyed week, meets all the following conditions:

- not employed,

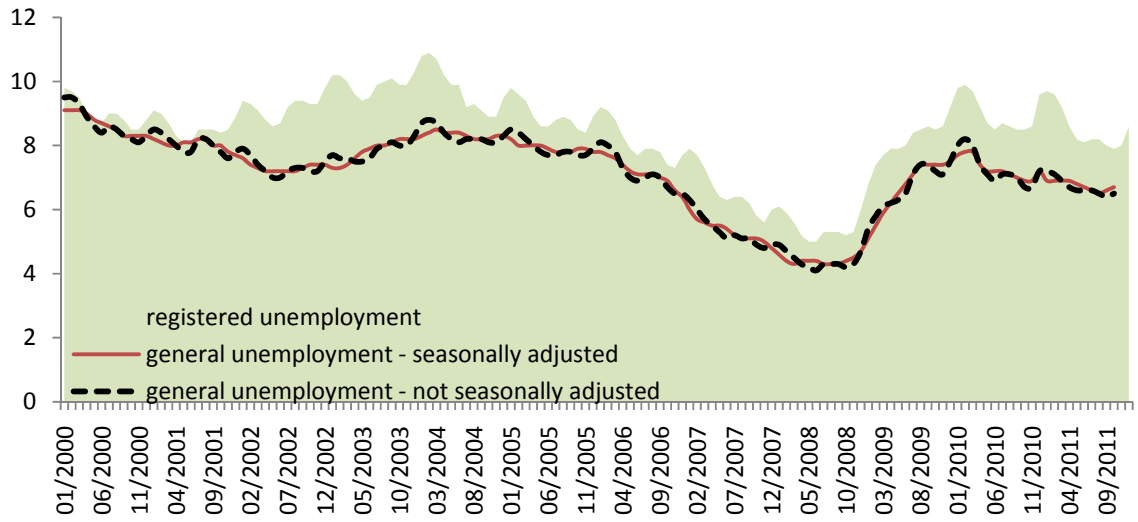
[39] The survey does not cover persons living in collective accommodation. Data for specific population groups, especially foreigners, are available only to a limited extent.
[40] EUROSTAT makes also monthly prediction for NUTS 1 based on Labour Force Survey.

- is ready to start work within 14 days,
- was actively looking for a job in the last 4 weeks .

If we add the employed and unemployed together, we get the total labour force. The general unemployment rate is then calculated as the proportion of the unemployed and labour force.

The following graph shows a comparison of the registered and general unemployment rate (seasonally adjusted and unadjusted) for the Czech Republic.

Figure 6.4: Registered and general unemployment in CZ - monthly data (%)



Source: Ministry of Labour and Social Affairs and Eurostat.

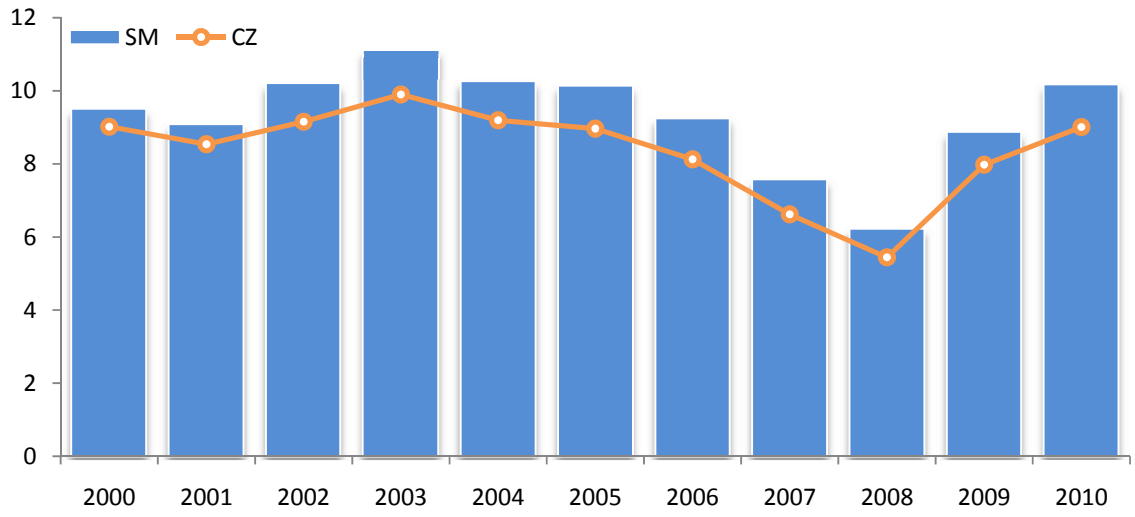
The registered unemployment rate is higher than the general unemployment detected on a VŠPS basis in the reporting period. Due to the strict definition of the unemployed according to ILO, this difference is expected. While according to the ILO just one hour of work in the surveyed week is enough to consider a person as employed, for keeping on the register of job seekers the Institute of non-overlapping employment can be used. Non-overlapping employment is considered as a work activity based on a work or service contract or part-time contract if the monthly earnings do not exceed half of the minimum wage.

6.2.6. Labour market analysis based on national statistics

Unemployment development in the South Moravian region (based on national statistics)

Unemployment in the South Moravian region fitted into the overall macroeconomic development in the Czech Republic, where the slowdown of GDP growth in 2002 and especially after the year 2009, was reflected by the delay in the rise of unemployment. For unemployment the South Moravian region, compared with other regions of the Czech Republic, belongs to the weaker regions.

Figure 6.5: Unemployment in South Moravia and Czech Republic – yearly average (%)



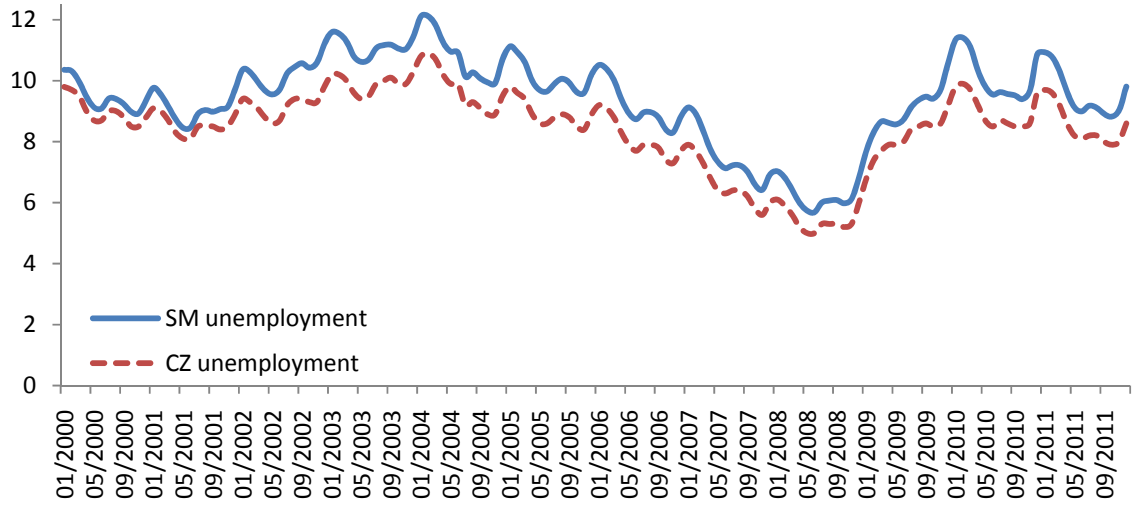
Source: Ministry of Labour and Social Affairs.

We can see the same trend in the monthly data for the Czech Republic and the South Moravian region. Seasonal unemployment is clearly distinct in the monthly data, which makes a difference of almost 2 percentage points during the year. The South Moravian region has in total higher unemployment rate fluctuations during the year compared to the average of the Czech Republic.

The registered unemployment rate of the South Moravian region reached below 6% for the first time in April 2008 and reached its lowest value of 5.68% in June of that year. The impact of the global economic crisis on the unemployment value has been clearly visible since 2009. The economic crisis had an impact in the Czech Republic that

year as well and the Czech Republic's GDP decline was -4.7%. The specific advantage of the South Moravian region was that it did not have any dominant enterprise on which employment was significantly dependent. The effects of the crisis were spread more and the increase of unemployment was not as high as in some other regions of the Czech Republic.

Figure 6.6: Registered rate of unemployment in South Moravia and CZ - monthly data (%)



Source: Ministry of Labour and Social Affairs.

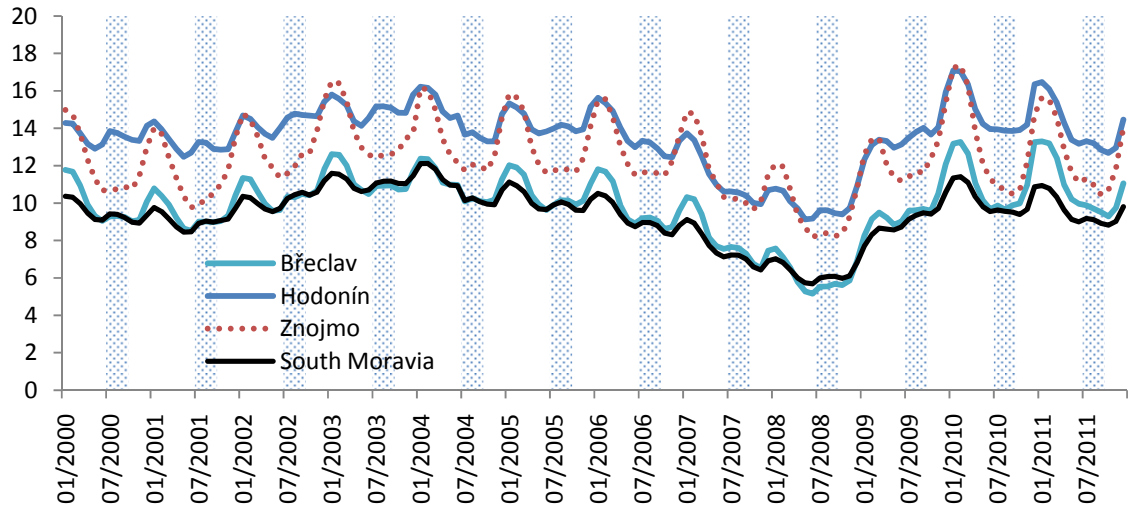
When looking at unemployment in the South Moravian region it is necessary to take into account the large difference between each district. The South Moravian region can be divided into districts with a higher proportion of industry and services, which include Blansko, Brno-město, Brno-venkov and Vyškov. These districts benefit from good transport access to Brno, and Brno-city itself from the high-quality public transport network. The second group of districts consists of Břeclav, Hodonín and Znojmo, which have a higher proportion of farming. Moreover, in these districts there is weaker transport access to Brno. Hodonín and Znojmo districts are facing very high unemployment in the long term and belong among the districts with one of the highest unemployment rates across the whole country.

First let's look at the districts Břeclav, Hodonín and Znojmo, which belong to the farming areas and where unemployment is above the average of the South Moravian region.

Seasonal employment is very evident in these districts. For better clarity on the graphs the third quarter is tinted.

The seasonal fluctuations are most apparent in the Znojmo district. The unemployment rate in Znojmo is as high as in Hodonín in the winter months, but in the harvesting season is much lower than in Hodonín by more than 2 percentage points. From the large employers for example the manufacturer of fabrics for the rubber industry Kordárna, the wood-processor Ploma and manufacturer of trucks components ORFUS[41] had to lay off people in 2009.

Figure 6.7: Unemployment in South Moravia – districts above South Moravia average - monthly data (%)



Source: Ministry of Labour and Social Affairs.

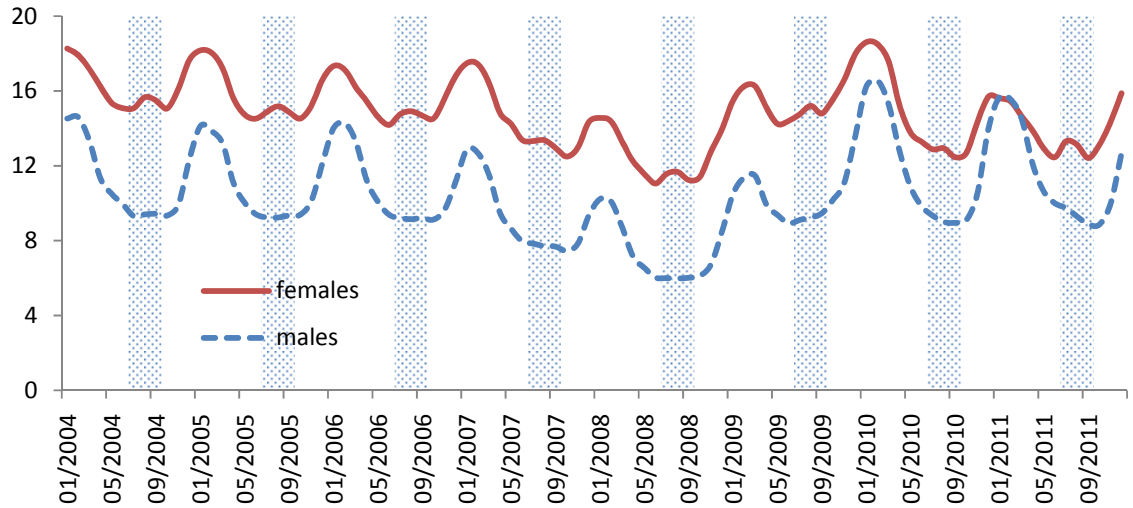
An interesting situation of unemployment occurs when we look at it from a gender perspective. While for men seasonal summer employment is stable, for women there is a slight but clearly noticeable growth of unemployment in the holiday months of July and August, but it falls back to the June level in September.

The increase of unemployment during the summer months and fall again in September can be explained by working time in education, where part of the working

[41] ORFUS had to also return more than CZK 24 million that was received as a grant to create and maintain jobs.

time is created by employment for a definite time and where women are the majority of employees. A testimony of for holidays and re-recruitment of staff at the beginning of the school year are relatively widespread in the Znojmo region and through all of the South Moravian region. The same explanation to development in Znojmo is offered by the Znojmo Jobcentre itself. Districts with lower unemployment than the average of the South Moravian region are Blansko, Brno-město, Brno-venkov and Vyškov.

Figure 6.8: Unemployment in Znojmo district among males and females - monthly data (%)

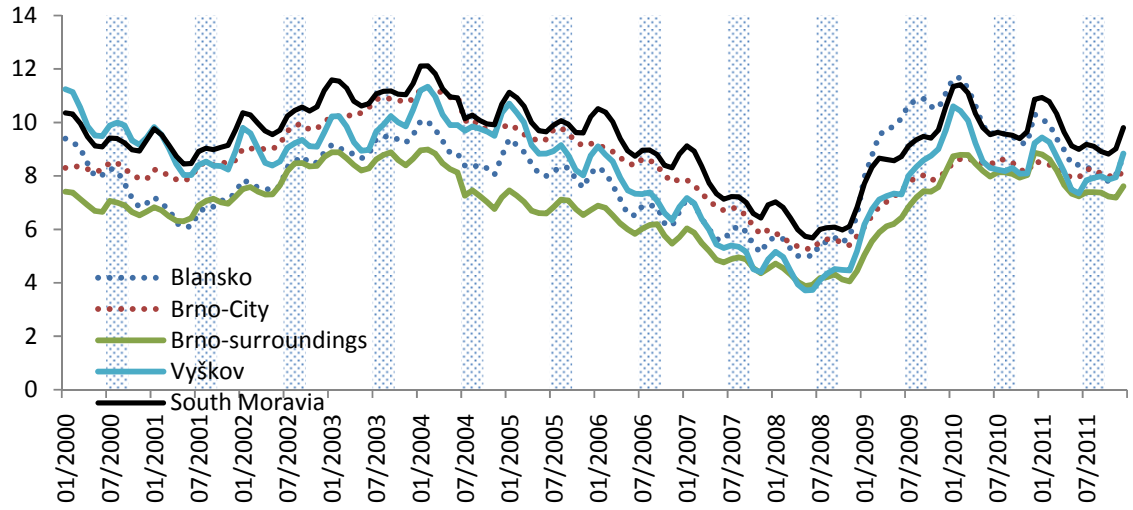


Source: Ministry of Labour and Social Affairs.

Seasonal unemployment is no longer so closely connected with agriculture, but also with the building industry and other sectors in these districts. The seasonal unemployment in the Brno-město district compared to other districts is not evident at all in fact. The slowdown in growth in 2002 and the economic crisis has affected these districts as well of course. The cause of the Flextronics company, which drew investment incentives but closed its plant in the industrial zone of the Černovické terraces, which meant the cancellation of nearly 2,000 jobs, has been known since the beginning of the millennium. Impacts of the economic crisis of the year 2009 were reflected by the closure of several major companies such as the pharmaceutical manufacturer Pliva-Lachema (400 employees) and Alstom (400 employees). Another large employer in

Brno, Zetor Tractors, dismissed 200 employees, which meant a staff reduction of 20 % in Zetor.

Figure 6.9: Unemployment in South Moravia – districts below South Moravia average - monthly data (%)



Source: Ministry of Labour and Social Affairs

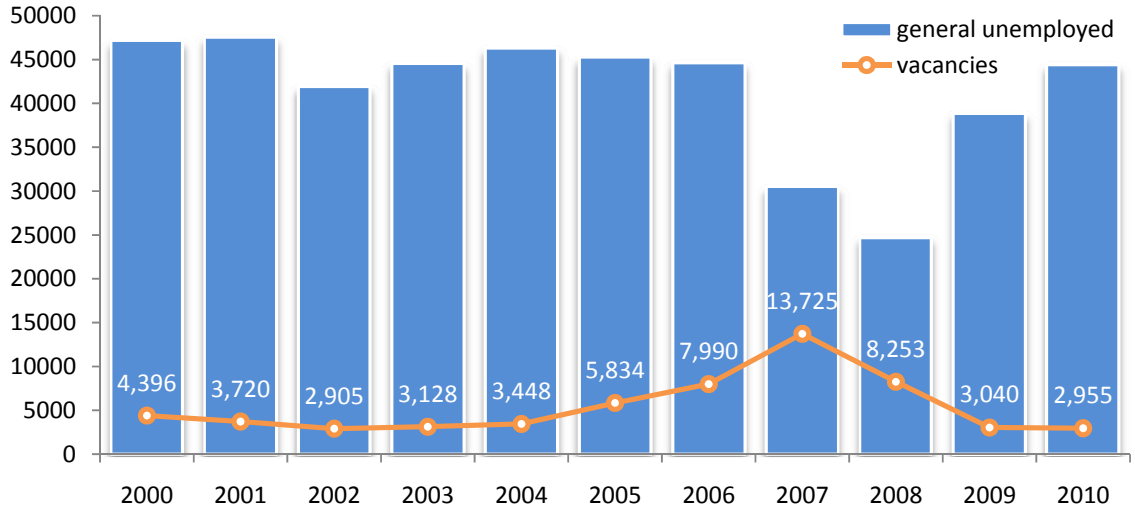
The developments of the number of unemployed by the ILO and the number of vacancies closely correspond with the development of unemployment. The vacancies in the South Moravian region had remained slightly above a value of 3000 by the year 2004, but then the job offer began to sharply increase to a maximum value of 13,725 vacancies in 2007. Many investors requiring a highly skilled labour force (IBM, Infosys, Motorola, Red Hat, Honeywell and others, especially technology companies) were attracted to the South Moravian region in the period of economic boom. On the other hand, the manufacturing sector was developed as well. And here, for the majority of the newly established jobs, either very low or no qualifications were required.

The proportion of reported new jobs where the employer did not require any qualifications reached 53 %[42] in the South Moravian region by the end of 2008, at the beginning of the millennium it was a only 2 %. The situation had improved considerably as a result of the economic crisis by the end of 2010, when the proportion of jobs where the employer does

[42] In the Brno-city district even more than 67%.

not require any qualifications decreased to 36.5 %. But jobs for unskilled workers still represent the largest category of newly created jobs. The employers in the South Moravian region established jobs for unskilled people only very rarely ten years ago, the creation of new jobs has strongly focused on this category since 2005. The domestic labour force was not employed in these jobs, but an unskilled or little skilled labour force from abroad was imported for these positions.

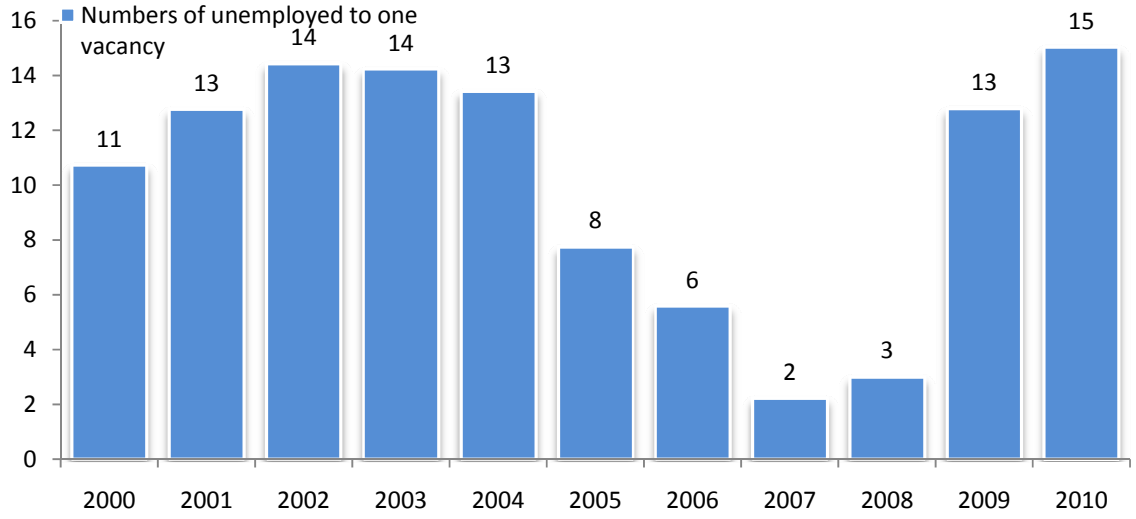
Figure 6.10: Numbers of unemployed and vacancies in South Moravia – yearly average



Source: Ministry of Labour and Social Affairs and CZSO.

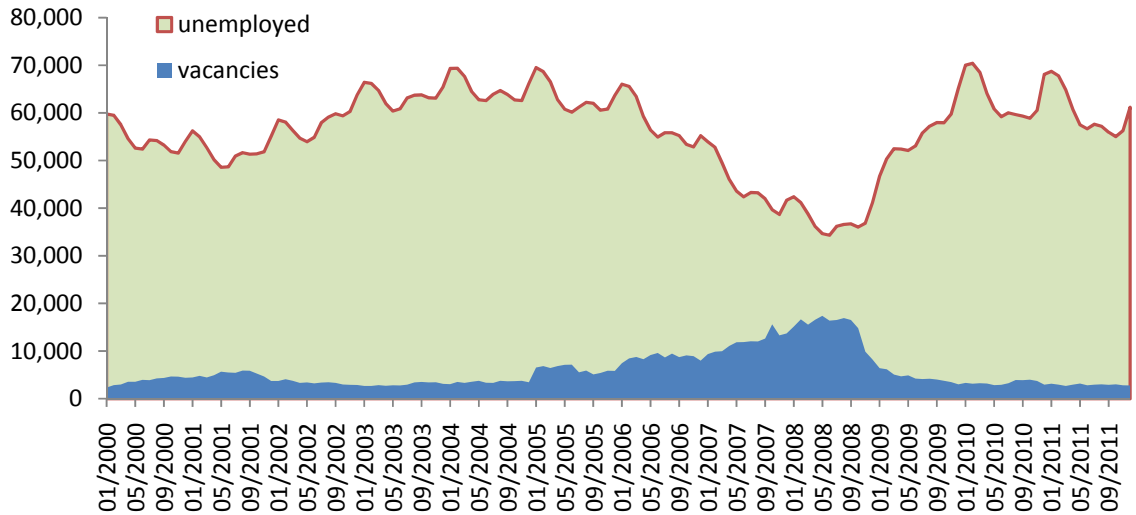
Although the number of vacancies in 2010 is reaching slightly higher values than the minimum in 2002, the total number of unemployed in the ratio of vacancies to the unemployed was the lowest just in 2010. For one free vacancy there are 15 unemployed people, which is more than a 7-fold increase compared to 2007. We can see a very similar development on the monthly development coming only from the statistics of the Ministry of Labour and Social Affairs.

Figure 6.11: Numbers of general unemployed and vacancies in South Moravia - yearly average



Source: Ministry of Labour and Social Affairs and CZSO.

Figure 6.12: Numbers of unemployed and vacancies in South Moravia – monthly data



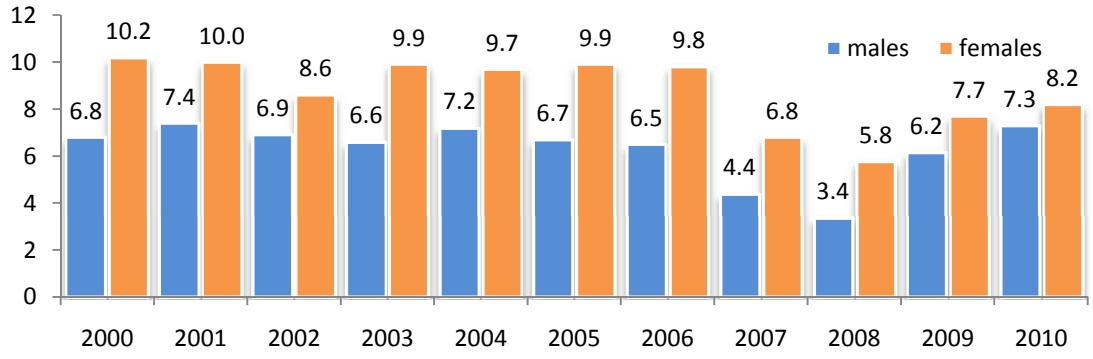
Source: Ministry of Labour and Social Affairs.

A gradual rise in vacancies to a maximum 17,405 of vacancies was from 2004 to May 2008. This month was also the only one where vacancies could have, hypothetically, covered more than half (50.2 % exactly) of job seekers. But it is necessary to consider the fact from above, that more than 50 % of these vacancies required only low or no qualifications. The steep drop in vacancies and the rise of the number of unemployed came at the end of 2008. An average of 20 unemployed per 1 vacancy is allotted in 2011. An interesting situation occurs in the development of unemployment by gender. It is still valid that the unemployment rate for men is generally lower than that for women. But unemployment for men returned to a higher value from 2000-2005, for women the return is not so dramatic and their unemployment is by 2 percentage points lower than before the exceptional years of 2007 and 2008.

The general female unemployment rate was nearly 10 % in 2000-2006, but in 2009 and 2010 held at about 8 % and even monthly data from the Ministry of Labour and Social Affairs do not indicate that it should lead to a rise of general unemployment and in 2011, could remain at 8 %.

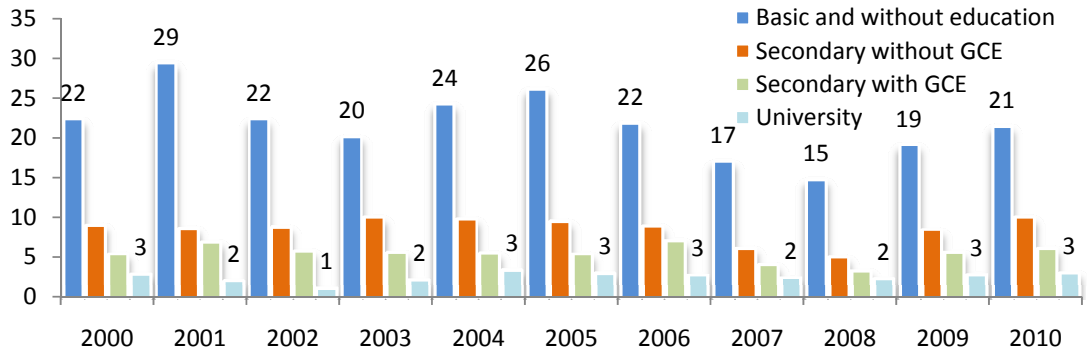
If we look at unemployment by educational achievement, we can see, not illogically, that with decreasing education unemployment is rising. What is also important is, that while the unemployment of university graduated people has been held in the long term at a low level of 2-3 %, unemployment of people with primary or no education fluctuates from 15 % to 29 % and follows cyclic economic development.

Figure 6.13: General unemployment in South Moravia by gender - yearly average (%)



Source: CZSO.

Figure 6.14: General unemployment in South Moravia by education - yearly average (%)

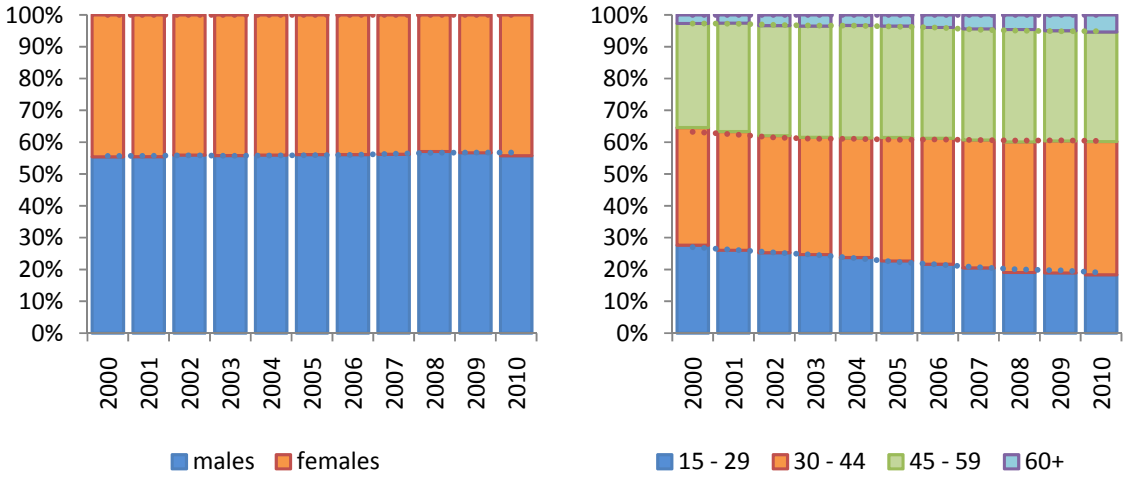


Source: CSZO.

The labour force in the South Moravia region

In the South Moravian region there is an economically active population of about 58 % of an age group of 15 + which means that the total labour force consists of 576 thousand people. A closer look at the labour force can be seen on the following graph. The average for the Czech Republic is shown on the graph by a dotted line.

Figure 6.15: Labour force in South Moravia and Czech Republic by gender and age

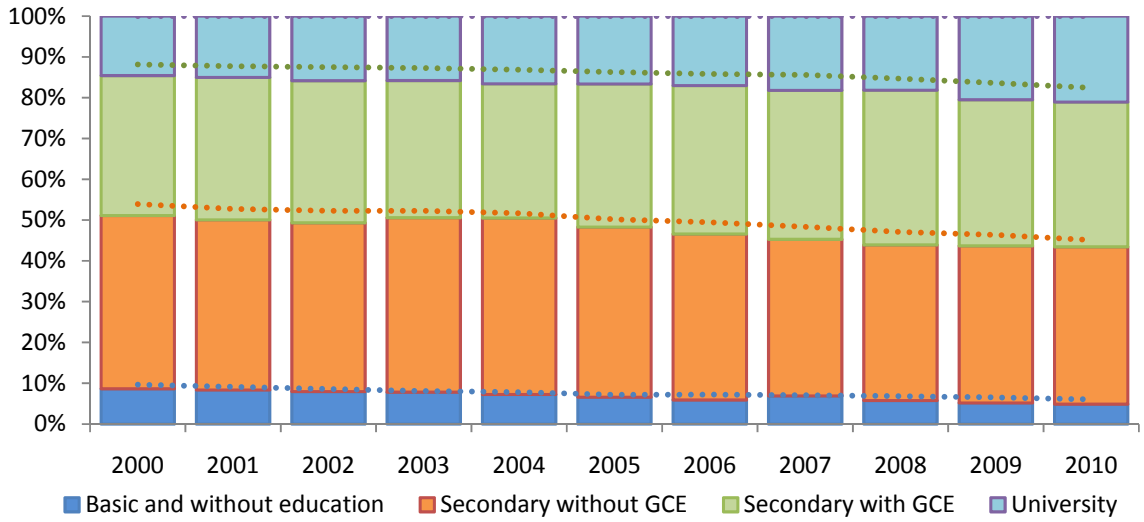


Source: CZSO.

The South Moravian region does not deviate from the national average in either case. The percentage of labour force over the period holds at around 55 % in favour of men. But the distribution of the age structure occurs at significant points in time. 28 % of inhabitants were economically active in the youngest age group in 2000, but their economic activity in 2010 was only 19 %. In other age groups there was a rise in the economically active population. It was from 37 % to 42 % in the group of 30-44 years, and in the remaining two groups the increase was by 2 percentage points to 35 %, respectively to 5 % in the group 60 +. There is a concurrence of two effects, gradual population aging, and also a positive effect in the form of increasing education.

The growth of education is evident from the graph showing the distribution of labour force according to educational attainment. The educational structure of the labour force differs from the national average in favour of the South Moravian region in this case.

Figure 6.16: Labour force by education in South Moravia and Czech Republic



Source: CZSO.

The labour force with only primary education or no education in the South Moravia region has gradually decreased from 9 % to 5 % and, on the other hand, the university educated labour force especially grew from 15 % to 21 %[43] in 2010. The advanced educational structure, which is at the second highest regional level after Prague, attracts investors,

[43] The proportion of university educated on the total population is 16%.

especially from technological areas. IBM, in its Brno centre, focused on managing, support and remote management of customer information systems, already employs more than 1000 people. Another example is the Brno branch of the Red Hat Software company, which has almost 300 million CZK of investment and a further extension of more than 150 highly skilled workers, Red Hat employs more than 600 people in total. AVG Technologies, in collaboration with the Faculty of Information Technology of the University of Technology, opened its third research centre, focused on analysing malware, in 2009. The first two research centres of AVG Technologies are in the USA.

The educational structure is a comparative advantage of the South Moravia region and on that is also built the Regional Innovation Strategy, which formulated the vision that the South Moravian region will be the most innovative region in the Czech Republic in 2013 and will be among the first fifty most innovative regions in the European Union. This strategy was closely described in the thematic Focus report on research, development and innovations.

6.3. Hungary

Márta Nárai

6.3.1. Institutions dealing with labour market issues on national level

The tasks of sectoral management are done by the **State Secretariat for Employment Policy** that belongs to the **Ministry of National Economy**. The tasks of the State Secretariat include legislation, preparation of legislation (inter alia labour relations, public employee relations, the question of wage policy, the support of employment, the support of job-seekers in the fields of labour relations, labour control and labour market services), making programs for employment policy, making prognosis, monitoring the employment trends, monitoring the change in labour demand and supply.

It is also responsible for the management of connecting background institutions, for their professional surveillance and control (e.g. National Employment Service, National Labour Safety and Labour General Inspectorate, National Institute of Vocational and Adult Education, National Employment Public Foundation), the operation of boards (e.g. Governing Body of Labour Market Fund, Labour Mediation and Arbitration Service, Board Supporting Labour Inspection, Board of Public Works), as well as for the establishment

and continuation of international relations with relevant professional organisations (e.g. International Labour Organisation).

It is also the task of State Secretariat to regulate and register vocational and adult education, to make programs connecting these and to manage background institutions working in this field (National Institute of Vocational and Adult Education). Deriving from the nature of its activity it partakes in the organisation and the conduction of social dialogue by the sectoral coordination of national interest reconciliation and the further development of the institution system of reconciliation.

The State Secretariat's areas of responsibility:

- Employment policy, creation of new jobs.
- Vocational training, adult education: the main aim of the government is to introduce the German dual model. The essence of this is to increase the number of practical lessons and the role of professional chambers in the training.
- Social dialogue: The State Secretariat for Employment Policy operates the *National Interest Reconciliation Council* (organisations of employers and employees and the tripartite forum consisted by the government), as well as the *National Civil Service Interest Reconciliation Council* (it consists of the government, the municipal interest associations and the trade unions).
- Public work.

National Employment Service (NES). In Hungary, this nationally established organisation performs the state tasks in connection with the support of employment and the handling of unemployment. The National Employment Service (the former Public Employment Service) has almost two decades of history. In favour of the prevention of unemployment and the alleviation of its disadvantageous consequences from 1991 legal level rules have determined those supplies, subventions and services that are applied by the organisation and that aimed and still aims at the improvement of the labour market situation. The task of the Service is to implement the government's aims regarding employment policy.

The National Employment Service consists of the following bodies:

- Hungarian Labour Inspectorate (former Employment Office): the central governing body of employment centres
- Employment centres.

Hungarian Labour Inspectorate (HLI) (Budapest): the Employment Office has been continuing its work under the name of Hungarian Labour Inspectorate since January 2012, by merging the National Labour Safety and Labour General Inspectorate and the National Institute of Vocational and Adult Education in it on 31 December last year. Accordingly it is a central office performing tasks regarding employment policy, labour safety, labour, vocational and adult education which operates under the direction of Secretary of State responsible for employment policy.

In the budget of 2010, 3.77 billion HUF are available for the operation of the new office.

The tasks of the inspectorate:

- among its employment policy tasks the management and coordination of labour centres and branch offices, and it also accomplishes the professional supervision of the official control duties of labour centres,
- it provides information and counselling in connection with working abroad,
- it coordinates the implementation of central labour market programs, furthermore it organises, accomplishes and coordinates the employment and training programs financed from the monetary funds of the European Union,
- it manages the development of services operated in the framework of National Employment Service (NES),
- it supports the social partners' preparation necessary for the participation in labour interest reconciliation,
- it collects and analyses data referring to the trend of wages and salaries, about the annual activity of private recruitment agencies and labour hiring agencies, as well as about the foreigners notifiable employment and that of requiring authorization in Hungary,
- it initiates and accomplishes labour researches,
- it also accomplishes international tasks, in the frame of which it gets the Hungarian system of European Employment Service (EURES) to operate, and in the frame of customer service it provides information and counselling about working abroad, the EURES-system, as well as the job search support demandable abroad and available in Hungary by foreigners,
- it examines the practical experiences of legislations related to employment policy, it proposes the amendment of rules of law and it elaborates a central labour market program,
- among its labour safety and labour tasks it performs inter alia the professional management of labour safety and labour inspectorates, it analyses and evaluates

complaints received by labour safety and labour directorate, and the labour safety and labour inspectorates,

The Labour Safety and Labour Directorate inter alia performs the tasks in connection with the management of labour safety at national economic level, furthermore the state management tasks in connection with labour official surveillance. The performing of labour safety tasks includes the official tasks of labour safety and occupational health as well.

- We summarised the office's tasks in connection with vocational training and adult education in the report regarding education (B part of Stock taking report).

Employment centres are specialised administrative bodies that operate as the organisational units of the capital and county government offices and that consist either only of county organisation or of county (capital) organisation and branch offices (employment centres of special authority and jurisdiction).

The county (capital) organisation of employment centres has a special authority and jurisdiction inter alia

- manages and controls the activity of branch offices of employment centres,
- performs the tasks in connection with the operation of money instruments of Labour Market Fund and it helps to plan the frame and control the use,
- operates the support system of job-seekers and cares about the operation of support and service system.

Among the activities of the branch offices of employment centres, the followings are the most important ones:

- they manage the affairs regarding the registration of job-seekers,
- they perform the tasks regarding the establishment, the paying out, the termination, the suspension and the claiming back of job-search benefits,
- they carry out recruitment,
- they are in contact with employers,
- they provide other labour market services (e.g. the organisation of trainings, counselling regarding working abroad, rehabilitation counselling),
- they also perform tasks regarding the establishment and the paying out of some employment policy subventions (e.g. the support of job-creating investments/programs)

The **National Employment Public Foundation** (NEPF) was founded by the government and the Ministry of Labour in 1992. The Public Foundation performs tasks that support the increasing of employment and the reduction of unemployment, especially among the disadvantaged social groups of labour market. In the service of the above objectives it elaborates tender programs and performs a full tendering activity starting from the tender invitation to the remittance of funding sources and the professional and financial closure of the programs. It has a great experience in the elaboration of programs aiming at the management of employment crisis situations. Its activity is partner-centred.

The most important laws related to labour

1/2012 Law on Labour Code: (in force from: 1 July 2012)

The objective of the law: the establishment of the basic rules of fair employment according to the principle of freedom of enterprise and employment with respect to the economic and social interests of the employee.

The force of this law extends to *a)* the employer, *b)* the employee, *c)* the employers' interest representation organisations, *d)* the works council, and *e)* the trade unions.

The law regulates the labour relations, its establishment, its lapse and its termination; it deals separately with the rules on collective redundancies. It declares the requirements of the contract of employment, it regulates its content and amendment and the basic obligations of both the employer and the employee. It determines the rules pertaining to the special types of labour relations (like e.g. teleworking, temporary employment, outworking, casual work), as well as the rules of labour hiring. It also deals with working and leisure hours, the working hours arrangements, the quantity of leave (the basic is 20 days/year) and sick-leave (employer: 15 days/year) and the method how to make them available and non-business days.
It regulates the rules pertaining to the remuneration for work (basic wage, supplementary wages, absence fee), it defines the requirement of the compulsory lowest wage, the guaranteed living wage the amount and force of which is determined by the government.

In favour of the social and economic protection of employees and of the peace in work, the law regulates the relationships of the trade union, the works council and the employers or their interest representative organisations. Within the frame of this it ensures the freedom of association, the participation of employees in the establishment of working conditions, furthermore it also determines the order of collective negotiations and the procedures referring to the prevention and the resolution of labour conflicts. It amplifies in details the

operating conditions, the articles of association of the works council and the trade union; furthermore it deals separately with the possibility of collective bargaining agreement.

Law XXXIII of 1992 on Status of Public Servants

The force of the law extends to the public servant status of people employed in state and local government budget agencies and by local government to perform public services within its mandate.

The law orders the rules pertinent to the establishment, the amendment and the lapse of public servant status. It regulates the conditions of work, the frames of working hours and leisure hours, the advancement and the stipend system of public servants, the keeping of public servant record as well as the rules pertinent to the disciplinal and liability responsibility of people employed as public servants.

It also deals with the national, sectoral and spatial interest reconciliation, the trade unions and the collective bargaining agreement.

The decrees of the law still in force have been amended more times since 1992.

Law CXCIX of 2011 on Civil Servants

The force of this law extends to the government service status of government clerks and government administrators of state administration bodies and the civil servant status of civil servants and civil administrators of the representative body's office.

The law orders the rules pertinent to the establishment, the amendment and the lapse of government service status and civil servant status. It regulates the working conditions of people employed in the mentioned statuses, the frames of working hours and leisure hours, it determines the ethical principles and the general behavioural requirements, it regulates the advancement and stipend system as well as the rules pertinent to the disciplinal and liability responsibility of people.

It also deals with the legal status, the task and the jurisdiction of the Hungarian Government Clerks' Body as well as the interest reconciliation of civil servants.

Law IV of 1991 on the Promotion of Employment and Unemployment Benefits

This law was constituted to resolve employment tensions and to ensure benefits for unemployed. The law declares that a state organisation providing nationally developed labour market service ensures the promotion of employment and unemployment benefits

as well as that every person eligible for work and every employer has the right to use the services specified by the law free of charge.
It determines the organisation of employment interest reconciliation, the system of labour organisation (management, employment centres), the funding forms promoting employment and their conditions, and it regulates the form of unemployment benefits, their duration and the coverage of the forms of allowances and benefits.

The decrees of the law still in force have been amended more times since 1991, for the last time in 2011.

Law CXCI of 2011 on the services to people with diminished work capacities and on the modification of particular statues

The law coming into force in 1 January 2012 regulates the transformation of disability and accidental disability pension system and its process in consonance with the government ideas of the expansion of employment and the transformation of social benefits. In case of people with disabilities the main aim is also to encourage their employment and rehabilitation built on their remained and developable abilities. In favour of this some changes also took place in the regulation of rehabilitation contribution as part of the transformation of benefit system.

Financial background

Labour Market Fund

The unemployment benefit is given on insurance basis; the state has been paying the benefits from the Labour Market Fund since 1 January 1996. The Labour Market Fund is a uniformly-handled, isolated state fund; its aims include by the pooling and the uniform handling of money instruments regarding employment, unemployment and the development of the training system

- the ensuring of support for job-seekers,
- the support of job-seekers to get a job,
- the encouragement of the social security of employees of economic organisations under liquidation,
- the support of the development of training system,
- the contribution to the partial financing of the paying out of early retirements pensions,
- the ensuring of the coverage for the expenditures in connection with the operation of the benefits and supports financed from each sub-fund,

- the contribution to the financing of the operation and development expenditures of the European Employment Service.

Table 6.6: The resources of Labour Market Fund in 2011 and in 2012: Revenues

Denomination	2011	2012
The due proportion of LMF of health insurance contribution and labour market contribution	187,700,0	197,000,0
Vocational training contribution	49,000,0	51,000,0
Budgetary subsidy	64,000,0	–
The revenues of SROP measures	30,588,1	31,065,2
Spatial other revenue	800,0	830,0
Central other revenue	2,600,0	1000,0
Vocational and adult training other revenue	1,000,0	1000,0
The repayment of wage guarantee grant	1,000,0	1000,0
Revenues from the European Globalisation Adjustment Fund	550,0	–
Aggregated revenues	**337,238,1**	**282,895,2**

Sources: www.mkogy.hu; www.paralament.hu

Table 6.7: The resources of Labour Market Fund in 2011 and in 2012: Expenditures

Denomination	2011	2012
Active subsidisations		
Employment and training subsidisations	40,519,8	27,600,0
The EU co-funding of employability	3,970,7	6,967,0
Expenditures of public employment (in 2012 Start-work program)	64,000,0	132,182,5
SROP 1.1. Labour market services and subsidies	30,925,2	27,900,0
SROP 1.2. Normative supports encouraging employment	5,500,0	8500,0
Reimbursement of contribution allowance	5,800,0	6000,0
Expenditures aiming at vocational and adult training	33,091,1	23,482,8
Passive expenditures		
Job-search benefit	134,800,0	67,000,0
Transmission to Pension Insurance Fund	681,3	1700,0
Wage guarantee expenditures	7,000,0	6000,0
Transactions fee	100,0	
The pre- and co-financing of the European Globalisation Adjustment Fund	850,0	
Balance-holding and risk management frame	10,000,0	
In 2012: operation costs		300,0
Aggregated expenditures	**337,238,1**	**307,632,3 +50,000,0 (subsidy)**

Sources: www.mkogy.hu; www.paralament.hu

From 2012 the government plans to establish an independent National Employment Fund which would be predestinated exclusively to encourage and support employment and

social and other types of expenditures wouldn't incorporated in it just like in Labour Market Fund.

6.3.2. Strategies and policies on labour market issues on national level

Széll Kálmán Plan and Convergence Program of Hungary 2011–2015 (The Government of the Hungarian Republic, 2011)

In early March 2011 the government introduced the structural reform program of Hungary (Széll Kálmán Plan) in which it indicated three main directions, objectives: a) the accomplishment of sustainable and high economic growth with the expansion of employment, b) the reduction of fiscal deficit and c) the significant and durable reduction of national debt. In favour of these the government announced such reform measures that inter alia affect the employment, the pension system and the education and that may have significant positive effect on labour market trends.

Measures supporting the employment of disadvantaged groups:

- National Public Employment Program: a renewing and transforming public employment program, the aim of which is to increase the employment of poorly-educated people, to increase the job-seeking activity and to support the come-back (entry) to private sector, the primary labour market.
- The improvement of employment opportunities of young entrants: in favour of this, the establishment of a higher education system and the posts frame that better follows the needs of labour market.
- The transformation of social benefits: e.g. to halve the upper limit of sick-pay, to maximise (below the minimum wage level) all the social transfers available at different titles, the nominal fixing of family support benefits, the reduction of passive labour market benefits and the reform of pension system. With these measures the government aims to encourage more effective and more intensive job-seeking, furthermore it aims to achieve the reduction of the duration of unemployment and thus that of the number of long-term unemployed people. In longer run it expects the expansion of employment and economic growth from the measures.

The National Reform Program of Hungary based on Széll Kálmán Plan (The Government of Hungarian Republic, April 2011)

The program describes the national commitments connecting to Europe 2020 Strategy focusing on five fields as follows: a) employment; b) research and development, innovation; c) climate change, energy efficiency; d) education; e) poverty.

The basic assumption of the Hungarian Government is that work has value-creating power therefore it put work on the centre of economic policy. The expansion of employment was defined as the most important economic and development policy aim: Hungary purposes to increase employment rate to 75% until 2020 (currently 60.4%) – in other words the total convergence with the EU-level aim – among the population between the age of 20-64.

The accomplishment of the employment objective can be achieved by the coordination of relevant policies (tax policy, the development of business environment, education, adult education and vocational training, sectoral policies, social policy, health care system, social convergence policy).

The aim of reform-measures affecting labour market is primarily to reclaim actually inactive but capable of work groups to labour market partly with more effective labour market incentives and regulations and partly with more targeted labour market, training and social benefit means. Priority target groups: a) poorly-educated people; b) people raising small children; c) new entrants.

The most important measures referring to employment are the followings:

- *The transformation of active labour market policies:* e.g. the increase of the rate of aid for employment, the reduction of the support for trainings, the emphasising of the encouragement and the support of open labour market employment.
- *The help to coordinate work and family:* it is a priority aim to support the come-back of parents with small children to labour market; the support of flexible employment forms.
- *Adult education programs aiming at competence development*: e.g. “I’m learning again!” program, the aim of which is to provide at least primary education for adults without primary education, to encourage lifelong learning, to provide programs aiming at the development of foreign language and informatics knowledge of adult population.
- *The support of employment of people with disabilities:* the rationalisation of benefits given to organisations employing them, the support of their employment rehabilitation.
- *The development of vocational training system and the strengthening of its labour market relevance*: the content development of vocational training (curriculum development, exam system development), the spread of so-called dual training (they receive practical training at real workplace), the establishment of national career-counselling service system and toolset.

- *Measures encouraging labour market demand:* the encouragement of investments resulting in new jobs especially at micro-, small- and medium-sized enterprises.
- *The improvement of employment by improving the health of the population and the encouragement of active and healthy aging*: Public Health Program.

National Work Plan (The Government of the Hungarian Republic, 2011)

The basic aim of the Work Plan touching on the employment and training field is to accomplish structural transformations drafted in the Széll Kálmán Plan and in the Convergence Program and to achieve the budget savings deriving from this. To do so the proposal analyses the current status of labour market in international comparison, identifies the factors impeding the expansion of employment and determines those structural measures that are necessary to achieve the worded aims.

The aim of the measures is a) to increase the flexibility of labour market; b) to improve the competitiveness of the workforce; c) to encourage job-creation and legal employment; d) to ensure supported employment for those who cannot establish themselves in jobs without support. In order to achieve the aims the following intervention directions and measures were worded:

- The establishment of a regulation encouraging employment
- Incentives and subsidies in favour of job-creation (the support of flexible employment is a highlighted field)
- Public employment instead of social benefits: the establishment of the new condition system of public employment
- The transformation of the frames of interest reconciliation, the expansion of the participants taking part in interest reconciliation
- The establishment of National Employment Fund
- The renewal of the training system (the transformation of vocational training)

Based on the National Work Plan a system built on three pillars would come into existence: the primary aim is the encouragement and support of *open labour market* situation (1st pillar) with active employment policy means and by involving enterprises. Besides the primary labour market, it is necessary to establish a so-called *intermediate labour market* in the field of *social economy* (2nd pillar) partly from state support and partly from own incomes especially on those fields where it either doesn't operate or operates only limitedly and doesn't have a power of absorption. Those who can get a position neither in the primary nor in the intermediate labour market, the employment of them is organised by the government itself within the frame of *public employment* (3rd pillar).

National Public Employment Program (The Government of the Hungarian Republic, 2011)

The government considers it highly important that everybody shall contribute to the operation of the society with its own workforce and work, that's why it targets the transformation of public employment.

The principle of the New Public Employment Program starting from January 2012 is that those people who are capable of work but temporarily or permanently forced out from labour market and for whom the employment centre cannot offer other job, can get labour income instead of social benefit in the frame of public work, which contributes to the sustainment of their working capacity and to their labour market (re)integration. In favour of this every person capable of work receiving benefits for jobless people has to work at least 4 hours per day in public employment offered to him/her. If he/she doesn't accomplish this or this opportunity is not ensured, then the social benefits given to him/her cannot reach the amount he/she could have earned with the public employment, and the latter shall remain under the every time level of minimum wage. The main aim of the transforming public employment program is to increase, in consonance with the Széll Kálmán Plan, the employment of poorly-educated people, to boost job-searching activity and to encourage come back (enter) to the primary labour market.

The long-term strategy of National Employment Service, 2011–2020

The new strategy of National Employment Service determines the mission of the organisation and its strategies up to 2020 built on the organisation's overall assessment of the situation and on the changed governmental requirements and professional challenges. To accomplish strategic aims, development plan documentation was also made.

The main strategic directions of NES:

- to meet the workforce demands of employers in a fast and high-standard way (e.g. competence-based labour placement, effective corporate network managing relationships),
- to apply differentiated customer service channels,
- to reduce bureaucracy,
- to make job-seekers active, to increase the efficiency of labour market programs and support system,
- to operate and develop human services encouraging the restoration and the increase of the working ability of job-seekers.

6.3.3. Institutions dealing with labour market issues at regional level

Employment Centres:

The employment centres performing tasks regarding employment and the management of unemployment at regional and local level and their branch offices of course can also be found in Győr-Moson-Sopron County and in Vas County that belong to the CENTROPE region. Their most important activities were described in Chapter 1:

- to manage affairs regarding the registration of job-seekers,
- to perform tasks regarding the establishment, the paying out, the termination, the suspension and the claiming back of job-search benefits,
- to be in contact with employers; recruitment,
- to provide labour market services: e.g. the organisation of trainings and retrainings, counselling, providing information, club of job-seekers,
- to perform tasks regarding the establishment and the paying out of employment policy subventions.

Employment Centres and their branch offices in the two concerned counties:

Győr-Moson-Sopron county

Centre: Employment Centre of Győr-Moson-Sopron County's Government Office

Branch offices:

- Branch Office of Csorna;
- Branch Office and Service Centre of Győr
- Branch Office of Kapuvár
- Branch Office of Mosonmagyaróvár
- Branch Office of Sopron.

Vas county:

Centre: Employment Centre of Vas County's Government Office

Branch offices:

- Branch Office of Celldömölk
- Branch Office of Körmend;
- Branch Office of Kőszeg;
- Branch Office of Sárvár
- Branch Office of Szentgotthárd;
- Branch Office and Service Centre of Szombathely;
- Branch Office of Vasvár.

6.3.4. Strategies and policies dealing with labour market issues on regional level

Small region Employment Strategies – Employment pacts:

Kemenesalja in the West Transdanubia Region was the first to establish employment pact in the country in 2002. This pact was followed by several local, micro regional, small regional and regional pacts in 8 places of the region and others are under elaboration. With respect to Vas and Győr-Moson-Sopron county (CENTROPE region) there are pacts in Szombathely (county town dimension), in the Vasi Hegyhát, in Kemenesalján and in the Lövő small region, furthermore there are cross-border employment pacts in the Austro-Hungarian EuRegio area and in the area of Győr–Dunaszerdahely.

Employment Pact of Kemenesalja

The harmonisation of initiatives promoting employment in the Celldömölk small region, the elaboration of local integrated employment strategy, the establishment and operation of partnership and cooperation networks are formulated as the overall objectives of the strategy.

The highlighted target groups of the pact: a) people with disabilities; b) women between the ages of 25–40 years; c) young people under the age of 25; d) local entrepreneurs.

In connection with employment situation three main objectives were identified for each of which strategic goals were defined:

1. *Raising the level of employment, the promotion of keeping the workers on site*:
   - raising the level of employment, reducing unemployment;
   - creating new jobs with the support of local entrepreneurs' sector;
   - the development of local and community services with the aid of information and communication technology;
   - the development of employment potential in the field of tourism, sport, leisure time, social services and culture by taking advantage of the region's characteristics;
   - the support of meeting the labour needs of the economy with training, labour market services and other economic means.
2. *The encouragement of acquiring competitive knowledge*:
   - the conservation of workplaces by launching demand-driven trainings;
   - the harmonisation of regional economic development plans and vocational training;
   - the ensuring of labour market catch-up and career orientation training programs providing qualifications for low-educated young people.

3. *The improvement of the equal opportunities of employees*:
    - the improvement of the employment opportunities of people with disabilities;
    - the expansion of counselling and nurture opportunities for people who are directly or indirectly affected by unemployment;
    - the promotion of the integration of disadvantaged groups and those excluded from labour market;
    - the consideration of equal opportunities for men and women in all fields.

Employment Pact of Hegyhát

The determinants of the small region's employment strategy: the experts of labour organisations and professionals from the field of employment and spatial development.

The objectives of the strategy: The cooperation in the long-run results in the increasing of the level of employment, the reduction of unemployment as well as the enhancement of environmental culture. In favour of this the signatories defined the followings by the harmonisation of their activities:

- creating new workplaces with the support of the local business sector and by providing favourable infrastructural conditions,
- ensuring human resources supporting the development plans of local economy,
- establishing effective training system to ensure workforce for enterprises,
- launching and operating programs that increase the employment opportunities of disadvantaged unemployed people,
- supporting the employment of young people,
- creating and supporting the conditions of lifelong learning,
- the quick and distortion free flow of labour market information promoting this way effective decisions,
- taking advantage of the opportunities provided by the accession to the European Union (tender sources),
- strengthening non-profit sector which may serve the more differentiated meeting of household needs,
- increasing the level of employment by spreading atypical forms of employment,
- developing employment opportunities in the settlement of the small region and attracting investors,
- enhancing local micro-, small- and medium-sized enterprises (SME sector),
- considering environmental aspects to preserve the environmental harmony of the small region,

- supporting programs helping equal opportunities for both sexes (gender mainstreaming).

The aim of the strategy of Hegyhát is that measures aimed at the improvement of employment shall lean on the region's natural, constructed and cultural heritage for example with social economy type of initiatives. A basic value is the community as well, so it is an aim to see both those live on site and the emigrated active people as community resources for the implementation of the programs, and to constantly attempt to their involvement as well for example with the so-called "Home-coming" initiatives.

The target groups of the pact: a) employees, particularly with regard to people threatened by unemployment; b) young people, particularly with regard to those with diploma and the poorly educated unskilled people; c) unemployed, particularly with regard to people with disabilities; d) secular unemployed people; e) unemployed Roma people; f) unemployed people over the age of 50; g) women (particularly mothers returning after childbearing and with more children); h) local entrepreneurs.

Employment Pact of Szombathely

The main objectives, the areas of intervention and the priorities of the local employment strategy of Szombathely and its region:

- the expansion of employability also including groups that are disadvantaged from a labour market viewpoint
- the promotion of the flexibility – both from the demand and the supply side – of labour market

Measures connecting to strategic programs include innovative, pilot methods like the followings:

- job rotation model,
- the exchange of professionals among enterprises,
- teleworking,
- marketing supporting the development of social economy,
- non-profit business development activity,
- the database of free jobs for the posts of which is possible to apply via Internet,
- demand-supply database.

Every, from a labour market viewpoint relevant partner's interest, opinion, role and responsibility in the implementation of concrete measures appear in the program. The

action programs defined in the strategy are fully aligned to local needs and their implementation is also connected to local actors. The pact managers of Enterprise Centre operating as the coordination office of the Pact put a major emphasis on free professional and employment counselling given to local micro-, small- and medium-sized enterprises, starting enterprises as well as to those who intend to become an entrepreneur. The Pact's role in the career choice of elementary school students has to be mentioned. With the help of the local trade-corporation the students visited small enterprises, thus they together with their parents could study and see the different professions.

With the help of the Employment Pact local actors could learn how partnership shall be operated. With the help of the Pact it was successful to put the representatives of various sectors into the same table as a result of which the so far unshared problems emerged and a joint thinking and search for solutions have been launched to solve the employment problems of the region. With the coordination of Enterprise Centre the regional HR club was formed in December 2008, with the participation of human resources professionals of local big- and medium-sized enterprises. The aim of the monthly assembling club is to talk the local employment questions and actualities with the professionals of the given topic. At the end of the meeting a regular job fair took place.

West Pannon EuRegio Employment Pact

The general contract on the formation of West Pannon EuRegio was signed by the leaders of Burgenland province, Győr-Moson-Sopron County and Vas County in Kismarton on 7 October 1998. Zala County also joined to the community of interests in June 1999. Besides the vivification of social, cultural and sport relations, they defined as joint objectives the utilisation of economic and labour market opportunities, the increasing of the living standard of people living in border areas.

The cooperation is composed of the different regional offices and their agencies; through their offices they represent the interest groups like local governments, employees and employers as well. It was among the aims of labour organisations participating in the partnership that a pact should be formed as a bottom-up initiative, since with the coming into prominence of common regional labour market it becomes increasingly important to involve a lot of local actors and if possible they should be the hosts of the projects as well to achieve the aims.

The main objectives of the strategy:

- the intensification of the partnership and to make it responsible,
- the development of human resource, the availability of qualified labour,

- the establishment of labour market information and monitoring system.

The contractors concluded the employment pact agreement for a fixed period that fits to the 2007–2013 program period of the European Union on condition that the duration of some certain regional projects can be different. Unfortunately the pact did not begin to operate until 2010 due to political reasons.

Employment Pact of Alpokalja small region (Lövő)

According to the original idea a common employment strategy would have been made for the Austrian and Hungarian region. Based on the experiences of the held workshops and the personal consultations the partners and the people participating in the consultations decided that a comprehensive employment strategy shall be made for the Alpokalja Small Region and a separated chapter shall deal with cross-border cooperations.

The starting-point of the strategy formation was the completed situation analysis. The target groups of the pact's planned measures were defined as follows:

- secular unemployed people,
- poorly educated people,
- women,
- the age-group over the age of 40,
- young new entrants,
- people with disabilities,
- people with multiple disabilities,
- ethnical minorities.

The strategic objectives:

- increasing the employment level of the region, reducing unemployment,
- creating new jobs, developing and preserving the existing ones,
- promoting the effective operation of regional labour market, creating tools promoting employment in harmonisation with the needs of the economy,
- enforcing the principle of partnership in all fields of cooperation,
- in consonance with the principles of the European Union ensuring equal opportunities in every activity and program of the Pact,
- improving the employment opportunities of people with disabilities,
- in consonance with the principle of lifelong learning creating vocational training opportunities providing convertible knowledge,

- creating employment opportunities for socially disadvantaged and lagging groups, increasing their living standard,
- reviewing potential employment opportunities provided by social economy, effectively integrating non-profit organisations into cooperation,
- analysing the opportunities of cross-border and domestic cooperation in the field of tourism,
- monitoring the cross-border passage and commuting, searching for solutions for the problems identified,
- supporting small-sized enterprises mainly in the field of agriculture, small municipal services and social services,
- cooperation in the field of environmental protection.

Slovak-Hungarian Cross-border Employment Pact

This partnership, coalition of forces means that the actors:

- know each other's employment situation, status, difficulties and the real reasons for unemployment,
- effectuate the involvement of economic and human resources and the continuous development of them,
- coordinate the use of available means and the activity of actors; coordinate among the participants of the program.

The employment pact defined the following aims:

- the increase of the Hungarian and the Slovak employment level and the reduction of unemployment,
- the creation of new workplaces by involving the region's business organisations and the launching of vocational trainings necessary for the conservation of existing jobs,
- the reduction of black work,
- the furtherance of the integration of currently unemployed to labour market, the mapping, the database recording and the offer of Hungarian and Slovak workplaces,
- the distinguished taking an interest in women, young entrants and people with disabilities,
- the establishment of a directional group and an employment forum encouraging the accomplishment of the objectives, the ensuring of their operating conditions, the control and the regular evaluation of the efficiency of their work.

The Employment Pact's highlighted target groups: secular unemployed; women; job-seekers turning the age of 45 and 50; young entrants; people with disabilities.

For the management and the leadership it is very important that the pact shall not only be a formal organisation but actually shall provide something for the partners. They have failed to meet this requirement so far, which is proved primarily by the number and the activity of the enterprises participating in the pact.

Employment Agreement of Őrség

The aim of the strategy is to increase the employment level of Őrség Small Region and to reduce inactivity and unemployment. The strategy was based by a labour market situation analysis which tried to reply to the reasons for the special employment policy crisis phenomena of the small region and it also deals with the factors impeding the employment of disadvantaged people.

In favour of the development of the micro- and small-sized enterprises of the region, the encouragement of the getting a situation of employees, the increase of their adaptability and the helping of the coming home of young entrants and the transmigrated graduates the following strategic objectives were defined:

- the expansion of employment opportunities locally, the promotion of the mobility of people working far away,
- the reduction of imbalances and the creation of equal opportunities,
- the building of active partnerships to improve employment situation,
- the domestication of life-long learning in the region.

The short- and mid-term aims of the strategy (its priorities):

- The expansion of employment opportunities, the promotion of job-creation (e.g. the promotion of the production and the marketing of local products, the development of social economy)
- The improvement of the employability and the adaptability of employees (e.g. the coordination of the training needs of the economy with the training supply, the establishment of career orientation services, the labour market integration of disadvantaged people)
- The establishment of innovative services promoting employment and the economic development of the region (e.g. atypical forms of employment)
- The development of organisational frames and the capacities of the employment partnership (e.g. network-building and community development within the small region, the development of border and cross-border employment relationships).

Employment Pact of Kőszeg and Felső-Répcemente Small Region

The employment pact was established by the initiation of three cities – Kőszeg, Csepreg, Bük – in 2010 with the intention to promote the development of regional employment and of the region's economy by the joint forces of the labour market actors of the two neighbouring small regions of similar conditions. The aims of the cooperation:

- the identification of *the problems, interests* and future *prospects, aims of local actors* relevant from the point of view of employment in the small regions of Kőszeg and Csepreg
- the establishment of sustainable partnership network in the framework of which a wide range of local actors cooperate in favour of the *promotion of employment initiatives*
- *the mapping of job-creation and human resource development* in the affected small regions and in the region
- *the starting of the implementing of tasks deriving from the strategy.*

The long-term aims of the pact are:

- to ensure stage for the information exchange among the actors of regional employment policy,
- to coordinate the human resource development ideas and aims of regional actors,
- to achieve the employment and settling down of young people within the region,
- to achieve equal employment opportunities.

EURES-T PANNÓNIA cross-border partnership cooperation

The cooperation includes on the Austrian side Eisenstadt, Mattersburg, Neusiedl/See, Oberpullendorf, Oberwart, Stegersbach, Jennersdorf labour areas in Burgenland province; Berndorf, Wiener Neustadt, Neunkirchen, Baden, Bruck/Leitha, Mödling, Schwechat labour areas in Lower-Austria province and Feldbach, Fürstenfeld, Hartberg labour areas in Styria province; on the Hungrian side Győr-Moson-Sopron County, Vas County and Zala County in West Transdanubia region. Organisations establishing the cooperation undertake to follow common aims in the following fields:

- to gradually inform and/or advise job-seekers, employers and the stakeholders on the actual cross-border life and working conditions and on the job offers,
- to gradually provide information in connection with the job-supply and job-demand in the cross-border region among EURES actors operating at employment services,
- to collect and gradually actualise the data of elementary and vocational training opportunities available in the region and provide opportunity to further vocational training,

- to support and promote the maximal use of cross-border vocational training opportunities and to widely provide information on opportunities,
- to perform activity in the field of cross-border employment, which promote labour market mobility and the dialogue between economic actors and social partners,
- to elaborate and contribute to projects that serve to improve cross-border labour market and that create opportunities for the cooperation of other projects that are active on the subject.

The employment strategy of West Transdanubia Region, 2010–2015 (REKORD strategy):

The aim of making regional employment strategy is to improve the living standard and social security of people living in the region by increasing employment. The strategy meets the requirements of the European Union, the national and regional, county and small region employment concepts, but first of all of the new Széchenyi Plan.

The strategy primarily aims at the development of regional economy and the increasing of employment. It contains the overall and specific objectives, priorities and measures based on the situation analysis; the measuring of potential funds necessary for development, indicative fund-map; its monitoring and evaluation system and process.

Overall objectives:

- Work-centred region: the increasing of employment level by developing the primary labour market
- Creating opportunities: the reduction of labour market imbalances – inter alia the disproportionate concentration of jobs in the region – by improving employment and making use of employment opportunities.
- Collaboration: the strengthening of the collaboration of labour market actors by improving regional partnerships.

Specific objectives:

- The conservation of jobs by exploring business opportunities in the region and by developing existing enterprises and the creation of sustainable new jobs mainly among small- and medium-sized enterprises.
- The improvement of the quality of jobs, the making of work organisations more effective, the development of their flexibility, furthermore the getting across of human resources as primary values.
- The improvement of the conditions of commuting to work characterising most of the areas within the region, the development of social background services encouraging employment.

- The successful fitting of education and training to the needs of the transforming regional economy by making use of the potential powers of employment partnerships.
- The development of work experience-gathering methods and structures encouraging the first or re-employment, the expansion of opportunities.
- The content-centred development of employment pacts, the performing of regional labour market management functions, the creation of new cooperations and the professional support of them.

Priorities/strategic programs

1. priority: Local economy development to create and preserve jobs
2. priority: The development of services encouraging employment
3. priority: The labour market integration of disadvantaged people
4. priority: Regional employment partnership-building and service development

Measures

1.1. The creation of business development information and counselling points at the basis of the pacts;
1.2. Job-creating actions;
1.3. Workplace health promotion
2.1. Regional interest career orientation;
2.2. The development of practical vocational training by involving enterprises;
2.3. The furtherance of work experience-gathering;
2.4. The development of transport for work, the development of social background services
3.1. The development of complex labour market services;
3.2. The regional organisation of public employment programs;
3.3. The development of social economy
4.1. The quality and content development of existing pacts, the support of the creation of new pacts;
4.2. The collection, analysis and publication of labour market data;
4.3. Regional investment promotion and the professional and coordinating support of job-creating investments.

The strategy describes in details the aim, the motivation, the content, the target group in case of every measure and it gives the indicators as well.

6.3.5. Methodology

Hungarian Central Statistical Office (KSH) – Labour Force Survey

KSH introduced this data collection in 1992 in order to examine the economic activity of the population. The labour force survey is a representative survey covering the private households which provides information about economic activity of people with the age of 15–74 years. The aim of the data collection is to observe the trend of employment and unemployment in accordance with the international statistical recommendations independent of current/respective labour legislation or its changes, using the definitions/concepts of International Labour Organisations (ILO).

In frame of the labour force survey 33 000 households and 66 000 persons have been recorded on a quarterly basis since 1998. During sampling the simple rotation method ensures that any included household shall provide data in the next forthcoming six quarters and then it will be removed from the sample.

The criterions of stratum forming in sampling are the following: geographical units, settlement categories according to their size, residential areas. The sample size allows the representativeness on NUTS 2 level as well.

The register database of registered jobseekers (FH-REG) of **National Employment Service**

Another main source of unemployment is the monthly recorded database on individual information of registered jobseekers.

Categories:

Employees: who conducted at least 1 hour, *income-generating* job on the reference (observed) week and had got a workplace from where he/she was absent temporarily. (e.g.: because of illness, holiday etc.) People who receive child care fee or child home care allowance (gyes) are not considered as an employed, unless they work beside the child home care allowance.

Income-generating job is defined all activity, which

- generates income, or
- ensures allowances in kind, or
- was conducted for another income with a later realizability

- was conducted by as a helping family members in order to increase the income of the economy, enterprise relating to the household.

Unemployed: whom the following are applied at the same time:

- he/she didn't work on the reference (observed) week and hasn't got a workplace from where he was absent temporarily;
- he/she searched for a job actively in the previous 4 weeks;
- he/she is at disposal, i.e. could start to work in 2 weeks if he/she could find a job.

Long term unemployed: Unemployed person who seeks for job for one or more than 1 year.

Registered jobseekers (The definition of registered unemployed of Act IV. of 1991 on job assistance and unemployment benefits was changed to „registered jobseeker" by its change of 1st November 2005)*:* from among the total number of clients registered with the National Employment Service those who are out of employment, not pensioners, or day-time students, who do not get employment facilitating promotion (re-training, employment for public benefit etc.); who look for work, employment or individual occupation, ready to accept a suitable job, and signed a job-seeking agreement with the local office of the National Employment Service.

Economic active group: who appears in the labour market, namely the employed and unemployed.

Non-economic active group (Inactive): who didn't work in the reference week and didn't have got a job with regular income and didn't seek for a job. So those people who can not be classified into category of neither employed nor unemployed. Eg.: students, pensioners, dependants.

Rate of unemployment: It shows the portion of unemployed within the economic active population (usually 15–64 years old). It isn't derived from registered jobseekers/unemployed people but from the so called labour force survey.

Rate of unemployment counted on registered jobseekers (unemployed): It shows the portion of unemployed registered on offices of National Employment Service within the economic active population (15–64 years old). The rate calculated on this method differs from the Hungarian Central Statistical Office Labour Force Survey. Its main reasons are

the different conceptual system and the fundamentally diverse observation/measurement method and approach.

Rate of long term unemployment: Portion of for one or more than one year job seeking unemployed within economic active population.

Rate of employment: It shows the portion of employed within the economic active population (15–64 years old)

Participation rate: Total number of employed and unemployed within population in percent. So it shows within the population the portion of employed and unemployed, namely the economic active population.

Availability of national statistics regarding NUTS levels:

The numbers and rates of registered jobseekers are available in level of region, county and settlement as well, therefore registered unemployment rate can be provided on settlement level (status of 20th January in every year; last available data concerning to 2010, but NUTS1, NUTS2 and NUTS3 levels concerning to 2011

6.3.6. Labour market analysis based on national statistics

As a result of the economic crisis that started in Hungary in 2008, the number of employed people was significantly lower and the number of unemployed ones was significantly higher between 2009 and 2011 than in the previous years.

The employment indicators of the 15-64 age group are very unfavourable compared to the European Union: the activity rate is only some percentage points higher than 60%, – according to labour market surveys – only 56% of the affected age group (60% of men, 50% of women) is employed in labour market (tables 6.14-6.18, 6.29). The relative majority of the employed people works in manufacturing industry considering both women (~one fifth of them) and men (one fourth of them), another significant proportion of men works in building industry, and in the fields of trade and motor vehicle repair. The latter sector is the second most important field of women employees, but a significant proportion of them works in the fields of education and human, health and social care (table 6.30).

The vast majority of employed people works in full-time job, the forms of atypical employment is not so spread (e.g. part-time job, teleworking). Approximately only 5% of

the employed people between the ages of 15 and 64 work in part-time job (two thirds of them are women).

The number of unemployed people is high and unfortunately it has been increasing from the middle of the last decade, thus the proportion of registered unemployed people exceeded the 13% in 2010 and 2011, and also according to the data of a labour market survey it reaches 11% (tables 6.12, 6.14-6.19), which has been among the highest values since the political transformation (the highest value was so far 15-17% in 1993). For the period between 2006 and 2011 there are available data regarding the proportion of registered unemployed people at national level on monthly basis from which is clearly visible that the unemployment rate is the highest in January and in February which practically hasn't changed during years. In months characterised by the lowest unemployment rate an interesting change can be observed compared to the middle of the decade; up to 2006-2009 the unemployment rate was the lowest in the summer months (from May to July) basically due to seasonal work, whereas during the last two years it significantly shifted over the autumn period (September-October) (table 6.13).

From the viewpoint of the consequences and the judgement of unemployment, the permanence and the duration of employment are important questions. In recent years approximately half of the employed people have been looking for work for one or more years which means that rate of permanently unemployed people is very high. Nowadays unemployment is the highest risk of poverty; there is a risk of exclusion in case of those permanently driven out of labour market.

The employment chances of the 15-24 age group deteriorated in a particularly dramatical way; the significant proportion of this age group is present in education, which means that they are students, but it can be said that every fourth young person doesn't either study nor have a job. Between 2000 and 2002 11-12% of the people between the age of 15 and 24 was unemployed, whereas in recent years this ratio has reached and has already exceeded the 26% (table 6.12). The unemployment rate of new entrants is the 15% of the whole unemployment rate.

The unemployment rate has significantly increased in case of both sexes, but the unemployment rate of men has exceeded that of women since 2009, although the difference is only a few percentage points (e.g. 2010 – men: 11,6%; women: 10,7%) (table 6.19).

The education more strongly determines labour market activity than sex. The labour market chances of people with no or maximum elementary education are very unfavourable, among them the unemployment rate is higher than 25% in contrast to the 8,4% unemployment rate of people with school-leaving exam (secondary education) and the 5% rate of those with higher education diploma. Although in recent years the unemployment rate has increased among highly-educated people, the difference as we can see is enormous. Among people with higher education diploma the unemployment rate was lower than 2% at the beginning of the 2000s, but in recent years the economic recession has affected them as well (table 6.20). 40% of unemployed people don't have any kind of qualification, they only completed their elementary school (if they did), and therefore their chances are very limited in labour market. One reason for the Hungarian unemployment rate which is very unfavourable compared to that of the EU is the very low presence of people with elementary education in labour market: only a fourth of them (28-30% of unskilled men and 23-24% of unskilled women) is employed (the average of the EU: 46%), whereas 61-62% of people with secondary education and between the age of 15 and 64 (65% of men, 54-55% of women) and 78% of people with higher education diploma (82% of men and 75% of women) work. Therefore the proportion of employed people increases with the increase of education. From the data in brackets we can see that there is a significant difference in the employment rate of the two sexes in case of each education, which is also related to the reproductive function of women.

The available data show quite well that what significant differences are between the composition of men and women unemployed based on education (table 6.22), which shows well that there is a basic difference between the education rate of the two sexes. Among unemployed men the relatively largest proportion belongs to skilled workers, whereas among women the largest proportion belongs to those who graduated from high school and the unskilled ones, however among them the rate of those with higher education diploma is higher than among men.

If we take into consideration the employment and unemployment situation of Győr-Moson-Sopron County and Vas County that belong to the CENTROPE region, we have to emphasise that they are in a substantially more favourable situation, especially Győr-Moson-Sopron County compared to the large part of the country. We can state that in both counties, similar to the national characteristics, the number of employed people decreased, but the number of unemployed people increased between 2008 and 2010,

however Győr-Moson-Sopron County and Vas County as well have more favourable indicators than the national average. The employment rate of the age group of 15–64 exceeds 60% in Győr-Moson-Sopron County, but that of Vas County decreased below 60% (58,5%) only in 2009 (table 6.28).

In both counties one third of employed people works in the field of industry, a fourth or fifth of them works in the field of trade-tourism and transportation, a further one fifth of them works in the fields of diverse public services. In Vas County the number of people employed in industry significantly decreased compared to the beginning of the decade (figures 18, 19).

The rate of registered unemployed people significantly increased in the two counties (more than one and a half times increase took place) after 2008, however since 2011 a significant positive change has happened in case of both counties, the rate of unemployed people has become definitely lower (table 6.23). A thing against the national trend is observed in terms of the unemployment rate of men and women, at national level the unemployment rate is higher among men, whereas in the two given counties since the middle of the 2000s the unemployment rate of women is higher than that of men, even not at all to a negligible extent, the only exception was one year (2009) in case of Vas County (table 6.24). Compared to the national average, the employment chances of young new entrants are more favourable, especially in Győr-Moson-Sopron County, whereas Vas County has a more mixed picture in this respect since there are some years when in case of men or women the unemployment rate of people between the age of 15 and 24 is the same as the national average or in some cases it is even higher (table 6.24).

There were no available data at county level, which could provide information on the unemployment rate of people with diverse education, but we do know the distribution of unemployed people based on education. Based on this we can state that both in Győr-Moson-Sopron County and in Vas County among unemployed people the rate of those with higher education diploma is higher and that of unskilled people is significantly lower than the national average, the difference in case of both educations is especially high in Győr-Moson-Sopron County.

Based on the data referring to the posts registered at employment centres and the number of registered unemployed people, it can be said that compared to the beginning of the decade (7,8) the number of unemployed people for one post increased significantly, which was the highest in 2009–2010 (27,1-26,1), then a decrease took place (14,2) (figure 16).

A similar trend can be observed in both Győr-Moson-Sopron and Vas County, but there are much more favourable rates, which means that there are less unemployed people for one post (e.g. in 2009 in Győr-Moson-Sopron County 13,9; in Vas County 22,1; in 2011 in Győr-Moson-Sopron County 8,0; in Vas County 8,4) (figure 17).

Table 6.8: Rate of registered unemployment and rate of unemployment according to the labour force surveys, on national level, yearly (average) (since 2000)

Year	Registered unemployed (Registered jobseekers)		Unemployment according to the labour force surveys, total		Unemployment according to the labour force surveys, 15–24 years old	
	Number	rate, %	1000 person	rate, %	1000 person	rate, %
2000	390,492	9.3	262.5	6.4	70.7	12.1
2001	364,140	8.5	232.9	5.7	55.7	10.8
2002	344,715	8.0	238.8	5.8	56.5	12.3
2003	357,212	8.3	244.5	5.9	54.9	13.4
2004	375,950	8.7	252.9	6.1	55.9	15.5
2005	409,929	9.4	303.9	7.2	66.9	19.4
2006	393,465	9.0	316.8	7.5	64.1	19.1
2007	426,915	9.7	311.9	7.4	57.6	18.0
2008	442,333	10.0	329.2	7.8	61.0	19.9
2009	561768	12.8	420.7	10.0	79.2	26.4
2010	582,664	13.3	474.8	11.2	79.2	26.6
2011	582,868	13.2	470.8	11.0	N/A	26.0

Source: Registered unemployed: National Employment Service; Unemployed according to the labour force surveys: Hungarian Central Statistical Office.

Table 6.9: Rate of registered unemployment, on national level, monthly (since 2006)

Year	Jan.	Febr.	March	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly (average)
2006	10.0	10.2	9.6	8.9	8.4	8.2	8.6	8.6	8.6	8.6	8.8	9.2	9.0
2007	10.0	10.4	10.3	9.8	9.4	9.1	9.4	9.5	9.4	9.4	9.5	10.1	9.7
2008	10.6	10.8	10.5	10.0	9.6	9.4	9.5	9.6	9.6	9.6	10.1	10.8	10.0
2009	11.6	12.3	12.8	12.9	12.8	12.5	12.7	12.8	12.9	12.9	13.2	13.7	12.8
2010	14.9	15.1	14.7	13.7	12.7	12.5	12.6	12.5	12.4	12.5	12.7	13.5	13.3
2011	15.4	15.2	14.7	13.8	12.9	12.5	12.5	12.4	12.1	12.0	11.9	12.5	13.2

Source: National Employment Service.

Table 6.10: Economic activity of population (rate of unemployment, rate of employment, and participation rate) according to the labour force surveys, on national level, per 3 month, (2007) %

Period	Rate of unemployment		Rate of employment		Participation rate	
	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64
Jan–March	7.5	7.5	50.6	56.9	54.7	61.6
Febr–Apr	7.5	7.5	50.5	56.9	54.6	61.5
March–May	7.3	7.3	50.8	57.2	54.8	61.7
Apr–Jun	7.0	7.0	51.1	57.6	54.9	61.9
May–Jul	7.0	7.0	51.2	57.6	55.0	62.0
Jun–Aug	7.2	7.2	51.1	57.6	55.1	62.1
Jul–Sept	7.2	7.3	51.1	57.7	55.1	62.2
Aug-Oct	7.3	7.4	51.1	57.6	55.1	62.2
Sept–Nov	7.5	7.5	50.8	57.3	54.9	61.9
Oct–Dec	7.7	7.8	50.7	57.1	54.9	61.9

Source: Hungarian Central Statistical Office.

Table 6.11: Economic activity of population (rate of unemployment, rate of employment, and participation rate) according to the labour force surveys, on national level, per 3 month, (2008) %

Period	Rate of unemployment		Rate of employment		Participation rate	
	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64
Jan–March	8.0	8.0	49.8	56.1	54.1	61.0
Febr–Apr	7.7	7.8	49.9	56.2	54.1	61.0
March–May	7.7	7.8	50.0	56.3	54.2	61.1
Apr–Jun	7.6	7.7	50.2	56.5	54.3	61.2
May–Jul	7.5	7.6	50.5	56.9	54.6	61.5
Jun–Aug	7.5	7.5	50.8	57.1	54.9	61.8
Jul–Sept	7.7	7.8	50.9	57.3	55.2	62.1
Aug-Oct	7.7	7.8	50.8	57.2	55.1	62.0
Sept–Nov	7.8	7.8	50.7	57.1	55.0	61.9
Oct–Dec	8.0	8.0	50.4	56.7	54.7	61.7

Source: Hungarian Central Statistical Office.

Table 6.12: Economic activity of population (rate of unemployment, rate of employment, and participation rate) according to the labour force surveys, on national level, per 3 month, (2009) %

Period	Rate of unemployment		Rate of employment		Participation rate	
	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64
Jan–March	9.7	9.7	48.9	55.1	54.1	61.0
Febr–Apr	9.9	9.9	48.9	55.1	54.3	61.2
March–May	9.8	9.8	49.1	55.3	54.5	61.4
Apr–Jun	9.6	9.6	49.4	55.6	54.6	61.5
May–Jul	9.7	9.7	49.5	55.8	54.8	61.8
Jun–Aug	9.9	10.0	49.4	55.7	54.9	61.8
Jul–Sept	10.3	10.4	49.2	55.5	54.9	61.9
Aug-Oct	10.4	10.5	49.3	55.6	55.0	62.0
Sept–Nov	10.5	10.6	49.3	55.6	55.1	62.1
Oct–Dec	10.5	10.5	49.2	55.5	55.0	62.0

Source: Hungarian Central Statistical Office.

Table 6.13: Economic activity of population (rate of unemployment, rate of employment, and participation rate) according to the labour force surveys, on national level, per 3 month, (2010) %

Period	Rate of unemployment		Rate of employment		Participation rate	
	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64
Jan–March	11.8	11.9	48.4	54.5	54.9	61.9
Febr–Apr	11.8	11.8	48.5	54.7	55.0	62.0
March–May	11.4	11.5	48.9	55.0	55.1	62.2
Apr–Jun	11.1	11.2	49.2	55.3	55.3	62.3
May–Jul	11.0	11.1	49.3	55.5	55.4	62.4
Jun–Aug	11.0	11.1	49.5	55.7	55.6	62.7
Jul–Sept	10.9	10.9	49.7	56.0	55.8	62.9
Aug-Oct	10.9	10.9	49.8	56.0	55.8	62.9
Sept–Nov	10.7	10.8	49.8	56.1	55.8	62.9
Oct–Dec	10.8	10.9	49.5	55.8	55.5	62.6

Source: Hungarian Central Statistical Office.

Table 6.14: Economic activity of population (rate of unemployment, rate of employment, and participation rate) according to the labour force surveys, on national level, per 3 month, (2011) %

Period	Rate of unemployment		Rate of employment		Participation rate	
	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64	Aged 15–74	Aged 15–64
Jan–March	11.6	11.7	48.6	54.6	55.0	61.9
Febr–Apr	11.4	11.4	48.9	55.0	55.2	62.1
March–May	11.0	11.0	49.3	55.4	55.4	62.3
Apr–Jun	10.8	10.8	49.6	55.8	55.6	62.6
May–Jul	10.8	10.8	49.9	56.1	56.0	62.9
Jun–Aug	10.8	10.8	50.0	56.1	56.0	62.9
Jul–Sept	10.7	10.7	50.3	56.4	56.3	63.2
Aug-Oct	10.8	10.8	50.3	56.6	56.4	63.5
Sept–Nov	10.6	10.6	50.4	56.7	56.4	63.5
Oct–Dec	10.7	10.7	50.2	56.5	56.2	63.2

Source: Hungarian Central Statistical Office.

Table 6.15: Rate of unemployment by gender, according to the labour force surveys, on national level, yearly (average) (since 2000) %

Year	Males	Females	Together
2000	7,0	5,6	6,4
2001	6,3	5,0	5,7
2002	6,1	5,4	5,8
2003	6,1	5,6	5,9
2004	6,1	6,1	6,1
2005	7,0	7,5	7,2
2006	7,2	7,8	7,5
2007	7,1	7,6	7,4
2008	7,6	8,1	7,8
2009	10,3	9,7	10,0
2010	11,6	10,7	11,2

Source: Hungarian Central Statistical Office.

Table 6.16: Rate of unemployment by highest educational qualification per gender, according to the labour force surveys, on national level, yearly (average) (since 2000) %

Year	Males					Females				
	<= Primery school	Vocatio-nal and special vonation al school	Secon-dary school	College, univer-sity	Total	<= Primery school	Vocatio-nal and special vonation al school	Secon-dary school	College, univer-sity	Total
2000	13.4	7.7	4.8	1.6	7.0	9.1	7.4	4.9	1.5	5.6
2001	13.6	6.4	4.3	1.2	6.3	8.4	6.4	4.0	1.6	5.0
2002	14.1	6.2	4.0	1.4	6.1	9.3	6.5	4.4	2.4	5.4
2003	13.6	6.6	3.9	1.6	6.1	10.5	7.2	4.4	1.9	5.6
2004	14.3	6.4	4.1	1.7	6.1	10.3	8.0	5.3	2.9	6.1
2005	15.6	7.4	4.9	2.3	7.0	13.0	9.8	6.7	3.1	7.5
2006	17.3	7.0	5.2	2.7	7.2	15.8	10.1	6.4	2.8	7.8
2007	18.4	6.8	5.1	2.4	7.1	16.0	9.4	6.2	3.3	7.6
2008	19.8	7.6	5.3	2.3	7.6	17.5	9.5	6.9	3.2	8.1
2009	24.4	10.6	7.7	3.8	10.3	21.6	12.4	7.7	4.1	9.7
2010	26.9	12.1	8.4	4.9	11.6	22.8	12.6	9.5	4.5	10.7

Source: Hungarian Central Statistical Office

Table 6.17: Share of registered unemployed (registered jobseekers) by highest educational qualification, on national level, yearly (average) (since 2000) %

Year	<= Primery school	Vocational and special vonational school	Secondary vocational school	Secondary general school	College	University	Total
2000	41.0	34.9	13.2	8.0	2.1	0,7	100,0
2001	42.0	34.1	13.1	7.7	2.2	0,8	100,0
2002	42.4	33.5	13.2	7.6	2.4	0,9	100,0
2003	42.7	32.9	13.1	7.5	2.7	1,0	100,0
2004	42.3	32.3	13.4	7.7	3.1	1,1	100,0
2005	41.9	32.4	13.5	7.9	3.2	1,2	100,0
2006	42.0	32.1	13.4	8.0	3.3	1,3	100,0
2007	42.4	31.5	13.3	8.2	3.3	1,3	100,0
2008	43.3	30.9	13.1	8.2	3.3	1,2	100,0
2009	40.1	32.5	14.4	8.5	3.2	1,2	100,0
2010	39.3	31.4	15.0	9.1	3.7	1,5	100,0
2011	40.3	29.8	24.4		5.6		100.0

Source: National Employment Service (PES REG).

Table 6.18: Share of unemployed by highest educational qualification per gender, according to the labour force surveys, on national level, yearly (average) (since 2000) %

Year	Males					Females				
	<= Primery school	Vocatio-nal and special vonation al school	Secon-dary school	College, univer-sity	Total	<= Primery school	Vocatio-nal and special vonation al school	Secon-dary school	College, univer-sity	Total
2000	32.9	45.8	17.9	3.4	100.0	31.8	28.2	35.0	5.0	100.0
2001	36.5	43.2	17.5	2.8	100.0	33.7	28.0	32.2	6.1	100.0
2002	36.7	43.3	16.7	3.3	100.0	33.2	26.0	32.2	8.5	100.0
2003	34.0	44.7	17.2	4.1	100.0	32.7	28.3	32.0	7.0	100.0
2004	33.9	42.6	18.6	4.9	100.0	27.8	27.4	34.2	10.6	100.0
2005	32.1	43.1	19.0	5.8	100.0	28.2	27.1	35.2	9.5	100.0
2006	33.4	40.0	20.0	6.6	100.0	31.5	27.5	32.5	8.5	100.0
2007	34.9	38.8	20.3	6.0	100.0	31.2	26.6	31.7	10.5	100.0
2008	35.2	39.4	19.8	5.6	100.0	32.2	24.3	33.3	10.2	100.0
2009	31.0	40.1	21.9	7.0	100.0	32.1	26.1	30.3	11.4	100.0
2010	30.1	40.2	21.5	8.2	100.0	30.5	24.3	34.0	11.2	100.0
2011 (I–III. Q.)	28.8	41.8	21.4	8.0	100.0	30.4	23.3	34.7	11.6	100.0

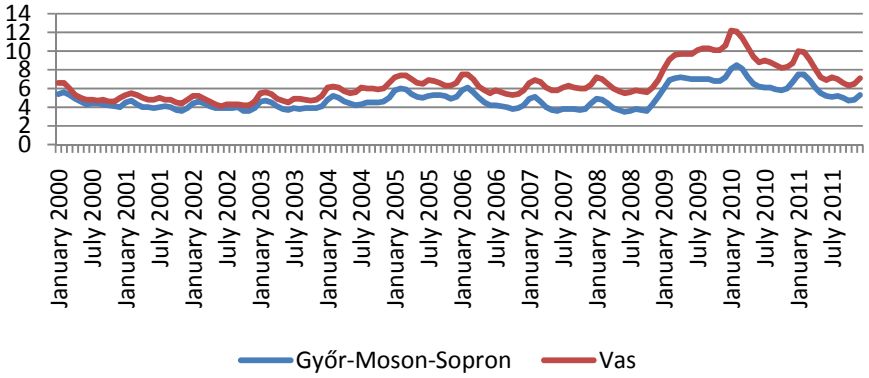
Source: Hungarian Central Statistical Office.

Table 6.19: Rate of registered unemployment in the CENTROPE region (Győr-Moson-Sopron and Vas county), yearly (average) (since 2000) %

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Győr-Moson-Sopron	4.6	4.1	4.0	4.1	4.6	5.4	4.6	4.1	4.1	6.9	6.8	5.7
Vas	5.2	4.9	4.5	5.0	6.0	6.8	6.1	6.2	6.1	9.8	9.6	7.7
Hungary	9.3	8.5	8.0	8.3	8.7	9.4	9.0	9.7	10.0	12.8	13.3	13.2

Source: National Employment Service (PES REG).

Figure 6.17: Rate of registered unemployment in the CENTROPE region (Győr-Moson-Sopron and Vas county), monthly (since 2000) %



Source: National Employment Service.

Table 6.20: Rate of unemployment by gender per age, in the CENTROPE region (Győr-Moson-Sopron and Vas county) yearly (average) (since 2000) %

Year	Győr-Moson-Sopron			Vas			Hungary
	Males	Females	Total	Males	Females	Total	Total
From 15 to 24 years							
2000	7.2	10.1	8.5	10.8	12.3	11.5	12.5
2001	7.8	12.3	9.8	15.0	5.7	11	11.3
2002	7.0	9.9	8.2	10.2	12.0	11	12.7
2003	7.6	7.7	7.6	11.1	13	11.9	13.4
2004	8.8	5.6	7.3	12.3	9.2	10.8	15.5
2005	9.5	12.6	10.8	15.9	16.3	16	19.4
2006	6.7	10.3	8.1	11.7	28	18.5	19.1
2007	9.5	6.96	8.3	11.8	19.1	14.6	18
2008	6.8	7.3	7.1	8.4	10.1	9.2	19.9
2009	11.9	23.2	16.8	29.3	22.7	26.6	26.5
15 years or over							
2000	4.0	4.6	4.3	4.5	4.8	4.6	6.4
2001	4.0	4.4	4.2	6.5	3.6	5.1	5.7
2002	3.9	3.9	3.9	5.6	4.0	4.8	5.8
2003	3.4	3.2	3.3	5.5	4.7	5.1	5.9
2004	3.5	4.3	3.8	4.9	6.8	5.85	6.1
2005	4.2	4.5	4.3	7.5	8.4	7.9	7.2
2006	3.3	5.7	4.3	6.4	8.6	7.4	7.5
2007	3.0	4.5	3.6	5.2	8.8	6.8	7.4
2008	2.3	5.1	3.5	4.7	6.3	5.5	7.8
2009	5.5	7.3	6.3	11.2	9.0	10.2	10.0

Source: EUROSTAT.

Table 6.21: Frequency and percent of registered unemployed (registered jobseekers) by gender, in the CENTROPE region (Győr-Moson-Sopron and Vas county) (since 2005)

Year	County	Gender		Together
		Males	Females	Number
2005	Győr-Moson-Sopron	4,952 47.5%	5,462 52.5%	10,414 100.0%
	Vas	4,415 50.4%	4,338 49.6%	8,753 100.0%
2006	Győr-Moson-Sopron	4,198 46.0%	4,933 54.0%	9,131 100.0%
	Vas	3,885 51.9%	3,607 48.1%	7,492 100.0%
2007	Győr-Moson-Sopron	3,851 46.7%	4,400 53.3%	8,251 100.0%
	Vas	3,922 50.5%	3,839 49.5%	7,761 100.0%
2008	Győr-Moson-Sopron	3,922 47.3%	4,374 52.7%	8,296 100.0%
	Vas	3,935 52.6%	3,553 47.4%	7,488 100.0%
2009	Győr-Moson-Sopron	7,605 53.2%	6,681 46.8%	14,286 100.0%
	Vas	6,562 54.5%	5,481 45.5%	12,043 100.0%
2010	Győr-Moson-Sopron	6,970 50.6%	6,816 49.4%	13,786 100.0%
	Vas	6,075 53.0%	5,390 47.0%	11,465 100.0%
2011. I. Quarter	Győr-Moson-Sopron	7,894 51.8%	7,343 48.2%	15,237 100.0%
	Vas	6,182 55.0%	5,068 45.0%	11,250 100.0%
2011. I. Semester	Győr-Moson-Sopron	6,618 49.2%	6,826 50.8%	13,444 100.0%
	Vas	5,258 53.0%	4,667 47.0%	9,925 100.0%

Source: National Employment Service.

Table 6.22: Frequency and percent of registered unemployed (registered jobseekers) by highest educational qualification, in the CENTROPE region (Győr-Moson-Sopron and Vas county) (since 2006) (average)

Year	County	Qualification					Total
		<= Primery school	Vocatio-nal and special vonatio-nal school	Secondary school	College, university	Missing data	Number
2006	Győr-Moson-Sopron	2,675 29.3%	3,271 35.8%	2,431 26.6%	754 8.3%	0 0.0%	9,131 100.0%
	Vas	2,600 34.7%	2,510 33.5%	1,956 26.1%	426 5.7%	0 0.0%	7,492 100.0%
2007	Győr-Moson-Sopron	2,413 29.2%	2,914 35.3%	2,259 27.4%	660 8.0%	6 0.1%	8,251 100.0%
	Vas	2,787 35.9%	2,473 31.9%	2,065 26.6%	433 5.6%	3 0.0%	7,761 100.0%
2008	Győr-Moson-Sopron	2,416 29.1%	2,878 34.7%	2,288 27.6%	702 8.5%	12 0.1%	8,296 100.0%
	Vas	2,659 35.5%	2,420 32.3%	1,957 26.1%	444 5.9%	8 0.1%	7,488 100.0%
2009	Győr-Moson-Sopron	4,053 28.4%	5,414 37.9%	3,797 26.6%	1022 7.2%	0 0.0%	14,286 100.0%
	Vas	4,092 34.05	4,177 34.7%	3,157 26.2%	616 5.1%	1 0.0%	12,043 100.0%
2010	Győr-Moson-Sopron	3,807 27.6%	4,932 35.8%	3,892 28.2%	1155 8.4%	0 0.0%	13,786 100.0%
	Vas	3,947 34.4%	3,841 33.5%	3,018 26.3%	659 5.7%	0 0.0%	11,465 100.0%
2011. I. Quarter	Győr-Moson-Sopron	4,407 28.9%	5,505 36.1%	4,124 27.1%	1201 7.9%	0 0.0%	15,237 100.0%
	Vas	3,914 34.8%	3,798 33.8%	2,853 25.4%	684 6.1%	1 0.0%	11,250 100.0%
2011. I. Semester	Győr-Moson-Sopron	3,849 28.6%	4,678 34.8%	3,771 28.0%	1146 8.5%	0 0.0%	13,444 100.0%
	Vas	3,397 34.2%	3,258 32.8%	2,603 26.2%	666 6.7%	1 0.0%	9,925 100.0%

Source: National Employment Service.

Table 6.23: Economic activity of population (Rate of unemployment; rate of employment, and participation rate) according to the labour force surveys, in the CENTROPE region (Győr-Moson-Sopron and Vas county), yearly (average) Age 15–74 (since 2000) %

Year	Győr-Moson-Sopron			Vas		
	Rate of unemployment	Rate of employment	Participation rate	Rate of unemployment	Rate of employment	Participation rate
2000	4.24	N/A	N/A	4.6 0	N/A	N/A
2001	4.16	N/A	N/A	4.48	N/A	N/A
2002	4.17	55.6	58.0	4.85	57.2	60.2
2003	3.25	54.3	56.1	5.23	57.4	60.5
2004	4.03	53.2	55.5	5.14	56.7	59.8
2005	5.0 0	54.2	57.1	6.50	55.6	59.5
2006	4.98	54.6	57.4	6.45	56.1	60.0
2007	4.18	56.0	58.5	5.88	56.4	59.9
2008	4.25	55.6	58.1	5.65	54.4	57.7
2009	6.98	54.5	58.6	9.22	51.6	56.9
2010	8.22	54.1	58.9	12.15	50.0	57.0
2011 (I–III. Q.)	6.43	53.4	57.0	7.63	53.6	58.0

Source: http://kisterseg.munka.hu/index.php.

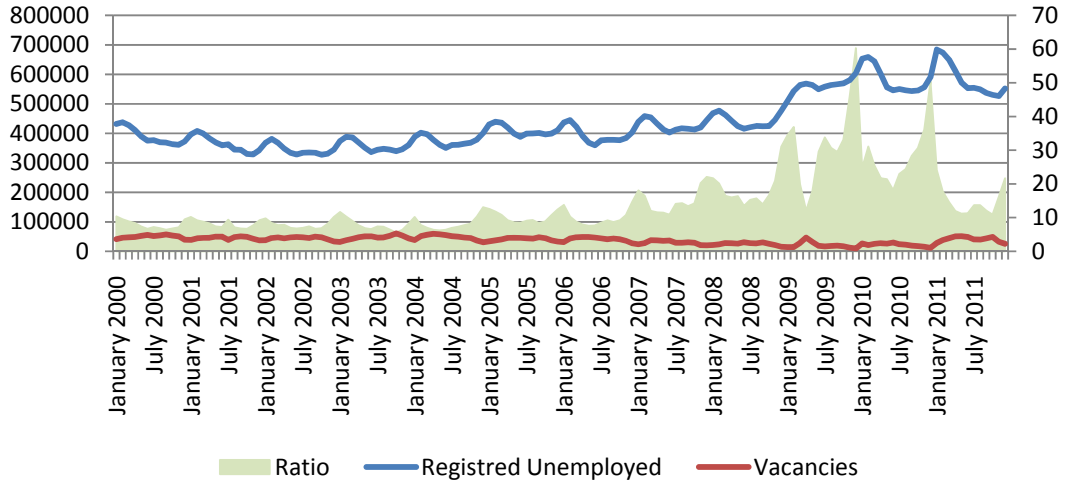
Table 6.24: Economic activity of population (Rate of unemployment; rate of employment, and participation rate) according to the labour force surveys, in the CENTROPE region (Győr-Moson-Sopron and Vas county), yearly (average). Age 15–64, (since 2001) %

Year	Győr-Moson-Sopron			Vas		
	Rate of unemployment	Rate of employment	Participation rate	Rate of unemployment	Rate of employment	Participation rate
2001	3.94	61.5	64.0	4.3	64.2	67.1
2002	4.21	60.9	63.5	4.87	64.3	67.6
2003	3.28	59.9	62.0	5.27	64.3	67.9
2004	4.05	60.9	63.5	5.13	64.1	67.6
2005	5.01	61.6	64.8	6.54	63.1	67.5
2006	4.99	62.7	65.9	6.52	62.8	67.2
2007	4.19	63.1	65.9	5.91	61.9	65.8
2008	4.26	62.9	65.7	5.68	60.8	64.5
2009	7.01	61.5	66.1	9.31	58.5	64.5
2010	8.24	N/A	N/A	12.19	N/A	N/A

Source: http://kisterseg.munka.hu/index.php.

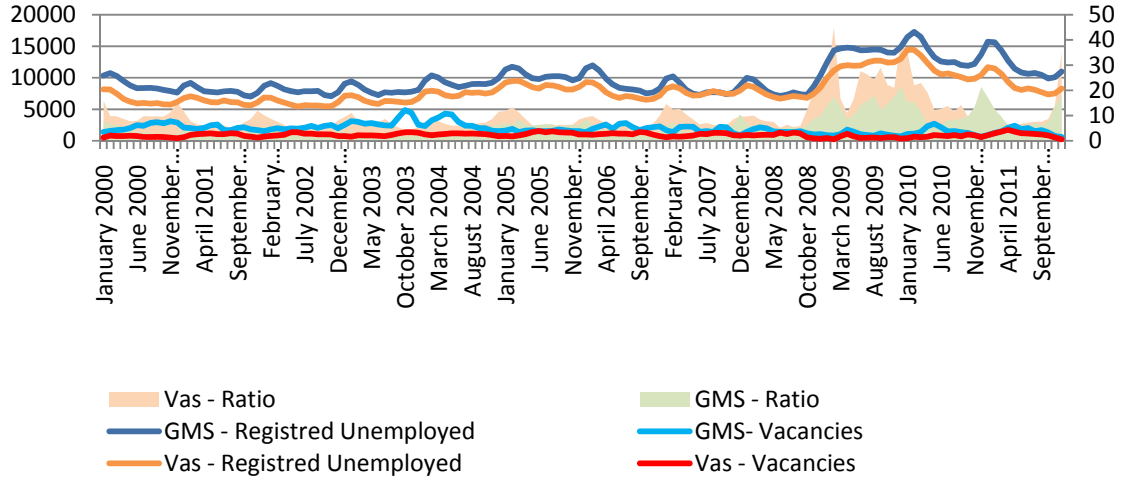
VACANCIES

Figure 6.18: Number of unfilled vacancies at the and of the month, and number of the registered unemployed, and ratio unemployed/vacancies, on national level, monthly (since 2000)



Source: National Employment Service.

Figure 6.19: Number of unfilled vacancies at the and of the month, and number of the unemployed, and ratio unemployed/vacancies, in the CENTROPE region (Győr-Moson-Sopron and Vas County) monthly (since 2000)



Source: National Employment Service.

LABOUR FORCE

Table 6.25: Rate of employment by highest educational qualification per gender, 15–64 years old, on national level (since 2000) % (according to the labour force surveys)

Year	Males					Females				
	<= Primery school	Vocational and special vonational school	Secon-dary school	College, univer-sity	Total	<= Primery school	Vocational and special vonational school	Secon-dary school	College, univer-sity	Total
2000	33.6	77.4	67.9	87.1	63.1	26.0	61.0	59.3	77.8	49.7
2001	33.0	77.6	67.3	87.4	62.9	26.1	60.8	59.2	77.8	49.8
2002	32.0	77.6	67.1	85.8	62.9	26.0	60.4	58.6	77.9	49.8
2003	32.4	76.5	67.8	86.4	63.4	25.3	59.7	59.5	78.3	50.9
2004	31.0	75.7	67.3	87.1	63.1	25.0	58.8	58.1	78.1	50.7
2005	31.6	74.7	66.9	86.9	63.1	25.1	57.6	57.9	78.9	51.0
2006	31.5	75.2	67.5	85.7	63.8	24.5	58.2	57.5	77.6	51.1
2007	31.6	74.6	67.5	85.9	64.0	24.0	57.8	57.2	75.4	50.9
2008	31.3	72.6	66.5	84.7	63.0	23.9	55.5	56.4	75.5	50.6
2009	29.0	69.9	65.1	83.1	61.1	23.0	54.3	54.9	74.4	49.9
2010	28.7	68.1	64.6	82.1	60.4	23.6	56.4	54.3	74.6	50.6

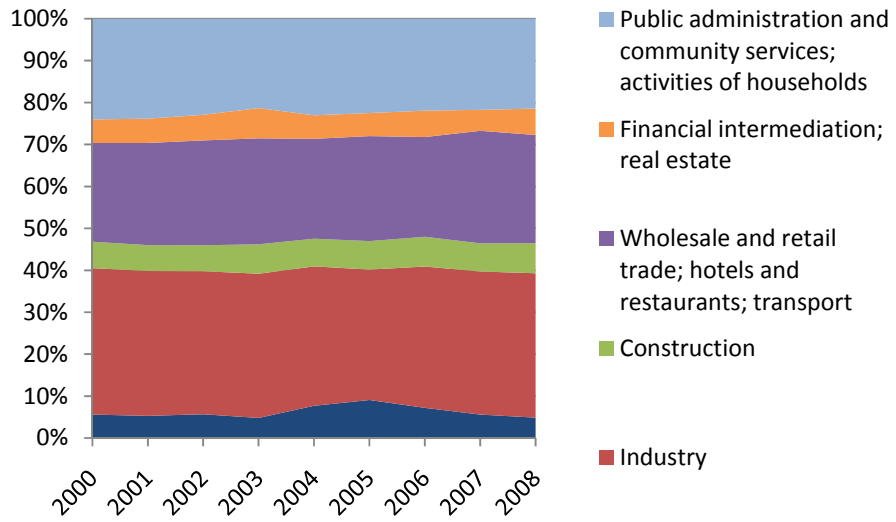
Source: Hungarian Central Statistical Office.

Table 6.26: Share of employees by industries[x] per gender, on national level, in 2008, 2010 (%) (according to the labour force surveys)

Industries, branches	2008			2010		
	Males	Females	Together	Males	Females	Together
Agriculture, hunting and fishing	4.8	1.7	3.4	5.0	1.6	3.4
Mining and quarrying	0.4	0.0	0.2	0.6	0.1	0.4
Manufacturing	27.6	19.7	23.7	26.1	18.3	22.3
Electricity, gas supply	1.4	0.5	1.0	1.5	0.7	1.1
Water supply , water treatment, treatment of waste	2.0	0.7	1.4	2.3	0.6	1.4
Construction	12.8	1.3	7.3	11.7	1.2	6.6
Wholesale and retail trade, repair of motor vehicles and household goods	11.9	16.1	13.9	11.4	16.1	13.6
Transport, storage	9.6	3.9	6.9	10.1	3.8	7.1
Hotels and restaurants	3.1	4.9	4.0	3.2	5.0	4.1
Information, Communications	2.9	1.8	2.4	3.0	1.7	2.4
Financial intermediation	1.4	3.4	2.4	1.3	3.6	2.4
Real estate	0.4	0.5	0.5	0.4	0.5	0.4
Scientific, technical, and special activities	2.1	3.7	2.8	2.4	3.4	2.9
Administrative and services supportive activities	2.9	2.5	2.7	3.3	2.8	3.0
Public administration and defence, compulsory social security	7.8	9.1	8.4	8.5	9.8	9.1
Education	3.7	14.9	9.0	4.1	15.0	9.4
Human, health and social work activities	2.5	11.5	6.8	2.8	12.2	7.3
Art, entertainment, leisure time,	1.5	1.7	1.6	1.3	1.7	1.5
Other service activities	1.2	2.1	1.6	1.0	2.0	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

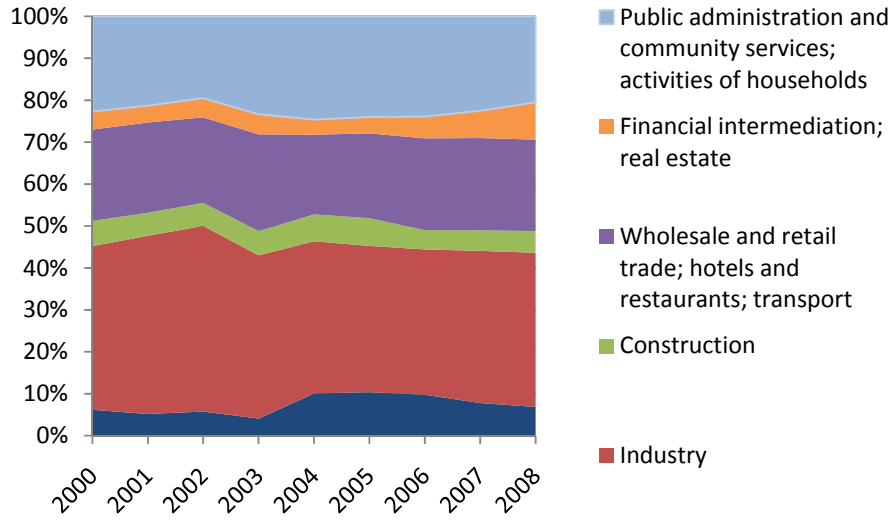
x byTEÁOR'08 Source: Hungarian Central Statistical Office.

Figure 6.20: Share of employed persons by industries, in the CENTROPE region (Győr-Moson-Sopron County) (since 2000) (%)



Source: EUROSTAT.

Figure 6.21: Share of employed persons by industries, in the CENTROPE region (Vas County) (since 2000) (%)



Source: EUROSTAT.

6.4. Slovakia

Karol Frank

6.4.1. Institutions dealing with labour market issues on national level

The labour market issues are under the competence of the Ministry of Labour, Social Affairs and Family of the Slovak Republic. The Ministry is responsible for[44]:

- labour-law relations, civil service employment relations, legal relations in the performance of civil service in public interest and legal relations of elected officials of the local self-government;
- Occupational safety and health protection;
- Labour inspection;
- Coordination of the employment strategy, and labour market policy;
- Social insurance, old-age pension saving scheme and supplementary pension saving scheme;
- State social benefits, social services, supporting of the social inclusion of the persons with a disability into the society and assistance in material need;
- Social and legal protection of the children, social curatorship and coordination of the family policy.

The Ministry of Labour, Social Affairs and Family of the Slovak Republic provides a state supervision over performance of social insurance and performs supervision over performance of the social services.

List of institutions dealing with labour market issues on national level:

- **Institute for Labour and Family Research** is the research institution founded by the Ministry. It is focusing on social and family policy, labour market, employment policy, industrial relations and working conditions and occupational safety and health.
- **Central Office of Labour, Social Affairs and Family** and individual Offices of Labour, Social Affairs and Family. The Offices are bodies of state administration focused on employment services for citizens with the objective to minimise the unemployment rate. A total of 45 regional offices are operating in Slovakia.[45]
- **The Social Implementation Agency** is the implementation agency of EU Cohesion policy focused on implementation of projects financed by the European Social Fund in the framework of Operational Programme Employment and Social Inclusion. It is a

[44] http://www.employment.gov.sk/en.html
[45] The list of individual offices can be found here http://www.upsvar.sk/urady-psvr/zoznam-uradov-prace-socialnych-veci-a-rodiny.html?page_id=1570

budgetary organisation financed from the budget of the Ministry of Labour, Social Affairs and Family founded on 29th December 2006.

- **The Social Development Fund** is providing assistance for projects focused on marginalised social groups. Its primary role is to provide support for unemployed, disabled and homeless people, immigrants, young people, former prisoners and women after maternity leave and Roma communities. The activities of the Fund contribute to the objective of reducing poverty and increasing employment in the country. The support is provided by the European Social Fund. The eligible beneficiaries are municipalities and organisation dealing with this target specific group of citizens.

6.4.2. Strategies and policies on labour market issues at national level

The Operational Programme Employment and Social Inclusion (OP EaSI) builds on the global objective of the National Strategic Reference Framework (NSRF) "to significantly increase competitiveness, regional performance and employment by 2013 while respecting sustainable development". The global objective of the Operational Programme directly responds to the five key disparities defined in the NSRF 2007 – 2013 for the area of Human Resources and Education, namely the low proportion of expenditure on human resource development per GDP, high rate of unemployment, high proportion of at-risk groups in total unemployment and a low rate of employment, low mobility and flexibility of the labour force, inadequate education level of marginalized Roma communities, a relatively high rate of poverty and risk of social exclusion, primarily of at-risk groups, with emphasis on marginalized Roma communities.

The main objectives of the OP EaSI reflect the labour market needs in Slovakia and are focused on:

- Increasing employment and adaptability and reducing unemployment.
- Strengthening the integration of persons at risk of social exclusion or socially excluded persons and supporting the reconciliation of work and family life.
- Enhancing the quality of human resources and their management in the area of public policy.

In the framework of the Operational Programme Employment and Social Inclusion the following national projects are being implemented.

1. Employment support for job applicants

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-i-2.html?page_id=1241

Budget: 40 000 000 EUR

Territorial eligibility: Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Specific objectives of the projects:

- Increase of motivation of employers to create new or maintain existing jobs,
- Support for new jobs for disadvantages groups,
- Maintaining employment of employees with low wages,
- Financial contribution for employees or job applicants to commuting,
- Financial contribution for employees or job applicants to job migration (moving from current place of residence to new place offering new labour opportunities).

2. Support for employment in the period of global financial and economic crisis

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-i-2-a.html?page_id=7775

Budget: 43 725 380 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Specific objectives:

- Increase of motivation of employers to create new or maintain existing jobs,
- Increase of motivation of job applicants by providing additional financial allowance for low wage jobs,
- Increase of chances of job applicants on the labour market, in the field of self-employment.

3. Selected measures of active labour market policies for support of job applicants

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-i-2-b.html?page_id=21702

Budget: 30 000 000 EUR

Territorial eligibility: all NUTS III regions except the Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Specific objectives:

- Increase of motivation of employers to create new or maintain existing jobs,
- Increase of chances of job applicants on the labour market, in the field of self-employment,
- Support for new jobs for disadvantages groups,
- Maintaining employment of employees in low wage sectors,
- Financial contribution for employees or job applicants to job migration (moving from current place of residence to new place offering new labour opportunities.

4. Support of regional and local employment

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-i-2-c.html?page_id=21140

Budget: 61 000 000 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Specific objectives:

- Increase of motivation of selected employers for employment of disadvantages groups of job applicants,
- Increase of employment of disadvantages groups of job applicants.

5. Employment support for disabled persons

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-ii-2.html?page_id=1243

Budget: 32 118 000 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Specific objectives:

- Increase of motivation of selected employers for employment of disadvantages groups of job applicants,
- Increase of employment of disadvantages groups of job applicants.

6. Activation of job applicants

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-v-2.html?page_id=1242

Budget: 1 106 000 EUR

Territorial eligibility: Bratislava region

Budget: 69 707 000 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Activation of job applicants by means of voluntary work with the objective to obtain practice for the need of the labour market.
- Activation of long-term unemployed dependent on social benefits by providing job opportunities in the area of local services in municipalities.

7. Support for employment mediation and counselling services provided by offices of labour, social affairs and family

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-vii-2.html?page_id=13484

Budget: 10 614 018 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Increase of employment and employability by modernising the traditional and support of new means and methods of job intermediation,
- Providing of counselling services and support for three layer system of employment services.

8. Improvement and increase of accessibility of employment services

URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-x-2.html?page_id=13242

Budget: 1 148 788 EUR

Territorial eligibility: Bratislava region

Budget: 10 795 747 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Concentration of job offers on to one place,
- Increase of chances of disadvantages groups on the labour market.

9. Development and fostering of human resources and qualification of employees

URL http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-xii-2.html?page_id=13245

Budget: 415 907 EUR

Territorial eligibility: Bratislava region

Budget: 8 208 362 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Providing of innovative means of education for state and local administration, offices of labour and childcare facilities (improvement of skills and knowledge in soft skills, projects management, mediation, computer literacy, legislation of Slovakia and language proficiency).
- Improvement of services provided by the offices of labour, social affairs and family.

10. System of labour market forecasting and survey of created and lost jobs
URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-xiv-2.html?page_id=13249

Budget: 230 509 EUR

Territorial eligibility: Bratislava region

Budget: 3 005 745 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Providing information for the Offices of Labour, Social Affairs and Family and business sector related to labour market.
- Building of system for forecasting of qualification requirements of employers and employees based on survey in business sector.

11. Modernisation and increase of efficiency of state administration
URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-xvi-2.html?page_id=13233

Budget: 259 201 EUR

Territorial eligibility: Bratislava region

Budget: 2 095 111 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Modernisation and improvement of employment services, managerial and controlling processes related at Offices of Labour, Social Affairs and Family.

12. Increase of employment opportunities for professional parents
URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-xxiv-2.html?page_id=1244

Budget: 324 678 EUR

Territorial eligibility: Bratislava region

Budget: 2 327 965 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Support for professional families including the preparation of professional surrogate families,
- Increase of public awareness on professional parenthood,
- Support for training opportunities, improvement of performance and number of professional families.

13. Financial contribution (financial benefit) for childcare services
URL: http://www.upsvar.sk/europsky-socialny-fond/narodne-projekty-v-programovom-obdobi-2007-2013/narodny-projekt-xxv-2.html?page_id=1245

Budget: 3 406 711 EUR

Territorial eligibility: Bratislava region

Budget: 45 166 474 EUR

Territorial eligibility: all NUTS III regions except Bratislava region

Implementation body: Central Office of Labour, Social Affairs and Family and its regional offices

Project objectives:

- Support for personal, family and professional life for childcare benefit beneficiaries by increasing, maintaining of employment.
- Support for return to previous job for parents on maternity leave.

Selected laws and regulations on national level[46]

Act No. 453/2003 on state administration responsible for social affairs, family and employment services
URL: http://www.employment.gov.sk/filemanager/dokumenty/ministerstvo/legislativa/pracovna_legislativa/453_2003.pdf

Act No. 461/2003 on social insurance
URL: http://www.employment.gov.sk/zakon-461_2003zz.pdf

Statute of the Social Implementation Agency (Štatút sociálnej implementačnej agentúry)
URL: http://www.sia.gov.sk/files/1242919497.pdf

Statute of the Social Development Fund (Štatút fondu sociálneho rozvoja).
URL: http://www.fsr.gov.sk/data/files/ine/Stat_FSR_(13._1._2011).pdf

Operational Programme Employment and Social Inclusion
URL: http://www.sia.gov.sk/index.php?siteid=44

6.4.3. Regional level

The regional authorities have only limited competences in the field of labour market and human resources. The majority of activities is set-up at national level and implemented through the regional offices of labour, social affairs and family. The regional authorities are cooperating with the regional Offices mainly in the field of social policy.

[46] The list of all relevant legislation can be found here: http://www.employment.gov.sk/legislativa.html

6.4.4. Methodology

The labour market indicators are reported by two independent institutions – The Statistical Office of Slovakia and the Centre for Labour, Social Affairs and Family. Each of these institutions is reporting on regular basis the development of main labour market indicators. Both institutions are using its own methodology which leads to reporting of different values of labour market indicators in the country. The following paragraphs are aimed at explaining the differences among these two methodologies, basic terms used in relation to labour market as well as recent development on the labour market using the national labour market methodology.

Unemployment rate based on labour force survey by the Slovak Statistics Office

Labour force sample survey (LFS) provides a permanent monitoring of the labour force on the basis of a direct survey in selected households. The survey is based on a random selection of dwellings in all districts of the Slovak Republic. The sample is covering 10 250 dwellings every quarter, which represents 0.6 % of the total number of permanently occupied dwellings in the Slovak Republic. The survey covers all persons aged 15 and over living in the households of the selected dwellings without regards to permanent, temporary or unregistered stay, institutionally population excepted. Each selected household remains in the sample for five subsequent quarters. All surveyed figures are weighted on the basis of current demographic data of the SR derived from statistical surveys on population change. The methodology used for the survey fully corresponds to the International Labour Organization and the Eurostat recommendations and definitions.

Economically active population by LFS are persons aged 15 and over who are employed or unemployed. Economically inactive population by LFS are persons who have no job in the reference week because they are students and apprentices, pensioners, persons keeping household, persons in re-training course and therefore they were not seeking a job actively during the last four weeks or they are seeking a job but they are not able to start working within two weeks. Persons on parental leave, discouraged workers (they would like to work but they are not seeking a job because they do not believe to find suitable job) and persons younger than 15 years are also included.

Economic activity rate by LFS is equal to economic active population divided by population aged 15 and more (multiplied by 100 to obtain the percentage value).

Employed by LFS are all those aged 15 and over who worked at least one hour for pay or profit (full-time or part-time job, permanent, temporary, casual or seasonal job) in the reference week, as well as contributing (unpaid) family workers, professionals in armed forces and persons working abroad. Data on employed include contributing family workers, who did not receive any wage and allowance for their work, persons not working in the reference week due to illness, holiday, maternity leave, study, weather conditions and strike or dispute, except persons on long-term unpaid leave of work. Persons on parental leave are not included among employed.

Employment rate 15 – 64 by LFS is equal to number of employed persons at the age of 15-64 divided by the number of population at the age of 15-64 (multiplied by 100 to obtain the percentage value).

Unemployed by LFS are persons aged 15 and over who were not working for wage or profit during the reference week, who are actively seeking work during the last four weeks (or who have already found a job to start within 3 months) and who are able to start work in the next two weeks. These unemployed persons are not obliged to be registered at offices of labour, social affairs and family as job applicants.

Unemployment rate by LFS is equal to Number of unemployed by LFS divided by economically active population by LFS (multiplied by 100 to obtain the percentage value). Economically active population in the denominator of the formula excludes persons on parental leave.

The data are available on the web page of the Statistical Office of Slovakia http://portal.statistics.sk/showdoc.do?docid=23.

Unemployment rate based on the data of Office of Labour, Social Affairs and Family

The registered rate of unemployment is calculated from total number of disposable applicants in evidence at the Central Office of Labour, Social Affairs and Family. The registered unemployment rate is calculated from a number of disposable job applicants, who can immediately report to work after submission of an offer of convenient job vacancy and from a number of economically active persons for a previous year from the Labour Force Sample Survey, in accordance with the Agreement of International Labour Organisation.

The registered unemployment rate is equal to the number of disposable job applicants (in the actual month) divided by the number of economically active persons (in the last year).

The number of disposable job applicants is calculated as the total number of job applicants minus non-disposable applicants. Where non-disposable applicants are persons:

- In education and preparation for the labour market.
- Persons currently on sick leave or persons on sick leave with sick children.
- Persons in the graduate training (practice).

A job vacancy is a paid post (newly created, unoccupied or about to become vacant) for - which the employer is taking active steps to find a suitable candidate from outside the enterprise concerned and is prepared to take more steps and - which the employer intends to occupy. Active steps to find a suitable candidate include:

- Notifying the job vacancy to the public employment services,
- Contacting a private employment agency/head hunters,
- Advertising the vacancy in the media (internet, newspapers, magazines),
- Advertising the vacancy on a public notice board,
- Approaching, interviewing or selecting possible candidates/potential recruits directly,
- Approaching employees and/or personal contacts,
- Using internships.

An occupied post that becomes vacant due to long-term absences (regular and additional maternity leave) and long-term sicknesses (more than 4 weeks) is included into job vacancy. A post that was vacant has been filled, but the person has not started work yet, is no longer a vacancy but it is still not considered as an occupied post. Average number of job vacancies per year is calculated as an arithmetic average of number of job vacancies of the last day of each month in the reference year.

Data on job vacancies is the annual average of the quarterly data that is obtained from a quarterly full-scale survey in organizations of financial intermediation and in all non-profit organizations irrespective of the number of employees as well as from a quarterly sample survey in profit organizations with 20 and more employees and in those with up to 20 employees which have a turnover of 5 million EUR and more. Data for other small-size enterprises with up to 19 employees are obtained from a quarterly sample survey. Job

vacancy statistics for staff of self-employed persons is gained via the quarterly sample survey on entrepreneur job vacancies, which is conducted by the Ministry of Labour, Social Affairs and Family. Regional and occupational distributions of the annual data are being collected by the proportion of regions and occupations from the quarterly questionnaire of Information System on Labour Price.

The data are available on the web site of the Central Office http://www.upsvar.sk/statistiky/nezamestnanost-mesacne-statistiky.html?page_id=1254. The data are available on monthly basis on regional (NUTS III) and district level (LAU 1). But some caution is advised, because the methodology has changed since 2000. Therefore the time series may not be very consistent. For long-term analysis of labour market and comparison among countries the most reliable data sources is still the labour force survey. Another source of data is the regional database of the Statistics Office of Slovakia RegDat available at http://px-web.statistics.sk/PXWebSlovak/.

6.4.5. Labour market analysis based on national statistics

Since the formation of the independent Slovak Republic the labour market issues represent the most pressing challenges for domestic economic policy. The transition from central planned economy towards functioning market economy resulted in rapid increase of unemployment in the whole economy with substantial social and regional consequences. This paragraph aims to analyse the development on the labour market from 2001 to 2011. The analysis is based on data provided by the RegDat database of the Statistical Office of Slovakia and data from the Central Office of Labour, Social Affairs and Family i.e. registered unemployment rate.

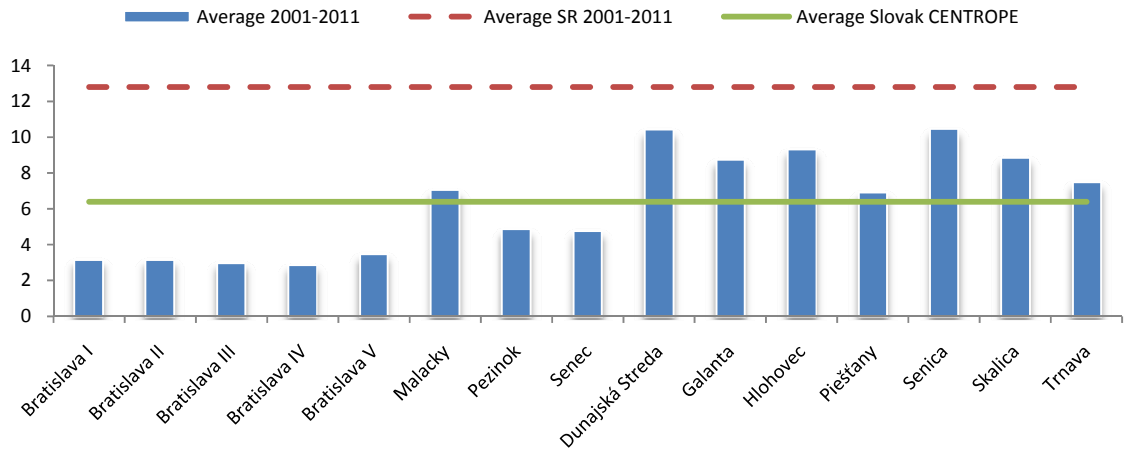
Since 2001 the registered unemployment rate decreased in all districts of Slovak CENTROPE. The most significant decrease of unemployment was recorded in the district of Galanta by 12.4 percentage points. In general the decrease of unemployment has been higher in the Trnava region, especially due to high unemployment rates at beginning of the analysed period. A more detailed look at the development of the unemployment rate shows, that the impact of financial and economic crisis hit the Slovak CENTROPE regions in 2009. Again, the most significant impact on unemployment was in the Trnava region.

Table 6.27: Average annual registered number of unemployment in the Slovak CENTROPE 2002 – 2011 (change in percentage points against the preceding year)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bratislava I	–1,5	–1,4	–0,7	–0,8	–0,3	–0,3	–0,2	0,8	0,8	0,4
Bratislava II	–0,2	–1,3	0,2	–0,7	–0,3	–0,4	0,0	1,4	1,3	0,7
Bratislava III	–1,4	–0,6	0,3	–0,8	–0,3	–0,3	–0,1	1,1	0,9	0,7
Bratislava IV	–0,5	–0,9	–0,4	–0,7	–0,1	–0,2	0,0	1,3	0,5	0,8
Bratislava V	0,3	–1,6	0,1	–1,0	–0,4	–0,4	–0,1	1,5	0,7	0,8
Malacky	–1,7	–5,2	–0,3	–1,1	–0,8	–0,7	0,2	3,9	0,1	–0,2
Pezinok	–0,7	–1,0	–0,4	–1,2	–0,5	–0,7	0,0	2,0	1,2	0,7
Senec	–0,5	–2,8	–0,7	–0,8	0,0	–0,5	–0,3	1,7	1,4	0,9
Bratislava region	–0,4	–1,7	–0,2	–0,9	–0,3	–0,4	–0,1	1,7	0,8	0,6
Dunajská Streda	–1,7	–5,5	–0,5	–2,2	–1,2	–1,4	–1,4	3,1	2,2	1,2
Galanta	–2,1	–5,2	–2,2	–2,4	–1,2	–1,8	–1,3	2,2	1,2	0,3
Hlohovec	–0,8	–1,1	0,2	–3,4	–2,6	–1,9	–0,9	2,4	1,2	1,1
Piešťany	–0,2	–1,7	0,1	–2,1	–1,2	–1,0	–0,3	3,2	0,6	0,2
Senica	–0,9	–5,3	0,7	–1,7	–1,1	–2,2	–0,3	5,4	0,6	–0,7
Skalica	–1,3	–4,3	0,3	–1,7	–1,2	–1,6	–0,9	5,7	–0,4	–0,9
Trnava	–0,2	–1,8	–1,6	–2,9	–1,1	–1,4	–0,5	2,5	0,5	0,6
Trnava region	–1,0	–3,7	–0,7	–2,4	–1,3	–1,6	–0,8	3,2	1,0	0,4

Source: own calculations based on monthly data published by the Central Office of Labour, Social Affairs and Family.

Figure 6.22: Average registered unemployment rate in the Slovak CENTROPE districts 2001 – 2011



Source: own calculations based on monthly data published by the Central Office of Labour, Social Affairs and Family

The average unemployment in Slovakia in the last decade reached 12.8 %. The most Slovak CENTROPE regions are still below the national average. From regional perspective the lowest unemployment rates are recorded in the Bratislava region, even below the Slovak CENTROPE average of 6.4 %, the only exception being the district of Malacky. This can be explained by the high share of services in Bratislava region, which were only slightly influenced by the decrease of external demand. On the contrary, the districts in the Trnava region are all above the CENTROPE average, but still below the national average. Among the largest employers in Trnava region, there are INA Skalica (manufacturing of bearings), PSA Peugeot Citroën Slovakia, SAMSUNG Electronics Slovakia, Swedwood Slovakia (sawmills, component and furniture production), Delphi (automotive industry), Bekaert (automotive industry), ŽOS Trnava (repair, reconstruction, modernisation and modification of railway freight wagons; modernisation and reconstruction of passenger cars; production of railcars), Johns Manville Slovakia (production and treatment of glass fibres) and ZF SACHS Slovakia (automotive industry – production of clutches and torque converters). Among the largest companies in Bratislava region are Volkswagen Slovakia and Slovenské elektrárne a.s. (energy).

Table 6.28: Annual changes of number of disposable job applicants 2002 – 2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bratislava I	–108	–303	–132	–184	–55	–91	–9	146	218	75
Bratislava II	–528	–735	109	–408	–146	–291	122	736	917	350
Bratislava III	–233	–194	127	–252	–78	–139	35	316	366	209
Bratislava IV	–270	–481	–173	–354	–15	–190	83	633	397	363
Bratislava V	–709	–1,228	108	–812	–222	–426	77	1,008	726	528
Malacky	–526	–1,678	–335	–420	–243	–347	179	1,168	354	–131
Pezinok	–111	–296	–118	–392	–118	–274	78	527	513	200
Senec	–27	–740	–217	–231	9	–202	–16	420	508	226
Bratislava region	–2,512	–5,654	–632	–3,052	–868	–1,961	551	4,952	4,003	1,819
Dunajská Streda	–860	–3,079	–413	–1,433	–690	–1,118	–473	1,492	1,745	747
Galanta	–198	–2,411	–1,170	–1,312	–584	–1,012	–380	865	769	140
Hlohovec	–233	–286	52	–702	–621	–581	–101	475	413	257
Piešťany	–91	–687	–48	–385	–358	–452	46	935	432	38
Senica	–319	–1,663	202	–513	–321	–856	89	1,547	609	–243
Skalica	–295	–1,098	24	–345	–279	–503	–92	1,275	202	–269
Trnava	–84	–1,375	–1,099	–1,618	–728	–1,175	–88	1,470	673	360
Trnava region	–2,080	–10,599	–2,454	–6,308	–3,580	–5,700	–996	7,777	5,126	1,030

Source: own calculations based on monthly data published by the Central Office of Labour, Social Affairs and Family. The annual data is calculated as simple mathematic average of individual months.

The deterioration on the labour market is also visible in the growing number of disposable job applicants. Since the end of 2008 and beginning of 2009 the number of job applicants is growing each year.

Table 6.29: Annual changes of the number of economically active population 2002 - 2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bratislava I	3,226	-145	549	-555	495	193	398	559	52	-510
Bratislava II	-9,840	-933	387	-943	1,321	467	960	1,561	540	-884
Bratislava III	4,424	-790	991	-435	734	265	560	868	214	-689
Bratislava IV	-263	-1,082	1,769	-1,106	1,289	585	996	1,447	452	-1,334
Bratislava V	-19,447	-398	883	-1,298	1,539	616	1,271	2,023	739	-1,792
Malacky	450	2,084	-3,757	-962	593	135	427	945	1,242	-812
Pezinok	1,203	212	-19	-648	484	187	426	813	447	-488
Senec	1,256	476	-741	-707	590	294	430	642	360	-383
Bratislava region	**-18,991**	**-576**	**62**	**-6,654**	**7,045**	**2,742**	**5,468**	**8,858**	**4,046**	**-6,892**
Dunajská Streda	629	1,367	-1,296	-1,715	95	356	484	635	826	456
Galanta	4,324	1,029	-1,055	-1,991	-193	263	251	513	171	-294
Hlohovec	-375	-306	38	817	-143	-218	75	346	178	-130
Piešťany	-278	-1,722	-1,069	3,562	495	286	456	739	552	-352
Senica	-145	64	-267	329	305	254	84	686	1,372	-26
Skalica	206	-428	-472	849	295	208	182	405	1,081	-409
Trnava	263	-1,623	-884	3,487	53	464	607	1,247	615	-848
Trnava region	**4,624**	**-1,619**	**-5,005**	**5,338**	**907**	**1,613**	**2,139**	**4,571**	**4,795**	**-1,603**

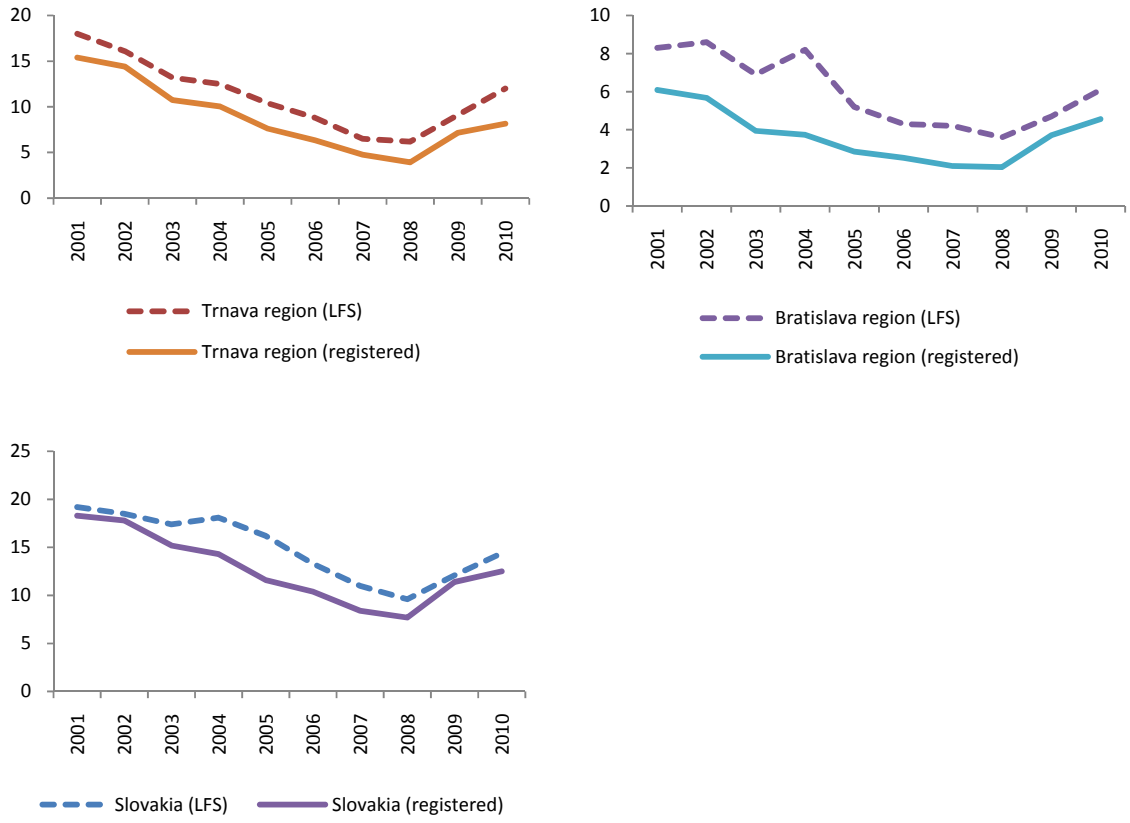
Source: own calculations based on monthly data published by the Central Office of Labour, Social Affairs and Family.

The differences in the methodology used by the Statistical Office of Slovakia and the Central Office of Labour, Social Affairs and Family are illustrated in figure 2. The average difference between the two statistics is in the case of national unemployment rate at 2.2 percentage points, with median value at 2.1 and standard deviation at 1.31 points. In the case of Bratislava region the average difference is at 2.3, median value at 2.2 and standard deviation at 0.98 points. In Trnava region the value of the standard deviation is at 0.68, the average difference at 2.4 points and median value at 2.5. In all cases the unemployment rate published by the Statistical Office based on the labour force survey is higher than the registered unemployment rate published by the Central Office of Labour, Social Affairs and Family.

In general the labour market indicators based on the labour force survey are more reliable. The registered unemployment rate is susceptible to changes in national legislation and administrative measures, which can influence the coherence of the time series and

reliability of the data. Therefore, a more comprehensive analysis of the recent development of labour market will be included in the Regional Development Report for 2011 due in the second quarter of 2012.

Figure 6.23: Comparison of unemployment rates based on the labour force survey and national methodology based on registered unemployment rate



Source: Slovak Statistics Office – RegDat Database, Central Office of Labour, Social Affairs and Family.

7. Human Capital and Education Systems in CENTROPE: Recent development and trends

7.1. Austria

Peter Huber

7.1.1. Institutions dealing with the education system at national level

Division of competences

While therefore the field of labour market policy is highly centralized – but rather uncontroversial - in terms of competences in Austria, education policy is highly controversial and according to the constitution competencies are split between the national and the provincial level according to rather complicated procedures. Furthermore many of the legal stipulations regulating the education system in Austria have a quasi constitutional rank, so that they can only be changed by a two thirds parliamentary majority and at the national level competences for different parts of the education system are also split between different ministries. This has made the education system in Austria rather inflexible.

Table 7.1: Institutions dealing education policy in Austria

Institution	Responsibility
National level	
Ministry of Education, Art and Culture	- Responsible for primary and secondary education
Ministry of Science and Research	- Responsible for tertiary education
Ministry of Economy, Family and Youth	- oversight body for company-based apprenticeship training
Regional Level	
Landesschulrat	- National agency responsible headed by the provincial governor responsible for administrating school law
Länder	- responsible for the provision of teaching staff at public compulsory schools - responsible for Kindergarten
Other actors	
PES	- providing and financing job related training
Private companies and NGOs	- providing adult education
Educational Institutions	- providing basic training

Source: own research.

The legal basis for primary and secondary education in Austria is the School Act of 1962. According to this law the competences for pre-school education (e.g. Kindergardens) is the sole competence of provincial authorities, while education after compulsory school is the sole competence of the national level. Competences for compulsory education (which is 9 years in Austria) are, however, split between the national and provincial level. In some areas (such as e.g. defining curricula, organization of schools with the exception of external organization) the national level has both legislative and executive powers, in other areas (e.g. in areas regarding the public service laws for teachers) the national level has legislative power but the provinces have the executive powers. Furthermore, in a number of instances (such as the external organization of schools) national authorities only have fundamental legislative power while both legislation on implementation and executive powers are with the provinces and finally in yet other areas (such as those of supervising teachers) the provinces have both legislative and executive powers.[47]

Despite this rather complicated situation in terms of constitutional competencies, in practice the national authorities have the overwhelming responsibility for the system of education, which covers virtually all areas of school organisation, the organisation of school instruction, private schools as well as the service, remuneration and retirement law-governing teachers. These matters are all governed by federal legislation.

Table 7.2: Important laws for labour market policy

Law	Content
School act 1962	- Defines competences in school system
University act 2002	- Defines the role and financing of universities
Act on studies in universities of applied sciences	- Defines rules of accreditation of universities of applied sciences

Source BMASK, own research.

Among the federal ministries the ministry of education, art and culture is responsible for funding and supervising primary and secondary education. It also coordinates important tasks such as education and training of teachers and maintenance of schools, while the administration of primary and secondary education is dealt with on the provincial level by the authorities of the respective province which are called Landesschulrat, which is an

[47] These regulations are further complicated by the fact that various exceptions exist for different types of schools (e.g. public training schools).

agency of the ministry body headed by the provincial governor. The provinces are mainly responsible for the provision of teaching staff at public compulsory schools. Moreover, they support the municipalities in the construction and maintenance of these schools via dedicated school construction funds, which they administer.[48]

By contrast the ministry of science and research is responsible for tertiary education (i.e both the universities of applied sciences – Fachhochschulen - and the universities). According to the 2002 Universitätengesetz (University Act) universities are public-law entities which are not under federal administration but are funded through three-year global budgets that are based on performance agreements. Being endowed with full legal capacity, the universities are free to tap other sources of funding. The ministry of science and research and the ministry of education, art and culture also jointly administer priority 4 (devoted to lifelong learning) of the Austrian ESF program.

The ministry of economy, family and youth is the supreme oversight body for company-based apprenticeship training. Furthermore also many of the labour market institutions such as the PES as well as some of the private institutions and NGO's (which are often close to the social partners) play an important role in the provision and funding of adult education.

The education system

The Austrian education system[49] in general is a two-track system in which children at the age of 6 enter primary schools.[50] A specific feature of the Austrian system is the four-year primary/elementary education followed by secondary education that is split up into two four-year periods.[51] After completion of the 4-year primary level schools pupils have to

[48] Schools enjoy some autonomy in budgetary management and, up to a point, are free to adapt the curriculum to local needs.

[49] In general schools are state-run although some private schools (most of them church schools) exist.

[50] In addition there are also special needs schools and inclusive education institutions, which we, however, do not describe in detail here.

[51] In both the public as well as the scientific debate a number of features of this system have been repeatedly criticized on different grounds. Thus for instance the early age (of 10 years) at which students have to decide between an upper track system leading to a university admissions certificate, and a lower track that does not, combined with a low permeability between the two tracks of the system, has often been criticized for selecting at much to early age. Similarly, the so called polytechnic year – i.e. an extra year of preparatory school for students that have not completed 9 years of compulsory education after completing lower secondary schools has also

choose between the following different types of schools (with differing admission requirements): lower secondary schools (Hauptschule), academic secondary schools (AHS) or the so called new secondary schools. Academic secondary schools are usually 8 year schools ending in the "Matura" examinations, which is also the university admissions certificate. New modern schools by contrast have just recently been established and are an upgraded version of secondary lower schools that are intended to improve the permeability in direction of academic secondary schools. Secondary lower schools by contrast are 4 year schools after which students can choose to:

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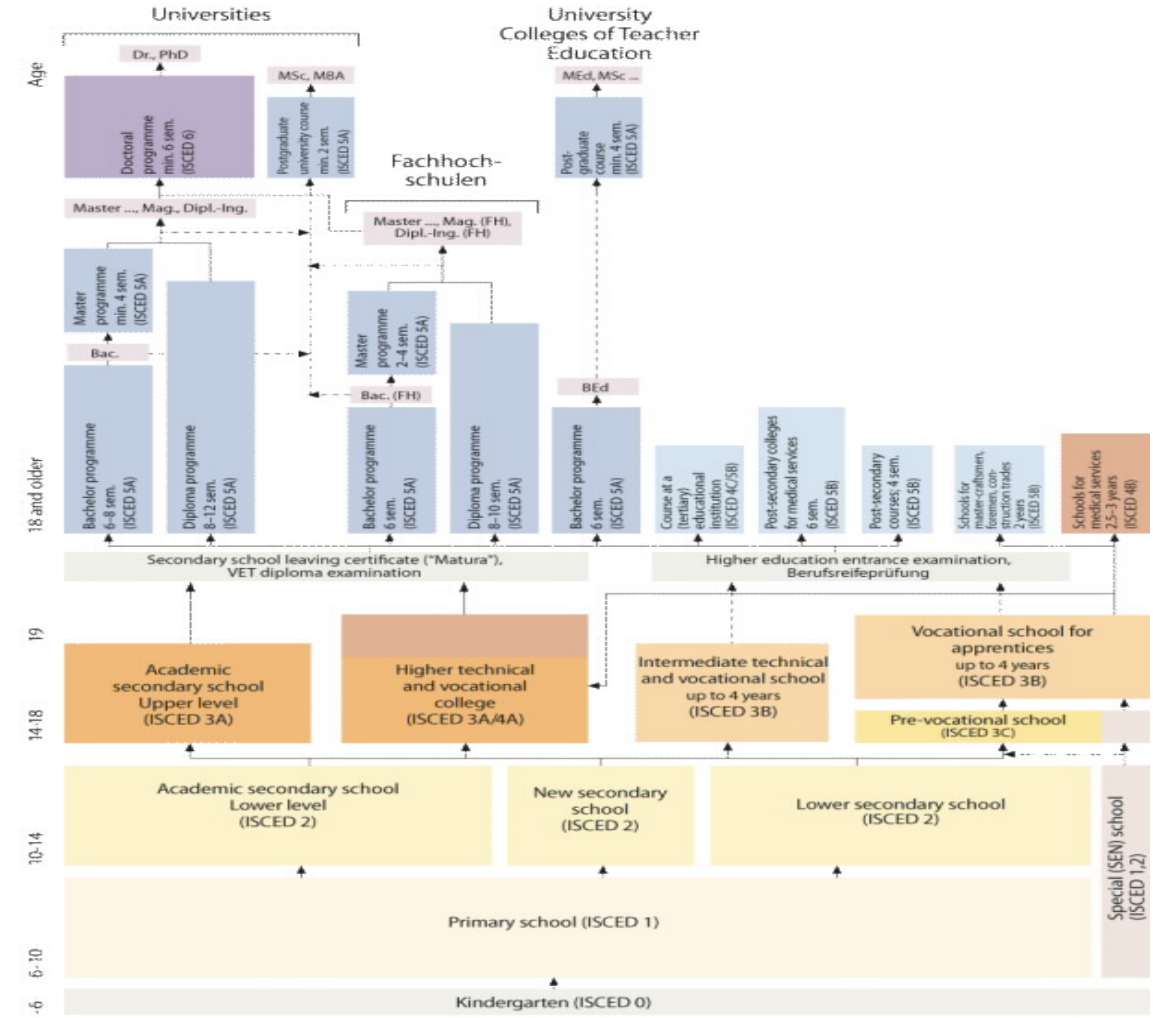
been criticized on account of the low quality of these schools. Despite some reforms in the last years, which have improved the situation, these criticisms still remain valid.

Figure 7.1: The Austrian Educations System



Source: BMUKK/BMWF, status: school- and academic year 2009/10

- either to continue education in "polytechnical" schools (i.e. one year schools preparing pupils for an apprenticeship or job), or (if they have completed 9 years of compulsory schooling) directly search for a job or an apprenticeship.
- or to continue training in (usually 5 year) higher technical and vocational colleges (which end with an university admissions certificate) or (usually 4 year) intermediate technical and vocational schools that to not end in a university admissions certificate,

Finally, those students completing the schools with a “Matura” (or those without “Matura” completing entry exams) can continue to study in the highly differentiated tertiary education system which consists of various tertiary education institutions (in particular at universities[52] or at universities of applied sciences[53]), while for persons without entry certificate a number of non-university tertiary sector schools (e.g. for mastercraftsmen, foremen and construction trades, colleges, midwife colleges, medical-technical colleges) exist.

7.1.2. Strategies, analyses and documents dealing with education system issues at national level

Given the many split competences in the Austrian education system and the highly differentiated school system it is not surprising that an overarching integrated strategy for the complete education system (which here is defined as reaching from Kindergarten to provisions for lifelong learning) in Austria does not exist. Much rather the relevant strategies for the education sector are often found in programs for other policies and strongly split between aspects dealing with the systems of schools on the one hand side and with the university system on the other hand side, while strategies addressing issues of lifelong learning are often found also in labour market strategy documents. Given this fragmented nature of the documents, it is also clear that the strategies sometimes differ in their emphasis of objectives.

Thus for instance the Austrian government program of 2008 in its education chapter stresses the importance of the education system in guaranteeing both social cohesion and growth and designs a program of school reforms reaching from the importance of Kindergartens as an educational institutions to aspects of lifelong learning, by foreseeing improved childcare facilities, measures aimed at improved foreign language training and integration of foreign born children into the Austrian schools, guaranteeing vocational training, improving the quality of schools and increasing the permeability of the education system, training teachers and developing lifelong learning strategies.

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[52] Universities are mostly state-run and free of charge in Austria although 13 accredited private universities (based on the Universitäts-Akkreditierungsgesetz) also exist.

[53] Univeristies of applied sciences in Austria as a rule operate as private legal entities that are run by various institutions and are often financially supported by provincial actors.

The strategies for the university system, however, are dealt with in a separate chapter on science, which resounds many of the themes laid down in the ministry's innovation strategy "The path to Innovation Leadership" (see: Csismadia et al, 2012 for a discussion) by aiming at increased student mobility, improving working conditions at universities, increasing student numbers and increasing the number of women in science, but also announces the objective to present an integrated strategy for universities, which is expected to be presented in mid 2012.

Austrian National reform Program, by contrast, in under the title education aims at

- Increasing the participation in education preparing for university studies and increasing mobility in the tertiary sector by sensitizing and counseling on both university studies and international mobility, increasing the number of places in the universities of applied sciences and promoting study stays abroad.
- Increasing the number of graduates in natural sciences and technology through information campaigns.
- Improving the educational levels and lowering the drop-out rate by a number of measures such as introducing the new secondary schools, promoting migrants and their language skills, introducing all day school models and various promotion measures.
- As well as increasing the attractiveness, quality and permeability of occupational training by introducing quality management systems in apprentice training and raising education levels of apprentices.

Furthermore this program also suggests that a national strategy for lifelong learning should be elaborated.

The operational program for the ESF by contrast aims at improving the access and continuation rates to post-compulsory education as well as improving the permeability of the education system in particular between the first and second 4 year phase of secondary education (see above) and reducing drop out rates at universities as well as entry barriers in the universities.

7.1.3. Institutions dealing with education system issues at regional/local level

Given the rather fragmented nature of national strategies for the education system in Austria it should be no surprise that also encompassing regional (i.e. provincial) education strategies are by and large missing. Here regional initiatives are often limited to individual subtopics in the field (such as adult learning, lifelong learning or the education of handicapped persons) which in addition often are limited to individual organizations and therefore often also lack commitment. Among the formalized strategic planning documents available for the Austrian CENTROPE regions only the operational program for the ESF in Burgenland makes explicit reference to the area of lifelong learning, while the regional OPs for EFRE usually only make very limited (or implicit) reference to education issues when focusing on increasing innovative capacity. In Burgeland this OP under the heading of strengthening human capital focuses strongly on improving training of teachers in vocational schools, awareness building for lifelong learning improving participation of the less educated in lifelong learning and orienting the region in direction of a learning region.

Table 7.3: Regional Education Strategies in the Austrian CENTROPE (Burgenland)

Region	Main objectives
Norburgenland	- Establishing a co-operation platform of education institutions - Improving accessibility and Information on education offers - Improving climate for education - Widen target groups - Networking
Southern Burgenland	- Co-ordination of training measures among enterprises in fields of ecological energy and agro-tourism - Creating possibilities for low-threshold qualification methods - Using local clubs to communicate and organize education - Improved networking among actors - Improved marketing of regional education initiatives - Focusing on training new arrivals to the region
Mittelburgenland	- Strengthening local identity - Improving competitiveness of enterprises through co-operation initiatives - Increasing learning and education motivation

Source: own research.

Thus while at the provincial level encompassing educational strategies are rather rare some developments in the direction of more locally based strategies have recently been initiated in the framework of the Austrian program for rural development. This program foresees to support rural regions in developing, implementing and managing a general strategy for learning regions as well as supporting necessary studies and evaluations. According to the web homepage of this project (http://www.lernende-regionen.at/) a total of

39 such regional strategies, which usually are designed for regions that consist of a small number of communities (i.e. regions substantially smaller than provinces but larger than communities) have been developed of which 13 are located in CENTROPE.

Table 7.4: Regional Education Strategies in the Austrian CENTROPE (Lower Austria)

Region	Main objectives
Niederösterreich Süd	- Strengthening local enterprises in agriculture, tourism and the economy in general - Focus on designing measures for the less-qualified - Networking among existing organizations - Spreading education provision more equally in space
Triestingtal	- Strengthening local enterprises in agriculture, tourism and the economy in general - Focusing on elder and persons with differing cultural background - Improving Networking among regional actors
Bucklige Welt, Wechselland	- Strengthening local enterprises in agriculture, tourism, renewable ressources and the economy in general - Focusing on elder
Moststraße	- Strengthening local enterprises in agriculture, tourism, and the economy in general - Creating infrastructure for tertiary education in the region - Co-ordination of local supplier to generate an “academy” - Focusing on less educated
Römerland-Carnuntum	- Strengthening local enterprises in agriculture, viniculture, tourism, renewable resources and the economy in general - Implementing Gender mainstreaming
Kulturpark Eisenstraße-Östscherland	- Improve education marketing - Conduct analysis concerning education demand - Improve networking of education institutions - Improve Supply of education
Waldviertel-Grenzland	- Reducing gender segregation in education and improving child care facilities - Marketing of education offers - Strengthening local enterprises in agriculture, tourism, and the economy in general - Creating Education opportunities in health care - Increasing energy awareness - Spreading education provision more equally in space, in particular in upper secondary education
Weinviertel-Manhartsberg	- Increasing co-operation between communes - Strengthening local enterprises in tourism and agriculture - Improving quality of education through evaluation - Increasing energy awareness - Creating a culture of innovation - Increasing participation of women in training - Co-operation among education institutions and securing a supply of education services - Providing information, consulting and marketing
Weinviertel Ost	- Creation of structures to support life long learning on a regional basis - Creating an education network
Weinviertel - Donauraum	- Linking formal and non-formal learning across generations - Improving educational infrastructure - Getting school profiles closer to regional demand - Focusing on less educated - Improving knowledge of languages of neighboring countries - Creating networks for professional training - Creation of an education hotline and an education brokeragein all communities - Providing training for regional tourism

Source: own research.

In these strategies (see tables 7.3 and 7.4 for an overview) these regions, which are by definition rural regions, often focus on issues such as how education institutions in the region can be used to strengthen local industries and how these institutions can co-operate to improve the accessibility for education. Furthermore strategies often address issues of how barriers to participation of certain groups (e.g. opening hours, lacking childcare facilities) can be alleviated. Clearly these strategies are mostly local and often reflect the rather limited resources in terms of education infrastructure of rural-peripheral regions. Yet, the mid-term evaluation of this program suggests that these programs have had an impact both on the quality of the education system as well as on the quality of life in the affected regions.

7.1.4. Cross-border co-operation

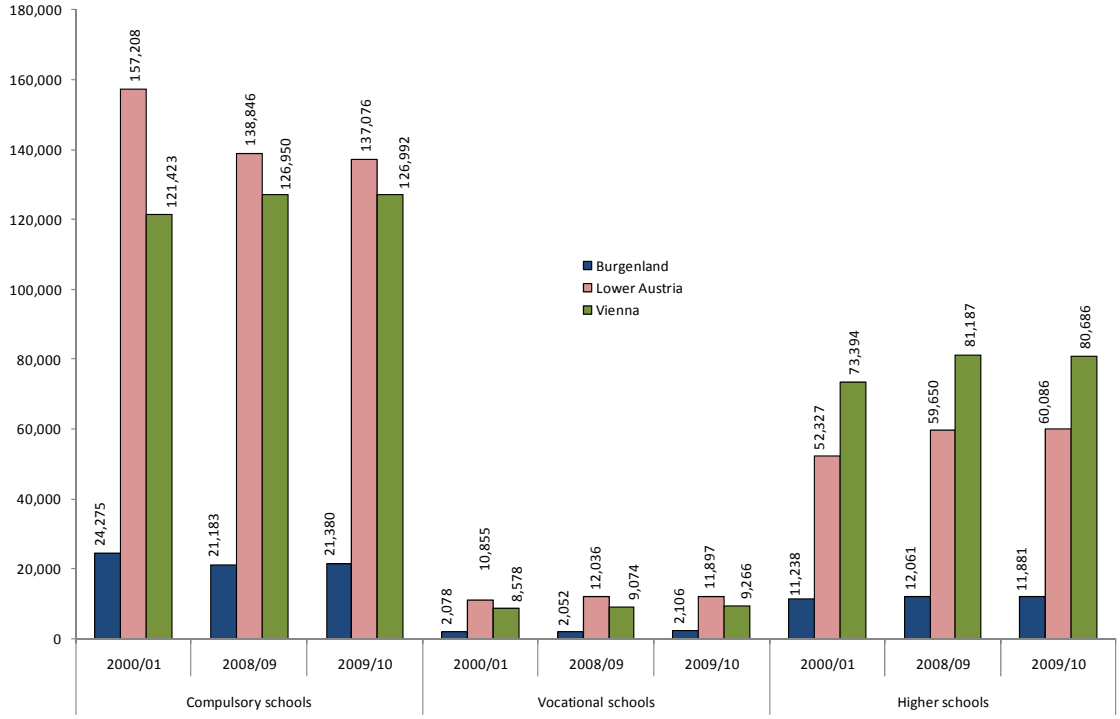
Finally, education topics also play an important role for the strategies of cross-border co-operation where the Austrian strategic framework program suggests that cross border co-operation in education could be one area for developing new initiatives. In consequence topics such as enhancing the development of education and human resources, mobility of students or joint qualification in the context of clusters, improving the quality of education, promoting co-operation among education institutions or scientific exchange and developing regional human resource management systems feature prominently also in the operational programs for Objective 3 cross-border programs in the CENTROPE countries. Furthermore also the operational programs for the three transnational co-operation programs that are relevant for the Austrian CENTROPE (South East Europe, Alpine Space, Central Europe) consider the development of transnational networks between tertiary education and research as an area of potential co-operation.

7.1.5 Recent Developments in the Austrian Education System

From a quantitative perspective the main changes in the Austrian school system – which are also in line with the national trends - can be characterized by three main tendencies (see Figure XXX): First of all due to demographic changes (i.e. the ageing of the population statistics) the number of students in compulsory schools is decreasing, second due to an increased propensity of children to want to continue on into university education and a general trend towards a better education level, student numbers in higher schools

ending with a Matura are increasing. Third for the same reasons also the enrolment in vocational schools is still increasing (although at a slower rate than that of Matura schools) or at least stagnating. These last two trends therefore imply that an ever smaller share of youths is not continuing education after compulsory education.

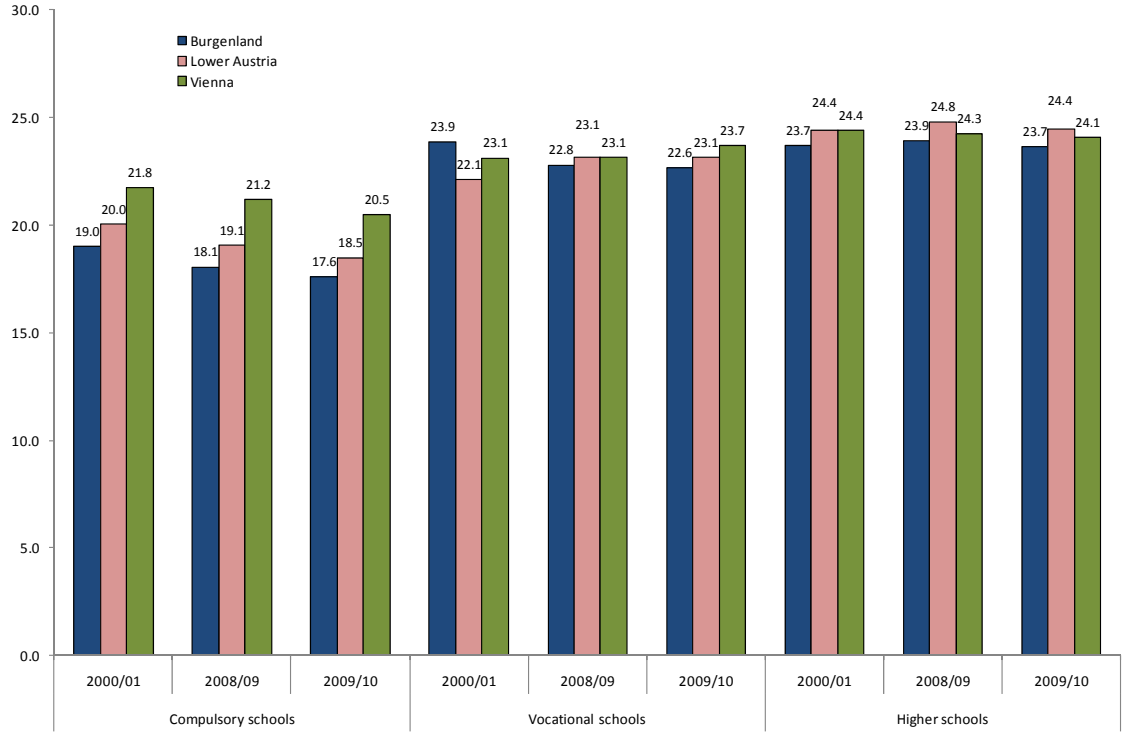
Figure 7.2: Number of students by aggregated school types and region in the Austrian CENTROPE



Source: Schulstatistik (2011).

The big exception to these general trends is, however, Vienna. Due to substantial in migration of both national and foreign born that are often in the child bearing age demographic trends are very different in Vienna than in the rest of Austria, with the population growing and also becoming younger. This therefore implies that the number of children enrolled in compulsory education is still increasing (and is expected to do so also in the future) in Vienna.

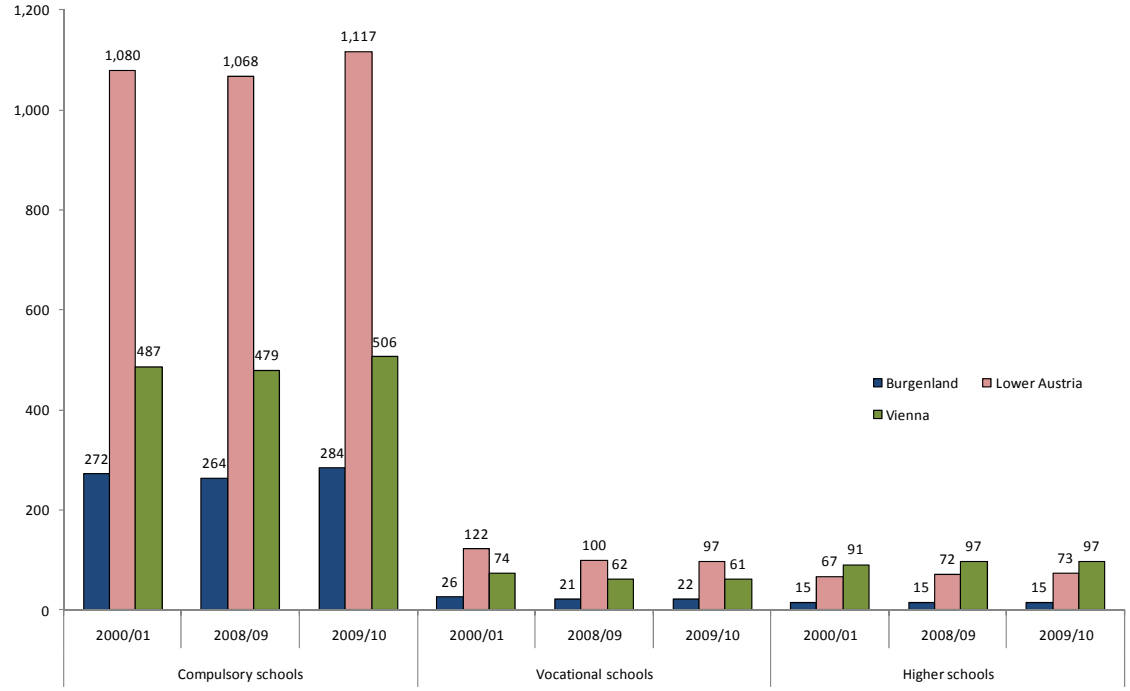
Figure 7.3: Number of students per teachers by aggregated school types and region in the Austrian CENTROPE



Source: Schulstatistik (2011).

At the same time in compulsory education despite the decline in enrollment rates the number of schools, - which is obviously higher per number of students in regions with a lower population density - has increased in all CENTROPE regions of Austria and enrolment student to teacher ratios have fallen, where the later tendency is less a consequence of falling student numbers rather than of an increased concern of education policy about the quality of education.

Figure 7.4: Number of schools by aggregated school types and region in the Austrian CENTROPE



Source: Schulstatistik (2011).

The same trends, however, do not apply to vocational schools and higher schools. Here student to teacher ratios have increased in vocational schools and more or less stagnated in the higher schools. School numbers, by contrast, have fallen among vocational schools but slightly increased or at stagnated in higher schools ending in a university entry exam.

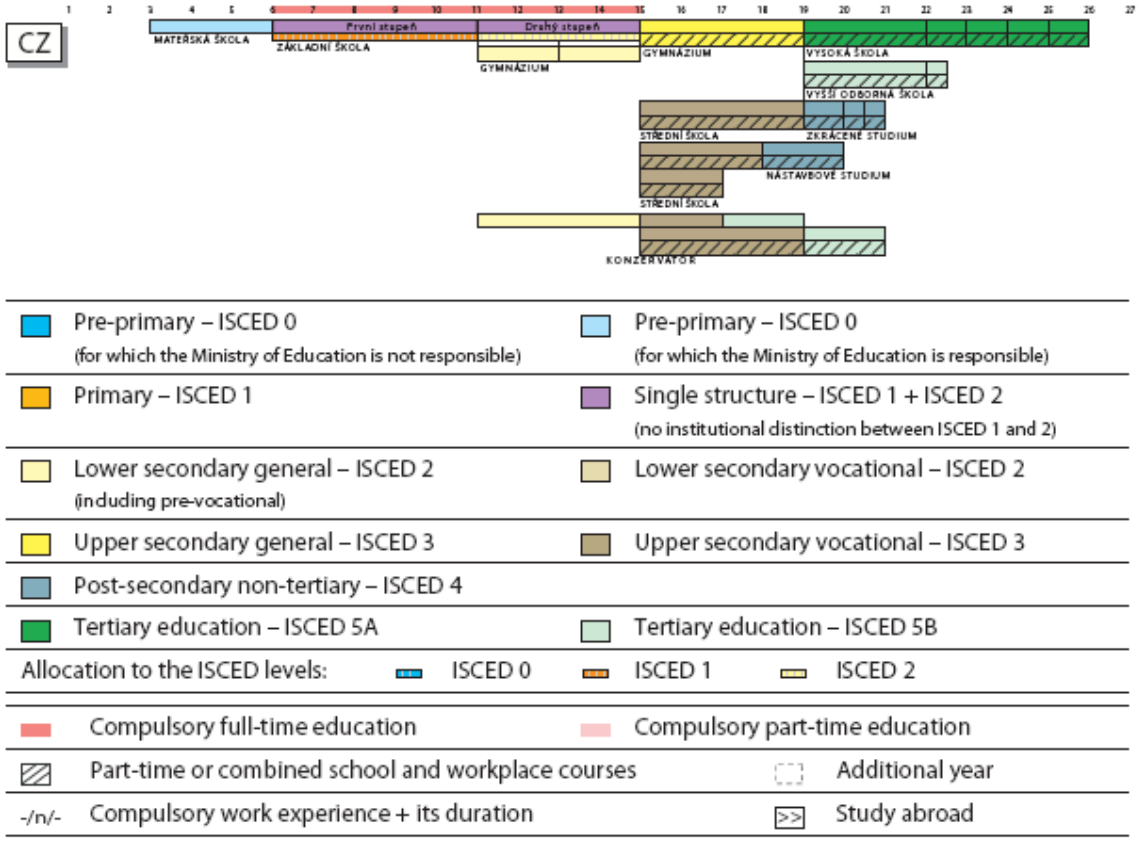
7.2. Czech Republic

Petr Rozmahel, Nikola Najman

This part focuses on selected issues of the education system at the national and regional level in the Czech Republic. Despite continuing integration and harmonisation efforts in the European Union the education systems differ in many aspects in the member countries. In case of the Czech Republic there are also some interesting features at the regional level since the regional authorities have relative large competencies and

responsibilities for managing the school and education system (particularly at the secondary level). Accordingly the goal of this chapter is to provide a basic overview of the structure of the education system in the Czech Republic. The text also focuses on description of important institutions, documents and policies dealing with the education system at the national and regional level. The text also describes actual ongoing debate on the expected changes in the education system resulting from proposed new Education Act by the Czech Ministry of Education, Youth and Sport. Finally, selected strategic documents related to regional development policy related to education system in the South Moravia region are described.

Figure 7.5: General Structure of Educational System in the Czech Republic



Source: Czech Statistical Office.

Figure 7.5 describes the general structure of the educational system in the Czech Republic. Basically we should distinguish between three fundamental levels of the System.

Primary and pre-primary education covers the elementary schools with nine-year compulsory education. The compulsory education is divided in the first five-year stage and second stag taking four years. After completing the first stage children can continue either at the second stage at the elementary (basic) school or they can continue on studying at multiyear secondary schools (K-12 schools). Before getting primary education, children in age 3-6 receive their pre-elementary education in the kindergartens.

Secondary education (including upper-secondary and post-secondary) is provided in various forms. Pupils who finished their elementary educational attainment with dissatisfactory results are directed to vocational schools. The pupils who prefer manual or technical professions go studying at the vocational apprenticeship schools providing qualifications for technical professions. Pupils get the apprenticeship certificate or the school leaving certificate (GSCE). Most typically the pupils complete four-year study at the secondary schools concluding with the state graduation exam (GCSE, A1 level) which allows them to continue with tertiary education. Apart from the tertiary education some of the pupils prefer completing the upper secondary or post-secondary education improving their special qualifications.

The universities provide tertiary education at three levels. First level represents the bachelor programmes that prepare the students directly for their professional carrier or for continuation at the master level. Whereas the bachelor level programmes usually take three or four years, the master level lasts two or three years in general. The master programmes are focused on increasing the theoretical knowledge on respective branches and ability of their practical application. Following doctoral programmes aim primarily on scientific research and development and also improving creative activity in art branches. The Ph.D. programs might have duration three to six years.

7.2.1. Institutions dealing with education system at national level

The Ministry of Education, Youth and Sport represents the highest institutional body responsible for educational policy and development of the education system. It co-operates with other government bodies. The issues connected to the vocational preparations and labour markets are solved jointly with the Ministry of Labour and Social Affairs. In addition to that the ministry collaborates with other government bodies including Ministry of Interior, Ministry of Defence and Ministry of Health).

The Ministry of Education, Youth and Sport is authorised for defining the national educational policy and setting the strategy of national educational structure development. Its sphere of domain includes also the long-life learning, research and development including the international co-operation initiatives. The Ministry also cares for issues on children, youth and sport activities.

Recalling the role of the Ministry as the one responsible for general concept and strategy of educational policy we should point out that its competencies differ across the general educational structure. The competencies and responsibilities of the Ministry towards the pre-primary, primary, secondary and partly upper-secondary education is specified in the Education Act. Its competencies and responsibilities towards higher education mainly to universities are defined in the Higher Education Act.

After the decentralisation of the state administration of education system as one of the outcome of the public sphere reform in 2003 the conceptual role of the Ministry is stressed. The Ministry define the long-term objectives of the common education policy and negotiates its basic principles with bodies of regional governance, labour unions and bodies of central government.

Considering the conceptual role of the Ministry of Education the level of autonomy and self-administration of schools differs across the general educational structure. Whereas universities dispose with quite high self-administration power set by the Act on Higher Education, the regional municipalities have large competencies and responsibilities in administration of secondary and tertiary professional education. The regional bodies are responsible for ensuring appropriate conditions for pursuing secondary and tertiary professional education, education of disabled children, pupils and students.

The Ministry of Education is internationally divided into functional sections managed by the deputies. The sections focus on various areas such as general educational structure, financial and administrative issues, university research and development, social issues and leisure activities of youth etc. The Ministry also establishes special institutions dealing with issues excluded from the internal administration functions. Among the most important ones we can name: Centre of Higher Education Studies, National Institute of Children and Youth, Research Institute of Education, the National Institute of Technical and Vocational Education, Educational and Psychological Counselling Institute, Institute for information on Education, Centre of International Services etc.

Legislation framework

- Education Act (the Act on Pre-school, Basic, Tertiary Professional and Other Education) – defines the basic principles and goals of education focussing on the education process. The Act partially deals with higher professional education. On the other hand it does not cover the issues on the tertiary educational level.
- Higher Education Act – defines the corporate aims and functions of universities and colleges, including the aspects of financing, operating, management, rights and responsibilities of students, academic staff etc.
- Act on Verification and Recognition of Further Education Outcomes – establishes National Qualification Framework as a register of qualifications
- Act on the Recognition o Professional Qualifications – defines the rules and directions for recognizing the qualifications of citizens from the EU member and some of non-member states (e.g. Switzerland).

7.2.2. Strategic documents determining actual development and trends in education system at national level

- White paper (2001) – National Programme for the Development of Education on the Czech Republic formulated objectives incorporated into the curricular reform. The document crucially determined the new Education Act that came in force in 2005.
- White Paper of Tertiary Education (2008) – the material should provide a conceptual basis for the proposed reform and related changes in legislation of tertiary education in the Czech Republic.
- Long-Term Policy Objectives of Education and the Development of the Education System (2007) – firstly formulated in 2002, then again in new Education Act in 2005 and then in 2007. The material includes analysis on current situation in the Czech education system, development priorities, main objectives in individual areas of education etc. It is based on documents on the state budget, regional development, employment, human resources development, socio-economic development, common goals of European processes etc.
- Czech Strategy of Education for Sustainable Development (2008 – 2015) – specifies the priorities in the area of education sustainable development.

7.2.3. Actual and future development trends and ongoing debate on educational system in the Czech Republic

There is an ongoing debate on future development of the education system in these days in the Czech Republic. On the secondary and primary education level we should recall the financial consequences of the public sector reform especially the dynamic decentralisation processes in 2001-2003. The regions and municipalities were provided with the responsibility for establishing and administration of schools at the secondary education level whereas the ministry kept the right to operate with funding. Distribution of direct educational costs such as salaries by the Ministry follows the per capita funding (using overall norms). The municipalities request for more competencies in funding and call for changes in the Law on Budgetary Tax Rating.

At the tertiary level the discussion seems to be lively and actual namely because of preparations of the new Education Act proposal. The actual proposal by the Czech Ministry of Education was widely rejected by the academic public represented by university rectors and academic senates.

The academic public mostly doubt the suggested changes that include a greater role for external stakeholders in institutional governance and accreditation, broader role for a board of trustees and participation of representatives of various interest groups (municipality, private sphere, others) in the university management, limiting the extent of academic self-governance. The new Education ACT suggests classifying the universities as research, educational and professionally oriented institutions. Such classification will remarkably determine the way of self-governance and mainly the financial funding of the institution.

One of the key documents providing a conceptual framework for the planned legislative changes is the White Paper of Tertiary Education (2008). This document also reflects the recommendation presented in the OECD review[54]. The advices by OECD suggest structural changes at the tertiary professional education and higher education including university level. One should mention support for bachelor program accreditation at the upper secondary schools providing professional tertiary education, funding according to the quality of institutions, students' participation in funding (fees) etc.

[54] File, J et al. (2009) OECD Reviews of Tertiary Education: Czech Republic, OECD Publishing, 127 p. ISBN 978-92-64-04907-9. Firstly Publisher as a Country Note in 2006.

In the document titled Long-Term Policy Objectives of Education and the Development of the Education System (2007) the objectives discussed included mainly supporting equal opportunity in education, curriculum reforms, quality assurance system implementation, support of foreign languages and communication technologies, support of continuing education etc.

All parts of education system face the negative demographic trends in the Czech Republic. The deviations in the demographic trends result nowadays in lack of free places for children in the kindergartens and excess offer of places at the secondary schools.

7.2.4. Education system at the regional level

In the Czech Republic the regional bodies have large competencies and responsibilities for organising the education at the secondary and upper secondary level. The regions are also obliged to provide appropriate conditions for the tertiary professional education and education for disable or disadvantaged pupils and students. The regional bodies, particularly the municipalities at the NUTS III level primarily establish the secondary schools, upper secondary schools, special elementary schools, schools and school facilities for disabled and disadvantaged pupils, authorised language schools, primary art schools, children's houses etc.

The regional authority is responsible for managing schools and school facilities. It has also financial competencies e.g. it is responsible for providing the funds to cover investment and operating costs with exception of those paid for the central state budget.

The regional authorities submit every four years the documents on Long-Term Policy Objectives of Education in respective regions. Such documents follow the principles and main policy trends specified in the Long-Term Policy Objectives by the Ministry of Education, Youth and Sport. The Annual Report on the State and Development of the Education System in the region is another regular document published by the regional authority.

Considering the general administration competencies the regional authorities are superior administrative bodies of directors of schools and school facilities established by state, regions or municipalities.

The institutions of the pre-primary and primary education level such as kindergartens, elementary schools, primary art schools are managed by the municipalities at the local level as the basic self-government unit in education system.

7.2.5. Strategies, Documents and Policies on Educational System at Regional Level

Long-Term Policy Objectives of Education and Development of the Education System in the Region

Annual Report on the State and Development of the Region's Education System

Strategic Documents on Education in the South Moravian Region

The South Moravian Region explicitly declares the education as one of the priorities in regional development policy. Considering a great deal of school and institutions at all education levels the region belongs among the most developed Czech regions in this respect (see the table 7.5). In addition to that the regional authority is directly responsible for managing the schools and school facilities at secondary and upper secondary level including tertiary professional education.

Table 7.5: Selected data on education in the South Moravia Region 2010/2011

	Schools / Universities	Children/ Pupils / Students	Teachers
Pre-primary education	633	36,377	2,842
Primary education (total)	477	84,974	6,336
Secondary education (total)	143	60,184	5,138
- Grammar schools	42	16,920	n.a.
- Technical secondary education	104	39,001	n.a.
Post secondary education	14	3,737	n.a.
Higher (tertiary) education	14	40,076	n.a.

Source: Statistical yearbook 2011 of South Moravia Region.

A number of strategic documents dealing with education system development in South Moravia region give an evidence of the area of education to be considered as one of the key priorities in the region. As the key documents we choose following:

Long-Term Policy Objectives of Education and Development of the Education System in the South Moravia Region (2012 – 2016)

The document is based on the Long-Term Policy Objectives and Development of the Education System in the Czech Republic published by the Czech Ministry of Education, Youth and Sports.

In South Moravia the actual version of the regionally focused document which is planned to be published in 2012 is under process of consultation on the draft. At the moment the version of 2008 is officially published by the regional authority of South Moravia.

Both documents have unified structure dividing it into four sections. In the first section it summarises the key characteristics of the region such as demographic structure, labour market structure, changes in society and education, factors of the education system in the region etc. The second section of the actual document (2012) describes the demographic factors of regional education system in details. Particularly it focuses on quantitative development and changes in respective levels of the regional education system. The third section evaluates the priority areas, objectives and development programs in the period 2008-2011 and sets objectives and strategies for period 2012-2015. The final section sheds some light on economic and financial issues of the regional education system and estimates its future development.

Strategy of Human Resources Development in the South Moravia Region (2006 – 2016)

The main goal of the document is to define the short-term and middle-term objectives and priorities in the South Moravia Region. The strategic documents define support in education, adaptability, employment and competitiveness as the main priorities of the human resources development policy. It is generally inspired by the Lisbon Strategy and other strategic development EU documents. In its first executive section it analyses the human capital and education system development as the main priority. Currently seventeen general tools established on the project basis such as projects supporting long-life learning programmes, improving quality in regional schooling, monitoring and quality assessment in regional education, equal opportunities in education, etc. In the other sections the other strategic areas of development are analysed.

Regional Innovation Strategy of the South Moravia Region 2009 – 2013

The innovation strategy defines the methodological framework and tools to create appropriate innovation infrastructure in South Moravia Region. The proposed strategy is

based on the survey of the needs of the private businesses and research and development sphere in the region.

Strategy of Anti-Drug Policy in the South Moravia Region 2010 – 2018

The regional strategy is based on the National Strategy of Anti-Drug Policy in 2010-2018 proposed by the central government of the Czech Republic. The strategy focuses on prevention of abusing drugs as well as solving its negative consequences. Among others the document stresses the crucial role of education at all levels of the education system to prevent effectively from drug abuse.

Strategy of Crime Prevention in the South Moravia Region 2009 – 2011

The Department of Education at the Regional Authority in South Moravia region proposed a concept of the crime prevention defining the main priorities, major and specific goals of the crime prevention strategy. The proposal results from an analysis of crime statistics, demographic structure analysis, institutional analysis and sociological surveys in the area of crime prevention in the region

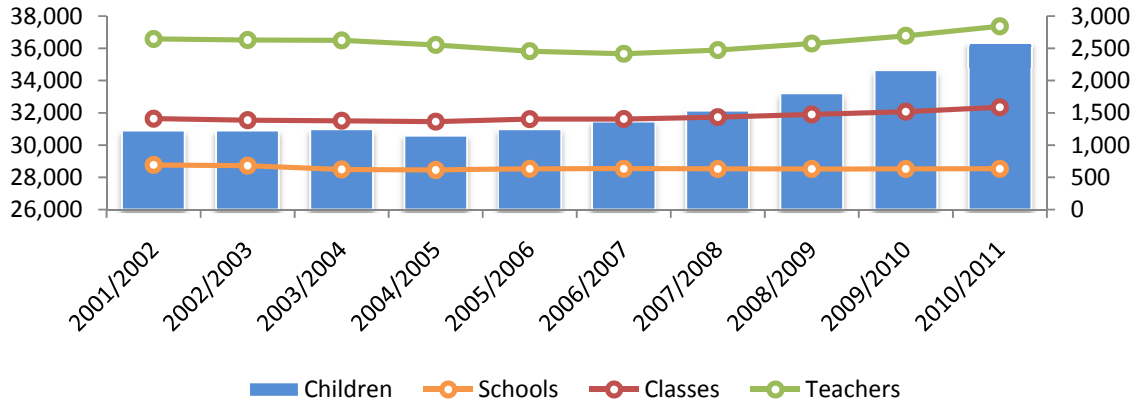
7.2.6. Recent Development in Czech Education System

In general all CENTROPE regions are affected by recent negative demographic trends common for most of European Union countries. Apart from the current ageing problem the long term deviation in the birth rate in the last three decades causes structural problems at different education structure levels. The problem could be described in case of South Moravia, where the universities and secondary schools face the problem of lack of students and pupils and excess of children approaching to the kindergartens. Thus today the pre-primary institutions are desperately missing in South Moravia. In South Moravia the deviation in demographic trends is clear when looking at the number of students at the secondary schools whereas the number schools and teachers do not copy this development.

Contrary to the development of students at the secondary education the number of university students rises steadily in South Moravia. Regarding declining number of secondary school graduates it gives an evidence of rising share of university students in Czech/South Moravia population. This trend is underlined with increasing number of universities in South Moravia caused by an increase of share of the private ones. In Czech Republic there existed 72 universities in 2010/2011 at which 44 were private ones. In 2000

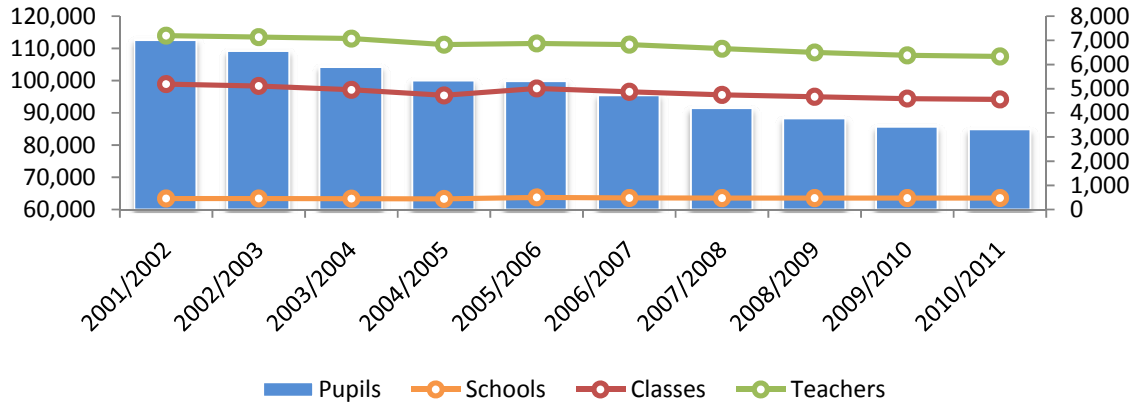
there ware just 8 private universities in the country. In South Moravia there were 13 universities of which 5 were private in 2010.

Figure 7.6: Pre-school education in South Moravia



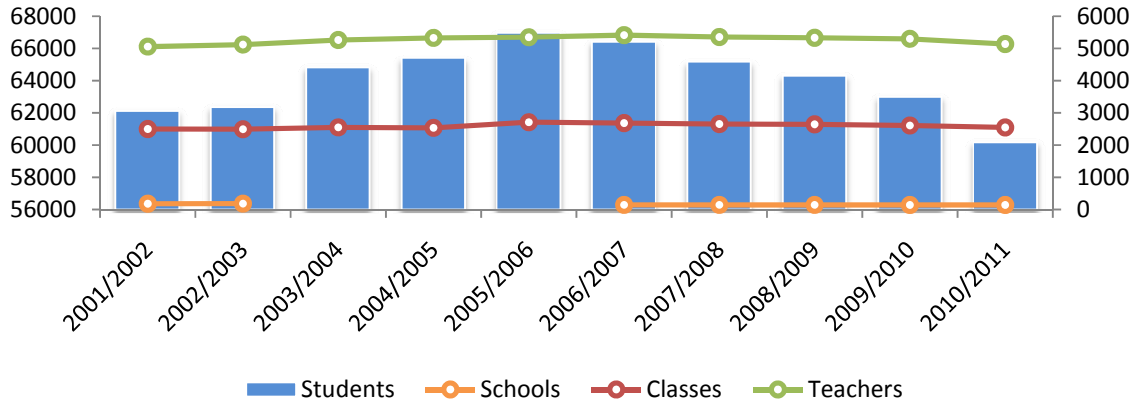
Source: Czech Statistical Office.

Figure 7.7: Basic education in South Moravia



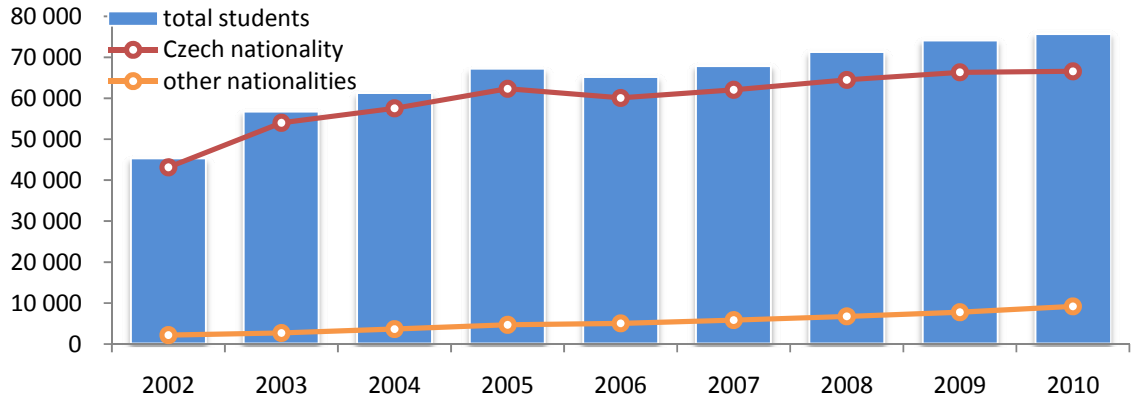
Source: Czech Statistical Office.

Figure 7.8: Secondary education in South Moravia



Source: Czech Statistical Office.

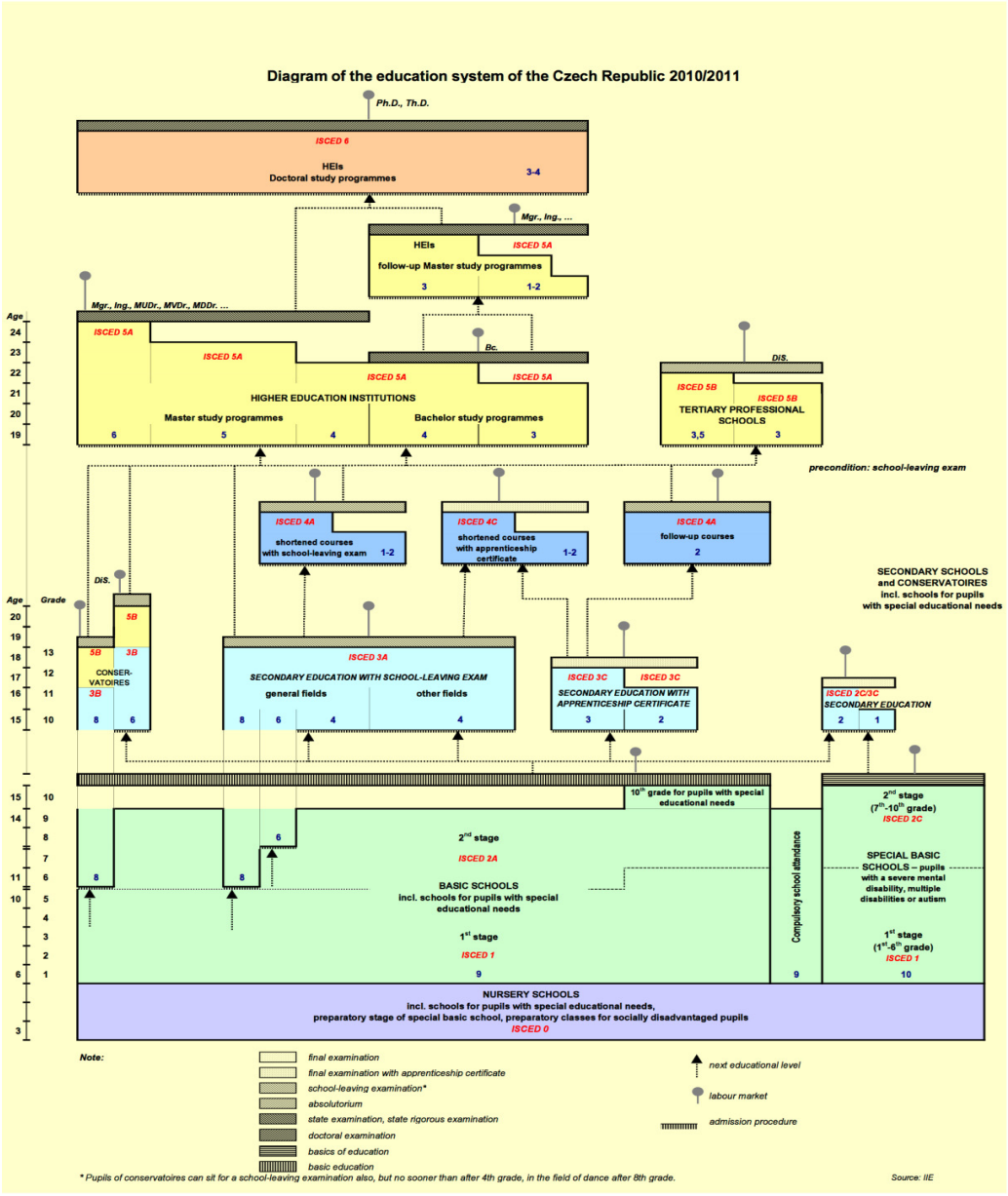
Figure 7.9: Students on public universities in South Moravia



Source: Czech Statistical Office.

Appendix:

Figure 7.10: Diagram of the education system of the Czech republic 2010/2011



Source: Ministry of Education, Youth and Sport of the Czech Republic.

7.3. Hungary

Márta Nárai

The structure of Hugarian educational system:

- School-based education:
    - public education,
    - higher education,
    - vocational training.
- Education outside the school system:
    - adult training,
    - training, retraining, continuing education.

The educative and educational institutions of public education

- Nursery school;
- Elementary school;
- Grammar-school,
- Technical high school;
- Vocational school;
- Basic arts education institution;
- Special education, conductive pedagogical educational institution: nursery school, elementary school, secondary school, special vocational school, skill developing special vocational school, preparatory vocational school and student hostel established in accordance with the type of disability.
- Student hostel.

Institution prior to primary education: *Nursery school*

It is an educative institution for children from age of 3 (but another precondition is e.g. to be house-trained) until the beginning of the compulsory school attendance. From 2012 nursery school is not a possibility for children at the age of 3 but is compulsory (at least 4 hours per day), whereas earlier it was compulsory from the age of 5. At the request of the parent and in concert with the head of the nursery school and the social worker the town

clerk can give an exemption from participating in compulsory nursery school education until the age of 5 if the child's family circumstances, the evolvement of its abilities or its special status indicate it.

From 2009 a new type of institution has been introduced: the so-called *integrated nursery school – day nursery*, with which an opportunity is given to parents living on such smaller places where an independent day-nursery cannot be operated and raising a child between 2 and 3 to place their child during the day. (Local governments are obliged to operate a day-nursery, which belongs to social institutions, on every settlement where the number of the inhabitants is more than 10 thousand.)

Elementary education: *Elementary school,* in which elementary education takes place nationally based on unified requirements.

The enrolment is between the age of 6 and 8 and depends on the advancement of the child; and the precondition of it is a school maturity investigation.

The elementary school has 8 classes (it begins with the first class and ends with the eighth one), but there is a possibility to go to study at an 8-class or a 6-class grammar-school after the fourth or the sixth class.

Secondary education:

After elementary school the child can study further in

- a grammar-school,
- a technical high school or
- a vocational school.
- *Grammar-school*: It carries out education and training that on the one hand establishes liberal education and on the other prepares for the secondary school-leaving exam and the commencement of higher education studies. As a general rule, it has 4 classes, but it can have 5, 6 or 8 classes as well. Grammar-schools and grammar-school classes with 6 or 8 classes were formed after the transition of the regime; their aim is to select children with the best skills → in the senior classes of most elementary schools the standard and the complement are problems.
- *Technical high school*: It has four secondary classes that establish liberal education and prepare for secondary school-leaving exam providing technical baccalaureate

certificate, for specialized higher further education and also for specialized employment. In this type of school both theoretical and practical education takes place. In technical high school after the 12th class, as defined in the National Training Register, a preparative education takes place that prepares for the vocational exam providing vocational qualification which belongs to the technical school-leaving exam's sector and the precondition of which is either the completion of the last secondary school class or a baccalaureate certificate. The number of vocational classes preparing for vocational exam is defined by the National Training Register.

The secondary school-leaving exam has two levels: there is an opportunity to pass an intermediate or an advanced level school-leaving exam. The secondary school-leaving exam is a national exam which has to be held nationally based on uniform exam requirements. The secondary school-leaving exam replaced the higher education entrance exam, which means that one can be admitted to higher education institutions based on the results of the secondary school-leaving exam.

In a secondary school-leaving exam students have to give an account of their knowledge of the following subjects:

a) Hungarian language and literature,

b) History,

c) Mathematics,

d) Foreign language – mother tongue and literature for those participating in national minority education,

e) Exam subject compulsory to be chosen; in a technical high school it is a vocational exam subject that is appropriate for the sector of the technical high school.

Vocational school:

This institution carries out vocational training; in a vocational school those vocational trainings can take place that provide vocational training qualification determined in the National Training Register and published in the curriculum framework.

It has three classes that include general knowledge training necessary to obtain the given vocational training qualification and vocational theoretical and practical education as well. The training ends with a vocational exam, this type of education doesn't provide a

secondary school-leaving exam, and therefore there is no opportunity to study further in a higher education institution after finishing the vocational school.

The young people leaving the public education system can choose from two options: either enter the labour market or continue their studies: enter in higher education (if they studied in a secondary school providing a secondary school-leaving exam) or take part in different professional trainings.

Higher education: *University, college*

From 2006 Bologna system: multi-cycle, sequential education ensuring higher level of qualification:

- bachelor course (BA/Bsc)
- master course (MA/Msc)
- doctorate (PhD, DLA).

The bachelor and master course can be organized as a unitary, undivided course but only in the cases determined by the laws. The government determines the structure of both the undivided and the split courses; the latter is divided into cycles.

Within the frame of higher education the following trainings without a higher level of qualification can be organized:

a) higher education training,

b) further vocational training.

Other educative and educational institutions under public education:

***Basic arts education institution*:**

The task of the basic arts education institution is to evolve the artistic skills, to enhance artistic talents, and in case of demand to prepare for the further vocational training.

The basic arts education institution has at least six and maximum twelve classes, within the framework of which the education can take place in pre-educational, basic level and further educational classes in the sectors of musical arts, fine and applied arts, puppet and dramatic art, and dance arts.

***Special education, conductive pedagogical educational institution*:** nursery school, elementary school, secondary school, special vocational school, skill developing special vocational school, preparatory vocational school and student hostel established in accordance with the type of disability.

Student hostel:

The student hostel is an educational institution that ensures the conditions necessary to continue the studies for those

- who study far away from their place of residence,
- whose parents cannot ensure the appropriate conditions necessary for studying.

The student hostel supply is available from the age of 10 – in case of children and students with special educational needs due to physical, sensory and mental disability and in case of children and students participating in national minority education from the beginning of nursery school education.

! The construction of educational structure is uniform at national level in Hungary, there are no regional differences.

7.3.1. Institutions dealing with education system on national level

I) The educational institutions of the institutional system regarding education were introduced in the Focus report

II) The non-educational institutions of public education institutional system

A) A **pedagogic service providing educational support** helps on the one hand the educative work of the parent and the pedagogue, and on the other the completion of the tasks of educational institution. Pedagogic service providing educational support includes the followings:

- special education consultancy, early childhood intervention, education and nursing,
- generative nursing,

- expert and rehabilitation activity examining learning ability, as well as the national expert and rehabilitation activity,
- educational guidance,
- logopedic therapy,
- further education and career guidance,
- conductive pedagogical services,
- remedial gymnastics,
- school psychology and nursery psychological services,
- care for highly talented children and students.

The institutions of pedagogic service providing educational support:

- **special education consulting centres, early childhood intervention and nursing centres**: their task beginning from the date of the determination of special educational needs (disability) is to improve the child with the involvement of the parent, and to provide counselling for the parent. The involvement in the supply is based on the expertise of the expert and rehabilitation board examining the learning ability of the assign. Early childhood intervention is realisable within the frame of home care, day-nursery care, nursing provided in the nursing and caring home for people with disabilities, care provided in the centre for early childhood intervention and conductive pedagogical services. A child aged three years – up to five years – receives an early childhood intervention and nursing if he/she doesn't attend day-nursery.
- **expert and rehabilitation board examining learning ability and the national expert and rehabilitation board: Only the expert and rehabilitation boards can determine the fact of special educational needs or disability based on complex – medical, pedagogical, special educational, psychological – examination. The task of the boards is to examine the disability regarding audition, seeing, movement and speech, as well as the written language skills; and also to do the intellect and personality test, the docility test, the measurement of knowledge level and school** performance, as well as the exploration of the organic background of the causes of affection. Based on the colation and examination of disability, the boards advises (expertise) the provision under special care of the child or the student; the method, the form and the place of provision; the pedagogic service providing

educational support in connection with the provision; and also examines the existence of conditions necessary for special nursing.

- **centres providing educational guidance**: their task is to explore the problems of child facing with integration and learning disabilities, and behavioural disorders; and based on this to make an expertise; to occupy the child with rehabilitation aims involving the pedagogue and the parent as well; furthermore to make expertise for school starting at the request of the day-nursery if the advancement and the individual talent of the child makes it necessary. The tasks and activities of centres providing educational guidance are very manifold: psychological diagnosis, psychological counselling, pedagogical diagnosis, pedagogical correction, (special) educational development, child-centred family care with psychological background, and the completion of development examinations of a child at school-age.
- **logopedic institutions**: the task of logopedic service is speech start, the correction of pselism, the correction of language and communication disorders, and the prevention and the treatment of dyslexia.
- **centres for further education and career guidance**: their task is to examine expertly the student's talents, learning ability, and orientation, and as a result of this to recommend a school.
- **conductive pedagogical institutions**: their task is the conductive education, the development and the nursing of children with central nervous system injuries.

Considering the organisational frames most of these institutions operate under the institution of Pedagogic Service Providing Educational Support. These institutions operate nationally based on a unified system, they have no regional specialities. The operation of expert and rehabilitation boards examining learning ability is the obligation of every county and metropolitan government, whereas the organisation of national expert activity examining the disability regarding seeing, audition, movement and speech is the task of the metropolitan government. The completion of other activities of pedagogic service providing educational support can be ensured in the form of local governments, common-maintained institutions, market-based service providers, and small area associations.

B) Pedagogical professional service institutions – Pedagogical Institutions

Pedagogical-professional services help the work of educational institutions, the work of pedagogic service institutions and their maintainers, as well as the work of pedagogues, furthermore help the activity regarding students' interest protection. Pedagogical-professional service can be provided with a nationally consistent professional leadership, and can be managed together with the professional leadership of the Minister of Education (the detailed rules of the service-providing is laid down in a regulation by the Minister of Education).

Among pedagogical-professional services we can find the followings:

- pedagogical evaluation, the task of which is to measure and evaluate the successfulness of educational work done in the educational institution, and also to help the organisation of public education tasks at a local, regional and national level;
- consultancy, care for subjects, the task of which is to demonstrate and disseminate educational and pedagogical methods;
- pedagogical information, the task of which is to collect, preserve, elaborate and provide the using of professional information, data and educational documents (curricula, textbooks, work-helps etc.), and to provide information;
- education management service, management and pedagogical service, the task of which is to make programs and curricula, to provide consultancy on school structure, to convey economic, legal etc. information, to familiarise people with curricula, textbooks, learning tools, and to cooperate in the elaboration of pedagogic program for schools and student hostels;
- the aid and organisation of the training, further training and self-training of pedagogues;
- the organisation and coordination of academic, sport and talent competitions;
- student information and consulting service, the task of which is to help students, learning communities and student governments by providing them the knowledge necessary for the enforcement of their rights, and by conveying education management, economic, legal etc. information.

Pedagogical Institutions providing pedagogical-professional services operate in the capital and in shire-tows.

III) Other institutions in connection with education, for example:

A) Educational Research and Development Institute (Budapest): it is the strategic research and development and service-providing institution of the education sector. It began its operation under this name on 1 January 2007, among its predecessors we can find the National Institute of Pedagogy, the National Institute for Public Education established in 1990, and the research and development departments operating within the frames of Institute for Educational Research and the House of Professors.

Its basic task is the research and development, the innovation and service-providing activity done in favour of the development of Hungarian public education and in some cases of the higher education. The activity of the institute covers public education and higher education researches and developments, international analyses, expert activities preparing for the professional decisions of education management, data services, and the wide dissemination of professional results.

It runs the National Pedagogical Library and Museum. It publishes the New Pedagogical Review, the Educatio, and the Book and Education scientific journals in connection with education.

Its units performing educational service tasks:

- the Arany János Program Office, which do the tasks in connection with the Disadvantaged Students Arany János Talent Management Program, the Arany János Dormitory Vocational School Program and the Disadvantaged Students Arany János Dormitory Program as part of talent management.
- National Scientific Student Council, the task of which is the students' scientific and artistic activity in higher education institutions and the national representation and coordination of students' movement; as well as the organisation of national scientific and artistic student forums.
- Education Mediation Service, which performs mediation services in all areas of education.
- Exam Centre
- National Talent Program Office, which is a new organisational unit ensuring the professional background of National Talent Program.

B) Public Education Information Office: it runs inter alia the public education information system. In the information system we can find e.g. the admission prospectus of secondary institutions, furthermore the admission information system of secondary institutions, the student and teacher registration systems, and the administration systems are also the parts of information system.

C) National Labour Office, which is the successor of National Vocational and Adult Education Institution that ceased with a merger on 31 December 2011. Among the Office's basic tasks in connection with vocational and adult training we can find the followings:

- the professional and methodological development of vocational and adult training, as well as the performing of analytical and evaluation tasks,
- the provision for the educational and training documents for the training of disadvantaged and disabled people,
- the continuous development of profession structure, the elaboration of the draft of National Training Register, and its harmonisation with ISCED, FEOR and European Union directives,
- the elaboration of the system of conditions of the equivalence of qualifications meeting the European requirements, the harmonisation of national and international qualifications, the elaboration of the Hungarian adaptation of European Qualification Framework,
- the collection and analysis of statistical data regarding adult training,
- the organisation of the elaboration of professional textbooks, and the operation of their publication and distribution,
- it performs the secretarial tasks of the Council for Vocational Training Textbooks and Training Devices, the National Qualifications Commission, the Adult Training Accreditation Board and the National Council of Vocational and Adult Education,
- it organises the further training of pedagogues, andragogues, and the educational leaders of institution, as well as the professional academic competitions of special vocational schools,
- it coordinates the elaboration of the requirements of vocational maturity subjects and the vocational maturity themes according to consistent principles,
- it complies and manages the national register of vocational trainings (of presidents of professional exams, of committee members of professional exams, and of vocational experts), it ensures the publication of the register,

- in cooperation with the chamber of economy it elaborates and runs the career orientation system,
- it elaborates and runs the career counselling service, it further develops and runs the career tracking system,
- it performs the tasks in connection with the registry of regional integrated vocational training centres,
- it elaborates and manages the consistent principles of the elaboration of professional and exam requirements, as well as the principles necessary for the obtaining of a licence to organise professional exams and the special, personal and material conditions for every vocational qualification,
- it organises the delivery of vocational maturity themes to exam centres,
- it runs an exam centre,
- it performs the tasks regarding master registry.

IV) The management of education

A) The tasks of sectoral administration are performed by the State Secretariat for Education that belongs to the Ministry of National Resources, and the responsibilities of which are the followings:

- public education,
- higher education,
- science policy.

The Minister of Education and the professional Secretary of State:

- enforces the special demands of education sector,
- prepares and accomplishes sectoral strategies, action plans and professional development programs,
- issues a ministerial decree based on authorization,
- carries out official tasks.

B) The background institution of the Ministry of National Resources in tasks regarding education affairs is the Office of Education. Its tasks are the followings:

- it collaborates in the management, the accomplishment, the organisation and the coordination of control, measurement and assessment tasks: it coordinates the professional supervisions taking place in education institutions, it registers the results of evaluations and informs the maintainers of schools about these results,
- it organises the national public education academic competitions,
- it contributes to the performing of tasks in connection with the statistical system of public education: it keeps count of higher and public education institutions, the students hostels, it registers the students and the teachers as well.
- the carrying out of official affairs regarding the studies of students and undergraduates,
- it is responsible for the arranging of the admission procedure in public and higher education: it registers the applicants and their data, furthermore it supports the matriculating people with a wide range of information.
- it contributes to the organisation of school-leaving exam, to the assessment of requests for legal remedy, and it runs the independent examining body of exams during the studies;
- it contributes to the tasks in connection with the National experts and the National examination register;
- it is responsible for the accreditation of teachers' further trainings and of the language exams, it permits the operation of language exam centres,
- it carries out tasks regarding official supervisions and misdemeanours.

C) Professional College of Education: it is a professional consultative, opinant and conciliatory college. The main emphasis is put on professional coordination. Its members: the 20 educative assistants under-secretary from the Government Office (1 in each county and Budapest) and the general vice-president of the Office of Education. The secretary tasks are done by the Office of Education.

7.3.2. Strategies, analyses and documents dealing with education system issues on national level

A) The most important acts and rules of law regulating the operation of education system

79/1993 Law on Public Education, which expires in 31 August 2012, and some amended provisions of it will be in force until 31 August 2013.
It regulates the management and the operation of public education system. It provides the institutions of public education system, its operation, and its regulation covers nursery education, school (primary school and secondary schools) education, as well as nurture and education in student hostels, furthermore the service and administration activities in connection with these (e.g. pedagogic service providing educational support, pedagogical-professional services). It defines the principles of the activity and the operation of public education, it determines the group of maintainers, it regulates the maintainers and sectoral management, the supervision of institutions, the principles and the method of public education's financing, and the group of services available for free of charge. It declares the specific rules pertinent to institutions that are not maintained by local governments and the functions-processing obligations of local governments in connection with public education. It provides the age of compulsory education, the schedule of the academic year, the length of education, training time, the pedagogic stages of nurture and education work, the set of requirements (also specifically the school-leaving exam), the nurture and pedagogic programs of institutions, and also the size of the class and the groups.
The act includes the conditions of the assignment of the leaders of institutions and the conditions of the employment of nurture-education workers and pedagogic service-providers as well as the rules of their work, and also the provisions pertinent to nursery-school admission and to the formation and lapse of student status.
It includes the rights and obligations of students, parents and pedagogues; it treats of parents' associations, school boards and student governments as well.
The act has provisions with international relevance, which relate on the one hand to the possibility of Hungarian studies for non-Hungarian citizens, and on the other hand to the foreign studies of Hungarian citizens and to the conditions for the recognition of qualifications obtained abroad.
The act was amended more times: 1996, 2003, 2005, 2007, 2010.

190/2011 Law on National Public Nurture: it replaces the more times amended 79/1993 Law on Public Education from **1 September 2012**, however some of its provisions, in line with the characteristics of the school system, come into force only from 2013 and 2014.

The act regulates the operation and the management of public education (public nurture) system.
The act declares that public education is civil service; it is the civil service task of the Hungarian state on the one hand to ensure the right to the free and compulsory primary education and to the free and the universally available secondary education until the school-leaving exam is obtained, and on the other hand to prepare for the first vocational qualification.

The major objective of the new act is with the means of nurture and education to prevent social segregation, to manage talented children and to ensure the necessary conditions for the long-term development of Hungarian society. The exchange in phrasing (public nurture instead of public education) symbolically signals the ethos of the new act: it puts the emphasis on the support of the forming of people, thus besides education it wants to put major emphasis on nurture. In public elementary schools for example ethics or faith and ethics lesson will be the part of compulsory lessons' activities (in an ascending system from 2013). The act defines the role of *National Talent Program*, the professional background of which is ensured by a new organisational unit, the National Talent Program Office.

The new regulation devotes a much greater role to the State than in the past. The content regulation, the centrally guaranteed wages of pedagogues, the assignment of directors and the central supervision of the work of pedagogues mean the greater state participation in the new system; and the public nurture institutions maintained by local and county governments will be maintained by the state from 1 January 2013. The state exercises its maintainer's rights through Government Offices, while local governments can take upon the operation of certain institutions – based on determined conditions – in a five-year contract on public nurture. The freedom of institution-foundation remains, thus religious and private institutions continue to operate.
The institutions of pedagogic service providing educational support will be state institutions. Among their tasks besides the previous ones we can also find the nurture of highly talented children and students.

A so-called pedagogical-professional supervision that is repeated every five year and culminates in an assessment will be introduced. Its aim is an external supervision and

evaluation of the work of pedagogues based on uniform criteria in order to enhance quality. The supervision extends to every public nurture institution independent from the maintainer.

The act regulates the introduction of the career model of pedagogues and defines the promotion system. These rules will be valid for the pedagogues of non state-run institutions as well. The career model will ensure higher wages for pedagogues, but promotion will not be affected only by the obtained qualifications and the years spent on the career, but the condition of it will be the obtainment of degrees. The career model of pedagogues will be introduced in 1 September 2013.

From 1 September 2014 the principal rule will be that it will be compulsory for children to take part in nursery-school activities four hours per day from the age of three instead of the previous age of five.
The age limit of compulsory school attendance decreases to 16 years, and the public nurture Bridge Programs ensure the possibility to continue the studies in vocational schools for those schoolable children who are not able to complete primary school or after completing primary school are not able or are unwilling to continue their studies. According to the plans the Public Nurture Bridge Programs will provide activities, occupations and programs that serve the complex development of students and that are in line with the individual skills of the given students.

After 1 January 2016 the condition of the issue of school-leaving exam certificate will be the proof of the completion of 50 hours ‘community service’.
The act pertinent to the operation of primary school lays down that nurture-education takes place in primary schools until 4 p.m. and if the given institution operates as a *full-time school*, it is compulsory for every student to stay at school until 4 p.m.

<u>204/2011 Law on National Higher Education</u>
The act coming into force in 1 January 2012 replaces the 139/2005 Law on Higher Education. The objective of the act: on the one hand the establishment of the system of conditions necessary for the improvement of the standard of higher education and for the

obtaining and sharing of competitive knowledge, and on the other hand the ensuring of the operation of national higher education institution system.
The act lays down the principles of the operation of higher education: like for example the basic activity of higher education institutions: education, scientific research, artistic creative activity. The operation of higher education system is the task of the state, while the operation of the higher education institution is the task of the maintainer. The basic education activities of higher education institutions include higher education vocational training, bachelor education, master education, doctoral education and the postgraduate specialisation training as well.

The act regulates the organisation and the management of higher education, the conditions of the establishment of higher education institutions, like e.g. state recognition, and the conditions of their transformation, fusion and abolishment. It defines the basic operating rules, provides the organisational structure of higher education institutions (e.g. senate, different organisational units etc.) and the responsibilities of each organisational unit. It determines the group of people employed in higher education and the rules of employment, and the rules pertinent to the occupancy and the performing of some employments. Employees in higher education institutions operating as budget authorities are employed within the frame of public servant status.
It contains the rights and the obligations of employees performing education tasks as well as the frames of interest protection and interest reconciliation.
It lays down the system of higher education training from higher education vocational training to doctoral education. It regulates the tasks and requirements regarding data handling, and it prescribes the operation of a central register and a higher education IT system. A separate section regulates the things affecting students, e.g. the formation and the lapse of student status, the rights and obligations of students, their responsibilities, academic requirements, the evaluation of performance; the communities of students (student government, national representation).
It regulates the question of financing and asset management, it defines the principles of higher education's financing and it determines the forms of defrayal of learning in higher education: *a)* student supported by Hungarian state scholarship, *b)* student supported by Hungarian state part-scholarship, *c)* fee-paying student. The full cost of the training of the student supported by state scholarship and half of the costs of the training of the student

supported by state part-scholarship is financed by the state, while the full cost of the training of fee-paying student is paid by the student itself.

It regulates talent management (e.g. scientific groups of students, professional colleges), doctoral education and the doctoral degree awarding procedure as well. It specifies the bodies involved in performing state jurisdictions (e.g. Hungarian Higher Education Accreditation Committee).

In its provisions with international relevance it declares the free possibility of foreign studies for Hungarian citizens and it lays down the rules pertinent to the Hungarian studies of foreign citizens.

289/2005. (XII. 22.) Order in Council on the higher education bachelor and master education and on the order of procedure of course-starting: it regulates the courses of bachelor and master education, it determines the order of their starting, and it specifically regulates the course of master education providing teacher professional training.

187/2011 Law on Vocational Training: the act coming into force in 1 January 2012 replaces the 76/1993 Law on Vocational Training.
The force of this act extends to school-based vocational trainings (vocational training) and in case of non-school-based vocational trainings to vocational trainings – taking place based on the Law on Adult Education – tending to obtain state-recognised qualifications.
The act draws up the principles in connection with school-based vocational training, like for example the freeness of the obtainment of the first, state-recognised qualification, and the requirement of equal treatment. It defines that besides the preparation of students for complex vocational exam it is the task of school-based vocational training to prepare the students for shoving themselves forward successfully in life and also to nurture students in line with the characteristics of their ages. The career counselling service helps the enrolment in school-based vocational training.
The act determines the institutions belonging to the system of vocational training (technical high school, vocational school, state institution of adult education and institutions providing non-school-based vocational training). It regulates their maintenance, their operation, it defines the **regional integrated vocational training centre**, which is a cooperation system of performing vocational training tasks, and the task of which is to harmonise the

regional tasks of vocational training in performing state and government tasks, to raise the efficiency of the course and of the use of resources, to optimalise the performing of vocational training tasks, to eliminate parallel trainings and developments and to vindicate labour market demands in school-based vocational training.

The act regulates the National Training Register (NTR) and its content; the state-recognised qualifications are enlisted in NTR. It regulates the vocational and exam requirements, the course and the conditions of the end of the training complex vocational exam and the professional exam board. It determines the principles of vocational theoretical and practical training; it separately rules the requirements and the frames of practical training. It regulates the official, legal and professional control of vocational training, the questions of financing and the management and cooperation system of vocational training. The reconciliation of the national strategic questions of vocational training takes place within the frames of National Economic and Social Council and the National Council of Vocational and Adult Education. It determines the range of benefits and allowances enjoyed by the students and the rules of labour law pertinent to students, furthermore the requirements pertinent to those teaching in vocational training.

155/2011 Law on Vocational Training Contribution and the Support of the Development of the Training: that replaces the 86/2003 Law from 2 January 2012.
The purpose of the vocational training contribution is to support practical training taking place within the frame of school-based training implementing vocational training, the non-school-based adult education and in higher education within the frame of practice intensive bachelor course's education, as well as to support the development of the training.
The act specifies the range of those obliged to contribute to vocational training. It regulates the establishment of the basis and the measure of vocational training contribution and also the method of fulfilment. The measure of vocational training contribution is the 1,5% of social contribution tax base.
Vocational training contribution can be accomplished based on the cooperation agreement between the vocational school and the obligor to contribution or based on the articles of apprenticeship between the student of the vocational training school and the obligor to contribution.

101/2001 Law on Adult Education, which is actually operative; it regulates adult education activity and the service and administration activity relating to adult education, as well as the institutional and financing system of adult education.
It is a principle that the state ensures the right to take part in adult education for everyone.
The act regulates the conditions of pursuing adult education activity, the content requirements of the training, the accreditation, the questions regarding the supervision of the institutions, the Adult Education Accreditation Board and the National Council of Vocational and Adult Education; the latter operates as the national professional decision-preparing, opinant and proposer body that helps the tasks of the minister for vocational training and adult education in connection with adult education and vocational training. The 98/2009 Law ruling the amendment of the law amplifies the original rule of law pertinent to adult education with the importance to ensure the conditions of lifelong learning. It lays down that the ensuring of the obtainment of digital literacy is a compulsory element of the content of adult education program.

37/2001 Law on the Order of Textbook Market

The basic principles justifying the creation of the law:

- Textbook supply is a public service task providing the enforcement of the right to civilization that takes place in market conditions.
- It is a characteristic of textbook market that the consumer – the parent and the student – cannot decide freely whether he/she wants to be a customer since textbooks are needed for the successful fulfilment of the studies.
- Access to textbook cannot depend on the financial and income position of the family. Every student has to have textbook, the state shall support the purchase of textbooks for students.

The law regulates that textbook can only be such a written or digital work that is certified as a textbook within the frame of the procedure to declare these works as textbooks. A textbook list is made from the documents declared to be textbooks.
It regulates the order of students' textbook support: the amount of textbook support per student is determined in the law on annual central budget. The support is given to schools and they can use it in line with the directions of the law. The law determines the order of textbook orders and the method how to organise textbook supply in schools. The school

can conclude a contract with one or more textbook distributors to perform tasks in connection with textbook supply.

It decides on the setting up of the National Board of Textbook Entrepreneurs as a public body, it determines the tasks of the board and its organisational structure as well as its operation.

B) Strategies, analyses and documents

National Core Curriculum 2012 (NCC):

The National Core Curriculum declares the attitudinal, conceptual and content foundations of the nurture-educative work (public nurture) of schools; it determines the main areas and contents of conveyable civilisation as well as the stages and development tasks of nurture-educative work, in other words it originates the content union of public nurture for the period of compulsory school attendance and of time till the school-leaving exam. Frame curricula state the nurture-educative aims referring to each type of school and educational section, the system of subjects, the themes and content of each subject, the requirements and the timeframe necessary to learn them. The professional autonomy of institutions is ensured by the free timeframe determined in frame curricula (average 10%), the methodological freedom and the possibility of unique curricula.

The aim of NCC is that the acquired knowledge shall be of stable value and adequate to the needs of the age. It emphasises the importance of differentiated teaching-learning; it wants to have a pedagogical work in the centre of which there is the development of the knowledge, the skills and the personality of the students.

It determines the content of public education based on civilisation areas. Civilisation areas are the followings: Hungarian language and literature; modern foreign language; mathematics; human and society; human and nature; our planet – our environment; arts; informatics; lifestyle and practice; PE and sport.

The development areas and nurture aims defined by NCC: 1) Moral education; 2) National consciousness, patriotic education; 3) Education for citizenship and democracy; 4) The development of self-knowledge and social culture; 5) Education for family life, 6) Physical and mental health education; 7) Responsibility for others, volunteering; 8) Sustainability, environmental consciousness; 9) Career orientation; 10) Economic and fiscal education; 11) Education for media-awareness; 12) Teaching how to learn.

The Education Ministry's medium-term strategy for public education development (April 2004)

The strategy came into existence in 2004, however based on the strategy public education development plans were made at settlement, small region, county and regional level for the period of 2007–2013 in consonance with the aim that the described system of central governmental measures and development shall be completed with a bottom-up multilevel (school, maintainer, county-regional) system. The strategy serves for the orientation of local actors.

The document is divided into 3 main parts: the first part provides a schematic assessment of the situation of Hungarian public education system in the form of a SWOT-analysis. In this part those problems will be identified the solving of which shall be attempted during the development of education. These are the followings: 1) the successfulness of education and the development of basic skills; 2) inequality; 3) the quality of education and the evaluation of quality; 4) the status of pedagogue profession; 5) the application of information and communication technologies (available IT instruments); 6) material conditions; 7) cost-efficiency and administration.

The second part summarises and interprets the vision of education and the main priorities and the development aims of the mid-term program. The third part describes the system of ways and means of the implementation of the strategy.

The strategy defines the following most important mid-term development objectives by taking into consideration the problems identified during the assessment of the situation, the objectives of the comprehensive education policy accepted by the EU and the National Development Plan:

- the foundation of lifelong learning by developing key competences;
- the reduction of educational inequalities;
- the improvement of the quality of education;
- the support of the development of pedagogue profession;
- the development of the application of information and communication technologies;
- the improvement of the material conditions of education;
- the improvement of the public education's cost-efficiency and administration.

The third part of the document (the system of ways and means of implementation) contains the target programs serving for the implementation of each development

objective. Some examples without the demand for entirety: the development of learning foreign languages; multicultural development program; the extension of pre-school education among disadvantaged groups of children, the integration of Romany and disadvantaged children, anti-discrimination program, the modernisation of the network of vocational schools, the development of local-spatial planning systems, the support of cooperations among associations, settlements and institutions etc.

The medium term vocational training strategy of the Hungarian Chamber of Commerce, 2005–2013.

The approach of the strategy: vocational training shall function as a modern educational service the aim of which is to meet the quantitative and qualitative labour market demands of competitive economy and to train successful and effective employee.
The strategy provides a brief situation, defines objectives and short- and long-term tasks taking into consideration the fields of vocational training, career orientation, adult education, higher education training, craftsman training, craftsman examination and the financing of vocational training.
We highlighted the most important aims and tasks in this study.

Objectives in the field of vocational training: 1) the establishment of a competence-based, practice-oriented, flexible system of vocational training that meets the current needs of labour market; 2) the establishment of normative financing overarching government cycles based on the number of articles of apprenticeship; 3) the increase in the interest of business organisations in practical training.
Short- and long-term tasks in the field of vocational training:

- the establishment of a new financing system based on the regional level vocational training-enrolment planning;
- the modernisation of profession structure (base- and sub-profession qualifications);
- the modernisation of practical training to improve the efficiency and the quality of practical training;
- the universalisation of articles of apprenticeship;
- for practical training and level exams the development of such methodological aids that contain pedagogical-methodological-innovative solutions;

- the acceleration of the integration of the fragmented school system – the establishment of regional integrated vocational training centres, the task of which is to harmonise the regional tasks of vocational training;
- the establishment of a professional examination system independent from trainers – the development of regional exam centres.

Objectives in the field of career orientation: the training of professions meeting the needs of labour market; the popularisation of professions in shortage and physical professions.

Short- and long-term tasks in the field of career orientation:

- the elaboration of career orientation curricula, the adding of occupations containing career orientation ideas to compulsory curriculum;
- the establishment of a system of complex and individualised career orientation and counselling;
- the making of short films and career descriptions introducing professions, and their publication on internet.

Objectives in the field of adult education: 1) the rate of participants in adult education shall increase from 6% to 12% between 2010 and 2013; 2) trainings shall be implemented in consonance with the needs of the economy.

Short- and long-term tasks in the field of adult education:

- the establishment of the system of adult vocational training of the chamber
- the establishment and the operation of the regional network of independent exam of chamber and competence-centres
- the supervision of practical training by the chamber
- the establishment of a virtual e-Learning academy of the chamber that ensures lifelong-learning.

Objectives in the field of higher education training: the establishment of a new higher education structure in which a key role shall be ensured to the practice-oriented higher education training.

Short- and long-term tasks in the field of higher education training:

- the establishment of appropriate cooperation and division of labour between technical high schools and higher education institutions;
- the importance of higher education training must be increased significantly in higher education, its rate shall reach 25%.

Objectives in the field of craftsman training: the integration of craftsman training into the national vocational training system.

Short- and long-term tasks in the field of craftsman training:

- the modernisation of the internal regulatory system, the modification of Craftsman Examination Regulations;
- the strengthening of the system's uniform operation; the ensuring of central exam questions and educational programs;
- the finding of the place of craftsman title in vocational training system and the increase in its recognition and value.

Objectives in the field of the financing of vocational training: the increase in the interest of business organisations in practical training and in the contribution to it.

<u>The Strategy of the Development of Vocational Training 2005–2013. (The Government of Hungarian Republic)</u>

The Government formulated the strategy involving ministries, economic chambers and professional organisations and in consultation with the public to enhance human resources and to increase the professional qualification of the population.

The main **objectives** of the strategy:

- *I) Qualitative vocational training for everyone!*

I/1) Vocational training shall be established in consonance with the needs of the users: the aim is the operation of such a vocational training system that can adapt to the changes of labour market by the continuous monitoring of the changes of labour market needs and that can ensure the professional competences required by employers by continuous development.

I/2) The access to vocational training shall be improved: it shall be achieved that the vast majority of the youth obtain a professional qualification; the possibility to improve the competence of adults shall be ensured within the frame of adult education.

I/3) Modern curricula are needed: curricula in accordance with the development of information and communication shall be prepared for vocational training.

I/4) The training of trainers shall be renewed: the role of appropriately prepared vocational teachers, instructors and trainers is crucial in vocational training. Human conditions shall be improved by the renewing of basic and further training of trainers.

- *II) A more effective system of vocational training management and financing!*

II/1) The interest representation possibility of users shall be improved: in order to use the sources effectively and to establish future-oriented planning, the participation of stakeholders of vocational training in national, regional and local decision-making processes shall be ensured.

II/2) The allocation of sources shall be more effective, the utilisation of capacities shall be improved: the institution system and the financing shall be restructured in a way that schools become interested in the framing of their training structure into the changes of labour market.

II/3) The institution system of vocational training shall be developed: the establishment of a new system and institution system of professional examination is needed. The strategy names the National Institute of Vocational Education which would be determinant in the development of vocational training from the point of view of content and methodology and in the coordination of researches in connection with vocational training.

- *III) A more developed information system!*

III/1) Decisions shall be more established: a statistical system measuring the whole vocational training shall be developed, which contributes to the establishment of decisions.

The most important **tasks** for the implementation of each objective

- I/1) – the application of quality management system in each vocational training institution;
  – the establishment of vocational training's planning system based on the needs of labour market by distinguishing the needs-definition accommodating to the long-term, short-term and rapidly changing needs of labour market, regional planning;

– the ability of labour mobility shall be improved, the Europass system shall be introduced and the mutual acknowledgement of certificates is needed with EU member states.

- I/2) – measures shall be elaborated to prevent drop-out from vocational training and to help the drop-outs to go back to training

  – in the 9th and 10th class of vocational schools general education shall be transformed to develop necessary knowledge and skills; the timeframe of career orientation and vocational groundwork shall be increased, the time aimed at teaching professional foreign language and informatics shall be increased.

  – the infrastructural conditions of schools shall be improved.

  – it shall be possible for the individual to have access to diverse levels and forms of vocational training in every stage of its life; the adult education system needs development;

  – a new vocational training structure shall be elaborated, the introduction of module system

- I/3) – the use of digitalised curricula in vocational training institutions
- I/4) – the training of vocational teachers and instructors shall be modernised, there is a need to learn education and training methods necessary for the use of modern curricula and learning tools, and a great emphasis shall be put on this during continuative education
- II/1) – The system of professional interest reconciliation shall be improved; the participation of economic chambers, interest representing organisations of employers and employees, business organisations shall be ensured in the preparation, the implementation and the monitoring of decisions.
  – The supporting system to integrate vocational training school into adult education and to accredit them shall be established.
- II/2) – The establishment of the system of regional integrated vocational training centres (RIVTC) – this way a more cost-effective system of vocational trainings institutions can be established. In the first round, in 2005 and 2006 the establishment of 16 centres then further ones

  – the supporting system of adult education shall be modified

– the establishment of a system of incentives to support the training of vocational qualifications in shortage

– the transformation of the financing system in a way that the normative financing of schools shall be differentiated based on the establishment rate of students obtaining qualifications.

– the greater participation of business organisations in practical training shall be encouraged with the modernisation of the system of vocational training contribution.

- II/3) – the establishment of a regional network of institutions that operates a professional examination system independent from trainers

  – the ensuring of the operation of the National Institute of Vocational Education

- III) – the changing needs of labour market shall be continuously analysed at regional level by the development of labour market information system;

  – an adult education identification and registration system shall be introduced to follow up the participant of adult education

  – the introduction of career tracking system

The Strategy of the Government of Hungarian Republic for Lifelong Learning (LLL strategy) (September 2005)

The strategy defines the directions of the development of human resources for the period of 2007–2013. The objective is the knowledge-based society, where besides traditional basic skills – writing, reading, counting – new basic skills are necessary. From new skills the most important ones are IT skills, the knowledge of a foreign language, technical culture, business and social knowledge and skills (competences). The younger generation can acquire the necessary competences in school, whereas the older one within the frames of adult education.

The development of lifelong learning shall be implemented in a way to effectively complete the development directions of the connected subfields (public education, vocational training, higher education, adult education, creating opportunities, employment, social policy, culture, financing) and other sectors.

The strategy enlists five priorities and seven key areas of development. It also defines the most important areas of intervention in case of each key area.
The priorities:

1) The strengthening of the opportunity-creating role of education and training.
2) The strengthening of the relations of education, training and economy.
3) The application of new governmental methods and public policy procedures.
4) The improvement of the efficiency of education and training and the increasing of their total social expenditure.
5) The improvement of the quality of education, training.

During the identification of key areas a dual viewpoint prevailed: the development policy targeting lifelong learning requires long-term strategic thinking, however the strategy shall also serve for the solving of acute labour market problems. Accordingly the key areas of development are the followings:

1) The development of basic skills and key competencies in public education (for the 5th priority)

Areas of intervention: the improvement of the standard of pre-school education basing on personality development; the emphasising of basic competences; the transformation of secondary education in favour of competence development: competence-based school-leaving exam.

2) Wide and rich supply in vocational training, in higher education and in adult education (for the 1st and 2nd priorities)

Areas of intervention: the modernisation and rationalisation of the network of training institutions (regional integrated vocational training centres); the establishment of regional knowledge centres with higher education basis; the successful accomplishment of bologna process in higher education institutions; the development of school-based adult education in higher education.

3) Constantly expanding learning opportunities (1st and 4th priorities)

Areas of intervention: to make the use of information and communication technologies a basic requirement; the encouragement of workplace learning; the opportunities of informal learning, the popularisation of alternative learning forms;

4) Career orientation, counselling and career tracking (2nd priority)

Areas of intervention: career orientation in public education; familiarisation with the world of work, the establishment of an informational and counselling system.

5) The recognition of informal and non-formal learning (2nd priority)

Areas of intervention: new service-providing model and the transformation of profession structure; connection to the Europass system.

6) The support of disadvantaged people and from a labour market viewpoint that of dangerous groups (1st and 2nd priorities)

Areas of intervention: the prevention of drop-out (integrated education, the adjustment of spatial differences in education and training); chance for the latch on to lifelong learning (the establishment of an environment stimulating learning-labour, the rethinking of the system of social benefits, the spreading of part-time employment forms, the elaboration of individual training programs for women on maternity and parental leave).

7) The domestication of a new type of teaching/learning culture (5th priority)

Areas of intervention: new roles of pedagogues (the increasing of self-development skills); quality culture (the establishment of a national measuring and evaluating system in public education that focuses on key competences, the emphases in the content of exams).

Proposal for HCCI's Strategy in the Field of Adult Education, 2010 – 2020. (Hungarian Chamber of Commerce and Industry, 2010. 03. 31.)

The Hungarian Chamber of Commerce and Industry elaborated a comprehensive adult education strategy with the intention to participate more actively in the forming of the condition system of adult education in the future. The strategy-proposal defines necessary steps regarding career orientation previous to school-based vocational training, adult career correction and adult education.

Starting from the assessment of the situation, which means the exposition of main professional facts affecting the need for change, the chamber initiates the change of adult education in a way that

- better fits to the professional and spatial needs of economy, it ensures the temporally changing, quality after-growth of professionals expected by the economic actors,

- it ensures the labour's specialised instruction and retraining while optimising the expenditures, it establishes the conditions for the constant and organised replacement training of employees,
- it increases the chances of getting and keeping workplace as well as of setting up an own business for those enrolling for the training.
- it establishes the human conditions for the new and significantly increasing tasks of the chamber.

In order to achieve the mentioned objectives the document defines the following short- and long-term tasks:

- The development of the forecast of vocational and adult education needs reflecting the long-, mid- and short-term needs of economy (e.g. the career tracking of qualified skill labourers)
- The development of career orientation, career choice and adult career correction activity, the elaboration of autonomous programs ensuring after-growth (e.g. the establishment of long-term career choice conception)
- The elaboration of programs helping the school-workplace transition, the support of the integration of young employees (e.g. supported internship contract, temporarily employing organisations)
- The overview and modernisation of the requirement system of National Training Register (NTR)
- The development of the quality assurance of adult education, the establishment of the conditions of chamber accreditation
- The transformation of the system of examination, the establishment of regional exam centres, the establishment of the network of accredited chamber exam locations
- The establishment of the compulsory knowledge renewing and knowledge updating system (compulsory knowledge renewing further training every five years)
- The extension, the modernisation of the system of craftsman examination and its integration to the further training system of the chamber
- The development of the relationships between the chamber and higher education
- The establishment of "elite training" of the chamber, Chamber Academy
- The development of organisational, service-providing and informatics system of the chamber, the financing of the operation

- The transformation of the application system of vocational training contribution and the related separated state funds (e.g. those elements shall be deleted from the application system of Vocational Training Funds that are not related to secondary education [grammar-schools, higher education, the support of cross-border vocational training]).

Report on Hungarian public education 2010. (Educational Research and Development Institute, 2011): The publication published in 2011 is the 6th in the range of publications published about the Hungarian public education since 1995. The volume was ordered by the then educational administration in 2008, counting with a publication in spring of 2010, thus its research basis and the time limit of its analyses is the middle of 2010. The studies published in the publication treat of the components and the formative factors of public education, its everyday processes and its tendencies of change from a differentiated and an objective point of view by using times series table- and data system.

7.3.3. Institutions dealing with education system in CENTROPE region

I) The non-educational institutions of public education institutional system

A) The pedagogic service providing educational support: there are institutions that perform

tasks which belong to the frame of pedagogic service providing educational support in every county, therefore in Győr-Moson-Sopron and in Vas County as well. The responsibilities of each institution are the same as described in case of these institutions at national level, but in some cases they may differ with regard to the spectrum of services provided and the applied methods.

Győr-Moson-Sopron County

Győr-Moson-Sopron County Special Education Service Centre – Győr: its supply area is Győr-Moson-Sopron County.

The units of service:

- Expert and rehabilitation board examining learning ability

- Logopedic supply: it ensures the supply of those children with pselism and with part-ability disorder who attend nursery-school or school in the different settlements of the county.
- Early childhood intervention: until the age of 0–3 and 3–5 if the child needs special educational help
- Generative training: The development of those school-children living in families who are mentally seriously damaged and have multiple disabilities and cannot be trained in the traditional school system.

Győr-Moson-Sopron County Expert and Rehabilitation Committee Analysing Learning Abilities – Győr: it operates within the frame of Győr-Moson-Sopron County Special Education Service Centre. It examines children struggling with the persistent and severe disorder of mental-, speech-, and autism-, cognitive or behavioural development. It proposes special nurture supply, the method, the form, the place of it, the connecting pedagogic service providing educational support; it examines the existence of conditions necessary for special nurture; it performs control tests; it cooperates with public educational and health care institutions, their maintainers and with the notaries of local governments; the support of integration with the operation of travelling teachers' network.

Győr Small Region's Pedagogical and Children's Psychological Service Centre – Győr:

The service providing institute performs the logopedic and remedial physical education tasks, the early childhood intervention and the generative nursing, the educational guidance and the special education counselling, as well as the career choice guidance for settlements of the Győr small region. It put a major emphasis on talent management within the frame of its Talent Workshop.

Centre for Pedagogic Service Providing Educational Support – Sopron:
The institution provides services for children attending to nursery-schools and institutions at primary levels: a) educational guidance; b) special education consultancy, early childhood intervention and nursing; c) logopedic supply, d) the operation of travelling teachers' network – the supply of children, students receiving integrated education-nurture

Doborjáni Ferenc Unified Special Educational, Methodological Institute, Nursery-school, Elementary School, Special Vocational School, Student Hostel, Children's School,

Convalescent Home and Pedagogic Service Providing Educational Support – Sopron: in this developing school the pedagogic support of severely and multiply disabled children and the unfold of their personality takes place. They perform the logopedic supply of pselism, the health care supply of those forced to remedial physical education and the conductive-pedagogic nurture of those with injured central mental system within the frames of pedagogic service providing educational support. They offer their complementing pedagogic services within the frames of habilitation and rehabilitation activities (pl. individual development, Ayres-therapy, therapeutic swimming, therapeutic horseback riding).

Tóth Antal Nurture-Education Centre – Sopron: It deals with students with special needs, special educational needs, and various degrees of hearing impairment, speech disability and multiple disabilities. Its tasks include besides the ensuring of nursery-school, elementary school and special vocational school education of children with hearing impairment and speech disability, the *logopedic supply* at town and spatial level (logopedic examinations, counselling, the carrying out of therapies based on individual development plans); The screening and therapy of associated disorders and learning disabilities; Further trainings and professional counselling for the pedagogues of mainstream schools; Remedial physical education, therapeutic swimming and swimming lessons with the aim of rehabilitation and prevention.

Educational Advisory – Sopron
Educational Advisory – Mosonmagyaróvár:
The task of the institutions is to explore the problems of children struggling with integration and learning difficulties and to help solve their problems, as well as promoting psychological, educational guidance, the development of language and speech, motor development.

Kapuvár Regional Elementary School and **Pedagogic Service Providing Educational Support** – Kapuvár:

The service providing institute performs the logopedic and remedial physical education tasks, the early childhood intervention and the generative nursing, the educational

guidance and the special education counselling, as well as the career choice guidance for 18 settlements of the Kapuvár–Beled small region.

Tét Regional Unified Institute of Pedagogic Service Providing Educational Support – Rábaszentmihály: The service providing institute of the small region performs the logopedic and remedial physical education tasks, the early childhood intervention and the generative nursing, the educational guidance and the special education counselling, as well as the career choice guidance for 19 settlement of the Tét small region.

Arany János Unified Special Educational, Methodological Institute, Nursery-school, Elementary School, Special Vocational Training School, Pedagogic Service Providing Educational Support and Educational Advisory – Csorna:

Supplies ensured by Pedagogic Service Providing Educational Support:

- Early childhood intervention (until the age of 0–5);
- Logopedic supply: in the city of Csorna and in the settlements of Rábaköz;
- Remedial physical education.

Services provided by Educational Advisory: Psychological examinations; Educational guidance; Hearing development; Language- and speech development; Basic therapy; Drama pedagogy; Psychodrama; Mental health occupations; Motor education.

Vas County

West-Hungarian University Regional Pedagogic Service Centre – Szombathely: it is a multi-purpose service and research, developing institution, its supply area is almost the whole territory of Vas County

Their professional and special services: pedagogical counselling; talent development; evaluation of measurement; quality assurance; further trainings; the organisation of conferences; educational and career choice guidance, conductive pedagogical services. It ensures the services based on the task-performing agreement concluded with the county government.

The main areas of research and development activities: science education, professional databases, the establishment of methodological databanks, the development of digital curricula, impact assessments for professional developments.

Vas County Expert and Rehabilitation Committee Analysing Learning Abilities – Szombathely – it has been operating in an independent institutional form since 2007; its supply area is Vas County.
The committee alone and completely supplies the expert activity analysing the learning ability in the county. Furthermore it ensures (in the territory of the whole county) the early childhood intervention and nursing for children of home supply at the age of 0–5 and it organises the generative training operated within the frames of home supply.

Aranyhíd Nurture-Education Integration Centre – Szombathely: the institution that supplies mild, moderate and severe mentally disabled students in almost the whole territory of the county ensures special education guidance, early childhood intervention and nursing and conductive pedagogical supply.

Celldömölk Town's Elementary School and Unified Pedagogic Service Providing Educational Support – Celldömölk:

The Unified Pedagogic Service Providing Educational Support as a member institute of Celldömölk Town's Elementary School ensures the logopedic, school psychological and remedial physical educational supply and the educational guidance of children at the age of 3–14 living in the Celldömölk small region and attending to the institutions of Celldömölk small region.

Educational Advisory of Vas County's Pedagogic Institute – Szombathely
Educational Advisory and Child Welfare Service – Körmend
Educational Advisory – Sárvár:

The task of the institutions is to explore the problems of children struggling with integration and learning difficulties and to help solve their problems, as well as promoting psychological, educational guidance, the development of language and speech, motor development.

B) Pedagogical professional service institutions – Pedagogical Institutions

Győr-Moson-Sopron County's Pedagogic Institute – Győr

Vas County's Pedagogic Institute – Szombathely

Based on a nationally uniform professional administration Pedagogic Institutes provide pedagogic-professional services the group of which is determined (for details see those described in the country part). Therefore the task of Pedagogic Institutes operating in two counties of CENTROPE region is the following:

- pedagogical evaluation
- consultancy, care for subjects,
- pedagogical information
- education management service, management and pedagogical service,
- the organisation and coordination of academic, sport and talent competitions
- student information and consulting service
- and among their services the further training of pedagogues plays an important role.

II) The management of education

The former regional directorates of the Office of Education integrated into the Government Offices of the counties in 2011, and they "transformed" into Departments of Education, and from 2012 the original 7 Departments of Education "break up" and in each county there will be a Department of Education, thus in Győr-Moson-Sopron and in Vas County as well that belong to the CENTROPE region. With the transformation the following tasks were transferred to the Government Offices from the Office of Education:

- official supervisions, allowances – to make decisions of first instance
- contribution to professional supervision
- the organisation of independent exams
- the replacement of pedagogue certificates
- contribution to the so far public education and organisational tasks.

The tasks of the Office of Education in connection with the tasks transferred to Government Offices:

- the professional support of official duties

- the management of professional provisions
- professional coordination, sectoral professional management cooperation.

7.3.4. Strategies, analyses and documents dealing with education system issues in CENTROPE region

In Hungary there are rules of law with national jurisdiction for the regulation of education system, there is no regulation at regional level. With reference to education-development there are/can be strategies and plans at regional, county, small region and settlement level.

West Transdanubian Regional Public Education Development Strategy, 2007–2013 (Győr, November 2006)

The strategy is divided into two main parts: the first part includes regional situation analysis which supported by statistical data analyses the strengths and weaknesses of the public educational institution system of West Transdanubian Region and drafts the socio-economic and financing environment of public education system and the expected development of it (labour market, demographic trends, the characteristics of settlement system etc.). In the second part it drafts the vision of education, the principles, the objectives and the most important priorities and measurements of the mid-term program.

The defined **vision** defines the public education of the region as an innovative, competence-based and quality-based system that is able to meet the needs of knowledge economy and the institution network of which is organised in a micro regional basis and that ensures the better utilisation of its available capacities by its multifunctional tasks.

It defines the regional public education development objectives based on four policies (quality, efficiency, successfulness, equality of opportunities).

The **priorities** of the strategy:

- The development of the public educational administration system of the region
- The development of the public educational institution system of the region
- The content and methodological development of the region's public education
- The preparation of the region's pedagogues for the new role required by the content and professional methodological paradigm shift.

The **strategic objectives** of the region's public education development:

- For each student the ensuring of the access to nurture-education necessary for the individual successfulness, particularly with regard to efficiently organised integrated institutions of small settlements (e.g. the establishment of an alternative pedagogic methodological centre in Sopron and in Szombathely).
- The development of educational infrastructure in the whole region, especially in the micro regional centres of public education by putting multi-functionality into the centre (a special emphasis shall be put on the most disadvantageous settlements of the region from the point of view of education [Tét, Vasvár, Őriszentpéter]).
- The development of public educational human resources among those working in the administration of public education and those performing pedagogical tasks, providing high quality expert background.
- The support of the spread of institutional programs establishing and ensuring lifelong learning.
- The reduction of segregation, the establishment of the conditions of co-nurture and recipient education system.
- The ensuring of modern and successful pedagogic service providing educational support and pedagogical-professional services for every student and nurture-educative institution.
- Providing the public educational background necessary for the establishment of vocational training system that meets the special labour market requirements of the region.

The amendment and supplement of the public education development plan of Vas County 2007–2013 (Szombathely 2007)

The document contains a very detailed situation analysis referring to Vas County about each level of public education (nursery school, elementary school, grammar-school, vocational training: vocational school-technical high school) and about the institutions of education of arts, the system of pedagogic service providing educational support, and adult education. It determines the development areas and directions of the following period (2007–2013) based on the changes and processes of the periods of academic years of 2000/2001 and 2005/2006.

The vocational training development strategy of West Transdanubian Region 2009–2013
(Regional Directorate of Office of Education, Győr 2008)

The strategy is a document for the development of the vocational training of West Transdanubian Region accepted by the West Transdanubian Regional Development and Training Committee.

The strategy defines the region's vocational training development vision based on the analysis of the labour market and vocational training situation of the region as follows:

„The evolvement of a regional vocational training institutions system that takes into consideration the regional characteristics and provide professionally and geographically harmonised supply and a wide range of vocational training and which is able to follow the constantly changing needs of economy. By providing skilled and adaptable labour it contributes to the strengthening of the competitiveness of economy and it serves the strategy of lifelong learning. It is also prepared to meet the special training needs of highly talented and disadvantaged people, furthermore with all of these it becomes a propulsive industry of the evolving regional institution system."

The **strategic objectives** of vocational training development in the West Transdanubian Region:

- the improvement of the quality and efficiency of vocational training,
- the harmonisation of vocational training's supply and labour market's needs,
- the improvement of the employees' employability and adaptability,
- the encouragement of the cooperations between actors affected by vocational training, the strengthening of vocational training's regional characteristic.

The priorities of implementing the strategic objectives in the region:

- The content and structural development of vocational training.
- The improvement of the infrastructural conditions of vocational training.
- The development of adult education and the spread of lifelong learning.
- The development of the regional institution system of vocational training.

For the priorities defined for the implementation of strategic objectives, the strategy planned seven short- and seven mid-term operative programs, measurements for the period of 2009–2013, with the following slogan: „competitiveness, flexibility, cooperation and integration".

Short-term programs, measurements:

- The improvement of the cooperation between vocational training institutions and business organisations (for the 1st priority)
- The infrastructural development of practical training (for the 2nd priority)
- The adaptation of modern information and communication, innovative and knowledge-based technologies and environmentally-friendly methods in vocational training (for the 2nd priority)
- The support of human resources development of small- and medium-sized enterprises (for the 3rd priority)
- The support of training activities serving the survival of economic crisis (for the 3rd priority)
- The establishment of a Regional Vocational Training Forum (for the 4th priority)
- Career choice, career orientation (for the 4th priority)

Mid-term programs, measurements:

- The support of the establishment of quality assurance systems (for the 1st priority)
- The development of vocational training system in accordance with the needs of disadvantaged target groups (for the 1st priority)
- The establishment of the infrastructural conditions necessary for the switching of the training profile (for the 2st priority)
- The methodological development and the popularisation of adult education, re- and further training (for the 3st priority)
- The support of regional-specific training programs (for the 3st priority)
- The support of researches serving as a basis for the decisions of Regional Development and Training Committee (for the 4st priority)
- The following up and evaluation of developments implemented by the support of Regional Development and Training Committee (for the 4st priority).

The strategy describes in a detailed way the motivation, the background, the target groups, the expected effects and the potential sources of each measurement.

7.3.5. Recent Development in Hungarian Education System

Due to demographic trends – the decades-long decline in the number of births (the rate of children-aged [between the age of 0 and 14] was only 14,9% in 2009) – the number of elementary school-aged children has been continually declining and therefore so does the number of students studying in **elementary school**. This is true for both the nation and the two counties of the CENTROPE region.

From those who finish elementary school everybody continues its studies in one type of secondary educational institution.

Nowadays from those who are enrolled in **secondary school** 24% study in vocational school, 42% in technical high school and 34% in grammar-schools. This distribution has stabilized over the past 4-5 years. The distribution of students studying in secondary schools is similar in the two counties of the CENTROPE region.

Nowadays about 26 thousand students study between the 5^{th}-8^{th} classes of grammar-schools with 6 and 8 classes (during data calculation these forms are counted as parts of secondary education).

The age limit of compulsory school attendance has changed from 2012, as it is modified from the previous 18 years to 16 years.

Before the transition of regime, in the eighties most of the students studying in secondary level learnt a profession, 35–40% of them attended to a vocational training (presently vocational school). In the nineties the training of skilled workers, that is vocational training faced with crisis. The reasons for this:

- several companies that were places of apprenticeship ceased
- the majority of the remaining companies closed their training workshops
- numerous professions were unnecessary in the labour market
- the transformation of values: manual labour lost its value, the majority of the parents, especially the more qualified ones didn't want their child to be a skilled worker, but nor the young people themselves are attracted to manual labour, according to surveys three-quarters of 16–18 year olds would like to have a diploma.

The degradation of vocational training today raises new problems: in several areas for example there are not enough skilled workers. In several places for example in Győr there is a serious scholarship to support students studying a profession.

In secondary education the ratio of the two sexes is more and more balanced, however the difference by the type of the school didn't disappear completely: girls predominate in grammar-schools, whereas boys predominate in technical high schools and vocational schools.

Higher education opened wide its doors in Hungary in the early 2000s. Presently there are 69 operating higher education institutions in the country. In times before the transition of regime there were strictly regulated frame numbers → only a small part of the population could get a diploma, and only a small part of 18–23 year olds participated in higher education (9% of them in 1980, 10,4% of them in 1990).

Due to the expansion taking place in the early 2000s there was a significant increase in the chance to enter higher education: while in 1990 a little more than a third (36%) of the candidates gained admission, in 1995 more than half of them (58%) and today more than the two-thirds of them (69%). Nowadays half of the 20 year olds (53%) are involved in higher education in full-time courses, and almost a third of the 22–25 year olds get a higher education diploma (in the early nineties this number was only 11-12%).

The increase in the absolute number of students has stopped in previous academic years (since 2006), what's more a decline can be observed (the demographic valley has reached higher education as well). The decrease in the numbers took place mainly due to the decrease in the numbers of students of evening, correspondence and distance learning sections and besides these due to the small decline in the number of full-time course participants as well. However a further decrease in the number of students can be expected, since the system of funding will be significantly changed from 2012. The number of those participating in state funded courses has been showing a slightly declining trend since 2007/2008 (it slightly increased in 2009/2010, and then declined again in 2010/2011), while their rate has increased compared to all undergraduates. So far the state funded the training of about three-quarters of full-time students. According to the plans from the beginning of the 2012/2013 academic year the number of state funded places will be drastically reduced, and the reduction will mainly affect the training field of social sciences, however it can also be said that for example in the field of engineering the frame numbers have increased. Overall, at national level instead of the previous 45 thousand state funded places this year only 35 thousand state funded places are available

for applicants. From the 2012/2013 academic year besides the fully self-funded and the fully state-funded forms of financing, the partly state-funded financing form will be introduced.

Over the past decade the ratio of female students has steadily increased in higher education, it reached the 50% in 1992 for the first time, and in 2005 it was close to 60%. Men predominate in two fields, in the field of informatics and in that of engineering, whereas the predominance of women (their ratio is 75–80%) can be observed in the field of teacher's training, and in the field of health and social education, but the ratio of female students is more than 60% in the faculties of economics, social sciences, human and legal sciences as well.

From 2012 in the system of public education a new and important change will be that the state will maintain those schools that were previously maintained by local (municipal) and county governments. Besides the state maintainer can be:

- a church legal entity registered in the Republic of Hungary,
- economic entity founded in the territory of the Republic of Hungary,
- foundation, association,
- other legal entity.

Table 7.6: The number of students in each level of education, on national level (since 2000)

Year	Kinder-gartner	Receiving elementary education (going to elementary school)	Student in vocational school	Students in Secondary school		Higher education student	
				total	from this full-time education	total	including full-time courses
2000	353	961	127	510	418	327	184
2001	342	947	133	516	421	349	193
2002	332	933	134	520	426	382	203
2003	328	913	135	531	438	409	216
2004	326	891	135	529	439	422	226
2005	327	862	135	531	441	424	231
2006	328	831	134	534	443	416	239
2007	324	811	139	525	442	398	243
2008	326	791	139	514	440	381	243
2009	329	776	145	513	443	370	243
2010	338	759	147	515	439	361	241

Sources of data: Hungarian Central Statistical Office, 2010.

Table 7.7: The number of successful leavers from each type of school, on national level (since 2000)

Year	Finished the 8th class		Passed a vocational exam	Passed the secondary school-leaving exam		Obtained a higher education diploma	
	total	from this full-time education		total	from this full-time education	total	including full-time courses
2000	122	121		89	72	47	30
2001	119	118	56	89	70	47	30
2002	119	118	64	90	70	51	31
2003	117	116	61	89	72	53	32
2004	118	117	65	93	77	54	32
2005	120	120	63	89	77	57	33
2006	119	118	60	91	77	53	30
2007	113	112	55	91	78	51	29
2008	110	110	55	81	68	49	29
2009	106	106	51	90	78	53	36
2010	107	107	53	87	78	53	38

Sources of data: Hungarian Central Statistical Office, 2010.

Table 7.8: The development of the most important indicators of school education in full-time education, in the CENTROPE region (Győr-Moson-Sopron and Vas county)

	School year 2005/2006			School year 2008/2009			School year 2009/2010		
	Győr-Moson-Sopron county	**Vas county**	**Hungary**	**Győr-Moson-Sopron county**	**Vas county**	**Hungary**	**Győr-Moson-Sopron county**	**Vas county**	**Hungary**
Elementary schools									
The number of task performance places	198	117	3,614	183	105	3,363	179	104	3,343
The number of student	35,543	21,822	861,858	32,866	19,609	790,722	32,377	18,949	775,741
Secondary education institutions									
Vocational and special vonational schools									
The number of task performance places	32	19	673	28	18	736	31	18	780
The number of student	6,144	3,456	135,008	6,235	3,357	138,657	6,558	3,500	145,285
Grammar-schools									
The number of task performance places	35	15	761	33	15	837	36	15	850
The number of student	9,057	4,334	243,878	9,231	4,564	242,777	8,791	4,792	239,992
Technical high schools									
The number of task performance places	43	28	931	38	23	908	41	23	917
The number of student	11,159	7,096	287,290	11,232	6,418	271,351	11,956	7,604	273,344
Higher education institutions									
Institut	5	7	71	3	5	70	3	2	69
including: outsourced	2	6		0	4		0	1	
The number of student[x]	22,395	6,402	424,161	20,847	4,627	381,033	14,488	8,595	370,331
including full-time courses	11,905	3,061	231,482	12,475	2,816	242,928	10,084	6,126	242,701

x Together with the higher education training.Source of data: Hungarian Central Statistical Office (2009;2010); Education-statistical year-book (2009;2010).

Table 7.9: The number of higher education students in the CENTROPE region by level of education

Institution	*The number of students*								
	Higher education training	*Course at college level*	*Course at university level*	*Bachelor course (BA/Bsc)*	*Master course (MA/Msc)*	*Undivided course*	*Further vocational training*	*PHD / DLA*	*Total*
School year 2008/2009									
University of West Hungary	978	2,873	1,615	8,650	407	0	756	179	15,458
Széchenyi István University	239	1,355	1,207	6,817	209	673	85	147	10,732
Theological College in Győr	0	18	30	148	47	43	6	0	292
School year 2009/2010									
University of West Hungary	1,056	923	937	9,590	871	0	694	190	14,261
Széchenyi István University	363	571	794	7,704	358	763	85	148	10,786
Theological College in Győr	0	1	5	96	36	15	0	0	153

Source of data: Education-statistical year-book (2009; 2010).

7.4. Slovakia

Karol Frank

7.4.1. Institutions dealing with education system at national level

The main institution dealing with the education system at national is the Ministry of Education, Science, Research and Sport of the Slovak republic. The Ministry is the main institution of state administration in charge of elementary, secondary and higher education, education facilities, lifelong learning, science and for the state's support for sports and youth[55]. The area of competence, organisation and tasks of the bodies of state administration in education, municipalities, and districts and of the bodies of self-government in education are laid down by the Act No. 596/2003 of the Law Code on state

[55] http://www.minedu.sk/index.php?lang=en&rootId=10

administration and self-government in education and on change and supplement to some acts.

The Ministry as a central body of state administration governs the execution of state administration in education and checks up this execution. It determines the network of schools and school facilities, principles of pedagogical management of schools, it establishes and abolishes fulfilment of the tasks of the sector research, for preparation of the basic pedagogical documents and in-service training of staff, for securing the sector information system, sector institutions and school information centres. It works out bills, the concept of development and norms for space, material and tool equipment of schools and school facilities, issues generally binding rules, and fulfils a number of other tasks. For fulfilling these tasks within the area of its competence the ministry sets up and dissolves the budgetary or partially-budgetary organisations.

A pre-school establishment can be founded by the body of state administration in education, church, religious community, municipality, other legal entity or natural person. The founder governs the activities of pre-school establishments. Pre-school establishments falling in the network of pre-school establishments with half-day, all-day, week and continuous educational care (kindergarten and special kindergarten) are methodically regulated by the Ministry of Education, Science, Research and Sport of the Slovak Republic.

The primary schools are governed by the Ministry of Education, Science, Research and Sport of the Slovak Republic concerning the matters of education and training. The primary schools are divided according to the founder into public, private and church schools. According to the Act No. 416/2001 of the Law Code as of 1 July 2002 the municipalities will function as founders of schools in the frame of transferred execution of the state administration. The regional educational offices set up and dissolve primary schools only in the case of special conditions.

In secondary schools the teaching is carried out according to the educational plans and curriculum that are issued by the Ministry of Education of the Slovak Republic. The educational plans and curriculum for general and specialised subjects at secondary health schools are issued by the Ministry of Education, Science, research and Sport of the Slovak Republic upon agreement with the Ministry of Health of the Slovak Republic.

The public higher education institutions are self-governing. Members of the academic community are guaranteed freedom of scientific research and publishing its results, freedom of artistic and further creative activity, the freedom of teaching lies mainly in the openness to the different science opinions, science and research methods and artistic movement, the right to teach and learn with the free choice of study, the right to elect academic self-governing bodies and the right to be elected. The right of freedom of speech and expressing own opinions and ideas during teaching, etc. The use of academic freedom and rights has to be in accordance with the principles of democracy, humanity and legal regulations.

The National Institute of Education (Štátny pedagogický ústav), which is managed by the Ministry, is responsible for activities focused on curricular changes, applied educational research, professional and methodological advice, experimental verification, pilot training projects, reforms and changes in the content of education, the State guarantees of training programs, departmental research, professional and methodological management of schools in particular the creation of school educational programs, preparation of pedagogical documentation for schools and school facilities in the field of education and training of teaching staff[56].

The State School Inspection (Štátna školská inšpekcia) is the main control institution. The Chief School inspector is appointed by the Minister of Education for a five year term. The School inspection is regulated by the Decree No. 137/2005 on school inspection.

The Institute of Information and Forecast (Prognoses) of Education (Ústav informácií a prognóz školstva) also managed by the Ministry of Education, Research, Science and Sport. The Institute is the central information centre of the Ministry and is responsible for:

- Operation of state information system related to education system.
- Methodology and processing of information in the field of education, guidance and counselling of young people
- Processing of information on financing of all education activities.
- Administration of the information system and its connectivity to other information systems in the country and abroad.

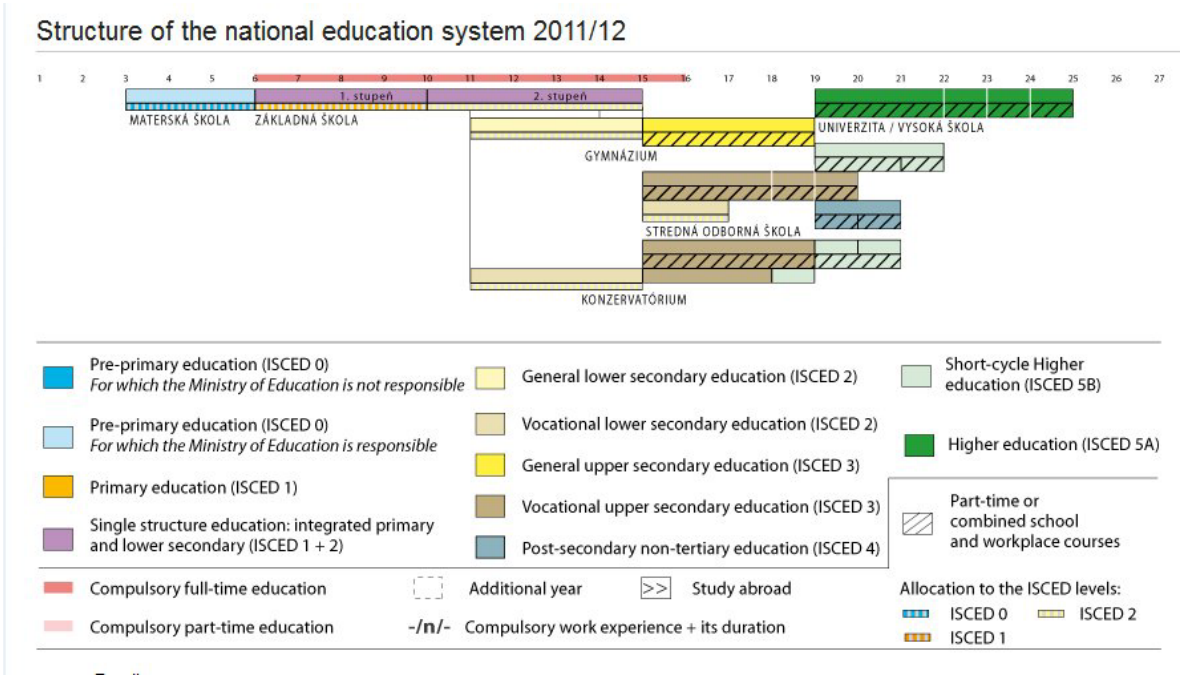
The further advisory bodies of the Ministry of Education are:

- the Council of Informatisation and Informatics in Education,

[56] http://www.statpedu.sk/en/Home.alej

- the Council for Children and Youth,
- the Council for the School System, Lifelong Learning and Science,
- the Council for National Minority Education,
- the Council for Vocational Education and Training,
- the Council of the Minister of Education for Sport,
- Accreditation Commission,
- Accreditation Commission for Further Education,
- Accreditation Commission for specialised activities in the area of work with youth,
- Accreditation Council for continuous education of pedagogic employees and professional employees,
- Accreditation Commission for the area of physical culture.

Figure 7.11: Structure of the national education system in Slovakia (ISCED Classification)



Source: Eurydice.

7.4.2. Strategies, analyses and documents dealing with education system issues at national level

Legislation

The main (selected) legal provisions which outline the rights and responsibilities of all actors in the education system are the following[57]:

- The Constitution of the Slovak Republic, as amended and supplemented (chapter 42 and chapter 34)
- The Act No. 245/2008 on Education
- the Act No. 131/2002 of the Law Code on Higher Education and on the change and supplement to some acts, as amended by subsequent provisions
- Act No. 689/2006 of the Law Code, amending and supplementing the Act No. 597/2003 of the Law Code on financing primary schools, secondary schools and school facilities, as amended by later regulations and on amending of the Act No. 596/2003 of the Law Code on the state administration in education and school self-government and on amending of certain acts, as amended.
- Decree of the Government No. 668/2004 on territorial administration tax income division
- Decree No. 9/2006 on structure and content of reports on educational activity, its results and conditions of schools and school facilities
- Decree No. 527/2007 on details of requirements for facilities for children and youth
- Decree No. 102/2006 on granting social scholarship to students of higher education institutions
- Decree No. 137/2005 on school inspection
- Decree No. 207/1993 whereby the details on equivalence of diplomas issued by foreign primary and secondary schools are set up
- Decree No. 280/1994 on private schools

Strategies, analyses and documents on national level

Modernization Programme Slovensko 21 (Slovakia 21) – scholarships for the academic year 2011/2012. The programme provides possibilities to study in Slovakia for graduates from secondary schools. The countries eligible for the programme: Belarus, Bosnia and Herzegovina, Macedonia, Moldavia, Montenegro, Serbia, Ukraine,.

[57] A more comprehensive overview can be found here: https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Slovakia:Legislation

Table 7.10: Overview of areas, problems and solution defined in the Minerva 2.0 Strategy

Area	Problem	Solution
Education	Low quality of education	Curriculum Innovation and Structural Changes
		Support of Self-Evaluation Processes
Connection between Education and R&D	Lack of top experts	The Excellence Initiative – Grants and Awards for Attracting and Supporting Top
		International Scholars
		Installation Grants for Young Scholars
		Science Popularization Program
		Renovation of Buildings of Education and Research Institutions
R&D	Weak performance of key institutions	University Governance Reform
		Reform of the Slovak Academy of Sciences (SAV)
Connection between R&D and Business	Inefficient and insufficient financing of R&D	New Grant Scheme for Academic R&D
		Grant System for Applied Research
		Radical Efficiency Improvements in the Use of EU Structural Funds for R&D and Innovation
	Ineffective transfer of knowledge to practice	National Technology Transfer System
		Legislation and Procedures Influencing Intellectual Property
		World-Class Infrastructure for Top Research
Support for entrepreneurship	Few and weak domestic technological firms	International System of Technology Incubators
		Innovative R&D Funding Programme
	Weak involvement of international companies in R&D	Stimuli for Industrial R&D
Connection between Businesses and Education	Education disconnected from Practice	Lifelong Education System
	Lack of Entrepreneurial Skills Training	Support for Practice Oriented Entrepreneurship Training
Systemic Failures	Lack of Political Coordination	Government Innovation Council
	Administrative barriers and burden	De-Bureaucratization of EU Structural Funds
		Reduction of the Regulatory Burden
		Amendment of the Public Procurement Act
		Štefánik Scholarship
	Lacking Support for and Administrative Barriers in International Mobility	Comprehensive Migration Policy Update
	Low level of Participation in International Cooperation Systems	Internationalisation of Education, Science and Innovative Entrepreneurship

Source: http://www.vedomostna-ekonomika.gov.sk/data/files/8241.pdf.

The Minerva 2.0 Strategy – Slovakia to the First League is the responsibility of the Plenipotentiary for Knowledge economy of the Slovak Government. The plenipotentiary is appointed by the Government of the Slovak Republic. The main responsibilities of the plenipotentiary are:

- Coordination and creation of policies of institutions related to the development of knowledge society with the objective to maintain coherence and synergy among them.

- Coordination and creation of strategic documents related to knowledge economy.
- Analysis and evaluation of achievements in the field of knowledge economy and formulation of recommendation in this field.
- Coordination and implementation of objectives in the field of knowledge economy based on international commitments of the Slovak republic.
- Cooperation with public, research and development institutions and stakeholder related to preparation of strategic documents.

The Strategy formulates outlines existing problems and formulates solutions aimed to develop a knowledge economy in Slovakia (table 7.10).

The Strategy represents the most comprehensive evaluation of existing deficiencies and also outlines concrete solutions. However, its implementation is progressing only slowly, and due to the early parliamentary elections, the future implementation can be the victim of political discontinuity.

In the framework of the National Strategic Reference Framework the Operational Programme Education is supporting education in following priority axes and measures:

Priority Axis 1 Reform of the Education and Vocational Training System

Measures:

1.1 Transformation of Traditional School into a Modern One

1.2 Higher education institutions and research & development as the driving forces in the development of a knowledge-based society

Priority axis 2 Continuing Education as an Instrument of Human Resource Development

Measures:

2.1 Support of continuing education

2.2 Support of continuing education in the health sector

Priority Axis 3 Support to Education of Persons with Special Education Needs

Measures

3.1 Raising the educational level of members of the marginalised Roma communities

3.2 Raising the educational level of persons with special educational needs

Priority Axis 4 Modern Education for a Knowledge-Based Society for the Bratislava Region

Measures:

4.1 Transformation of Traditional School into a Modern One for the Bratislava Region

4.2 Raising competitiveness of the Bratislava region through the development of higher and continuing education

The total allocation for 2007 – 2013 is EUR 617.8 million and is provided by the European Social Fund.

7.4.3. Institutions dealing with education system issues at regional/local level

The regional education and training is the responsibility of the self-governing regions (Vyššie územné celky – VÚC) and municipalities (obce) and is carried out in the framework of following education institutions[58]:

Pre-school training and education of children in pre-school facilities from the age of two to generally six years: Pre-school training and education refers to education of the child in the family, completed with training and education activity that focuses on multilateral development of the child's personality, as well as the child's social, emotional, physical and intellectual development in accordance with individual and age specialties. Part of the pre-school training and education of children in pre-school facilities is preparation of the child for compulsory school attendance.

Elementary training and education of children at elementary school that provides elementary education based on scientific knowledge in accordance with principles of patriotism, humanity and democracy: It provides moral, aesthetic, working, health, physical, traffic and ecology education. It enables religious education and sport preparation. The constitution of the Slovak Republic ensures the right of each citizen to education at state elementary schools free of charge and the possibility of attending other than state schools.

[58] The information is extracted from the official website of the Ministry of Education, Science, Research and Sports of Slovakia. Source: http://www.minedu.sk/index.php?lang=en&rootId=33

Professional artistic education at elementary artistic school within individual artistic fields: This both prepares children for study in educational fields at secondary schools with an artistic orientation and at conservatories and also prepares them professionally for study at universities with an artistic and artistic-pedagogic orientation.

Secondary general education and training, particularly at gymnasiums that prepare principally for study at universities: They also prepare for some activities in administration, culture and other areas. General education and training also are part of the offerings at secondary professional schools and secondary professional training schools.

Secondary professional education and training in which students at secondary professional schools prepare principally for professional occupations, including technical, economic, pedagogic, health care, social and legal, administrative, artistic and cultural, as well as for study at universities. At the secondary professional training schools, students prepare in educational fields for skilled labour and professional occupations, especially for occupations requiring specialized skills and certain technical and occupations of an operational nature.

Special training and education provides for children and students with specific training and educational needs, e.g., with mental, physical, visual, or acoustic disabilities, with communication disorders, autism, developmental learning defects, behavioural defects, physical and health problems, as well as intellectually gifted children and students at particular schools and facilities offering special pedagogic expertise.

Training and education of national minorities provided at pre-school facilities, elementary schools, secondary schools, special schools and school facilities with teaching in languages other than Slovak, including the languages of the Hungarian, Ukrainian, Ruthenian and German national minority: In addition, education is provided for members of the Roma community and children from socially disadvantaged environments at schools and school facilities.

Education and training at clerical and private schools and school facilities that may be established by the churches or religious communities recognized by the state, or by another legal entity or natural person: Education obtained in these schools is equivalent to the education provided at other schools and tuition can be charged. The goal of clerical and private schools is to provide, in addition to quality education and training, alternative content, methods, and formats in education and training.

According to Act No. 596/2003 of the Law Code the local school administration are represented by regional school offices. The regional school offices are budgetary organisations of the State. They are financially connected to the budget of the Ministry of Education, Science, Research and Sport that fulfils the task of the founder in relation to them. The regional school offices are managed by the He that is appointed and recalled by the Government of the Slovak Republic at the proposal of the Minister of Education. The seats and territorial area of competence of regional school offices are identical with the seats and territorial area of the self-governing regions.

The self-governing region

- establishes and dissolves within the transferred execution of the state administration and according to the network of school and school establishments, the secondary schools, apprentice schools and the centres for practical teaching,
- appoints the headteachers of schools and school facilities he had founded, on the basis of the selection procedure, to be carried out by the school self-governing authority – the school council; he recalls the headteachers of schools and school facilities he had founded,
- within the framework of regional self-government, it establishes and dissolves according to the network of schools and school establishments, the basic schools of art, centres of out-of-school activities, language schools at primary schools, youth houses, establishments of school catering, centres of practical training, service centres of schools, school centres of special-interest activities, open-air schools and free-time centres with the territorial area of competence of the self-governing region.

Bratislava region

The Bratislava self-governing region is responsible for education policy on regional level, especially the Commission for Education, Sport and Youth. Besides the Commission the following bodies are responsible for different aspects of education policy:

- Individual councils in schools and school facilities
- Regional School Council of Bratislava region responsible for all aspects of education policy (personal, financial, curricular, social etc.)
- Regional Council for Vocational Education and Training is an advisory body for the chairman of the Bratislava region. The main objectives of the Council are linked to elaboration of regional strategy and all aspects of vocational education and training linked to economic and social demands of the region.

- High school parliament is the common platform for young people to discuss their opinions, requests and wishes and implementation of concrete projects, programmes and actions in the region.

Trnava region

In Trnava self-governing region the Department of Education and Physical Culture under the Section for Public Administration is responsible for education policy. The Department is divided into four specific departments responsible for:

- Education and school methodology.
- Development and design of strategy for schools and school facilities.
- Physical culture.
- Financial and economic issues related to education facilities.

Besides these departments the following advisory bodies have been established in the Trnava self-governing region:

- Commission for education, physical culture and culture.
- Regional council for vocational education and training.
- Regional school council.
- Council for sport and youth.

7.4.4. Strategies, analyses and documents dealing with education system issues at regional/local level

In Bratislava self-governing region, the main documents related to education policy are following:

- Report on status and future development of education on high schools in Bratislava region for 2009-2013 with outlook to 2014 (Situačná a výhľadová správa o stave a vývoji vzdelávania na stredných školách v zriaďovateľskej pôsobnosti BSK na roky 2009 – 2013 s výhľadom do roku 2015). URL: http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=10029635
- Regional development strategy of vocational education and training in Bratislava region (Regionálna stratégia rozvoja odborného vzdelávania a prípravy v Bratislavskom samosprávnom kraji). URL: http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=10029634

- Programme for development of physical training in Bratislava region (Koncepcia a program rozvoja telesnej kultúry v podmienkach Bratislavského samosprávneho kraja). URL: http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=10017755
- Programme for development of youth related activities in Bratislava region for 2009 – 2013 with realisation plan (Koncepcia rozvoja práce s mládežou v podmienkach Bratislavského samosprávneho kraja na roky 2009 – 2013 a Realizačný plán). URL: http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=10017755 http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=10017754
- Millenium – National Programme for education and training in the Slovak republic (MILÉNIUM - Národný program výchovy a vzdelávania v Slovenskej republike). URL: http://www.region-bsk.sk/SCRIPT/ViewFile.aspx?docid=89

In Trnava self-governing region, the main documents related to education policy are following:

- Programme for development of physical culture and work with youth. URL: http://www.trnava-vuc.sk/sport_a_mladez.html?file=tl_files/dokumenty/dokumenty_skolstvo/sport_a_mladez/rozvoj%20TKa%20mladez.zip

7.4.5. Recent development in the Slovak Education System

The reform of the Slovak education system is strongly interlinked with the Cohesion policy especially the Operational Programme Education financed by the European Social Fund (ESF). The global objective of the operational programme is defined as follows: “Ensuring competitiveness of the Slovak Republic in the long run by adapting the system of education to the needs of a knowledge-based society”.

In this context the overall reform is aimed at transformation of the traditional school into a modern one, on increasing the accessibility and quality of tertiary education, on opening up the system of continuing education to the widest possible group of citizens and on improving the level of education of marginalised groups.

The basic action for ensuring long-term competitiveness of Slovakia in the human resource development is to finalise the reform of primary and secondary schools. The reform of the content is aimed at creating room for creative work of pedagogues, for strengthening of upbringing, for improving the comprehensive development of cognitive functions of pupils.

The main objectives of the reform of content to be supported by OP Education are following:

- Creating a modern, flexible school system;
- Establishing conditions for the development of higher cognitive capabilities of pupils by developing their competences;
- Ensure a transition from factual learning to the development of key competences, open the school and link it to the surrounding environment and the entire society;
- Perform a didactic reform aimed at the application of modern teaching strategies, effective forms and methods of education;
- Modify the objectives of education and the content of upbringing & educational programmes so that they would provide the school leaver a competency profile for continuing further educational path or for placement on the labour market, and to provide him the capability and the need of life-long learning.

Furthermore, the prerequisite of a successful entry of school leavers to the labour market is a new quality of vocational education and training depending on a systemic approach and active involvement of employer entities in addressing its objectives, content and structure, cooperation with institutions associating employers, with employers, central state administration authorities, authorities of local self-governments and other entities in adapting the existing branches of training and studies to the labour market requirements, also by creating new branches.

In tertiary schools, it is necessary to focus on expanding the capacities (by diversifying higher education institutions), a significant quality and flexibility rising of higher education, human resource development and involvement of higher education and R& D institutions in innovation networks. To support effective international cooperation, OP Education will co-finance involvement of higher education institutions in the research and development networks and in student and teacher mobility networks. Higher education institutions should lay more stress on providing higher education in a global language and on the support of student and researcher mobility.

Slovakia’s significant priority in respect to access to education is the integration of children from risky and marginalised groups into standard school environment.

The OP Education is being implemented through five priority axes:

- Reform of the system of education and vocational training.
- Continuing education as an instrument of human resources development.

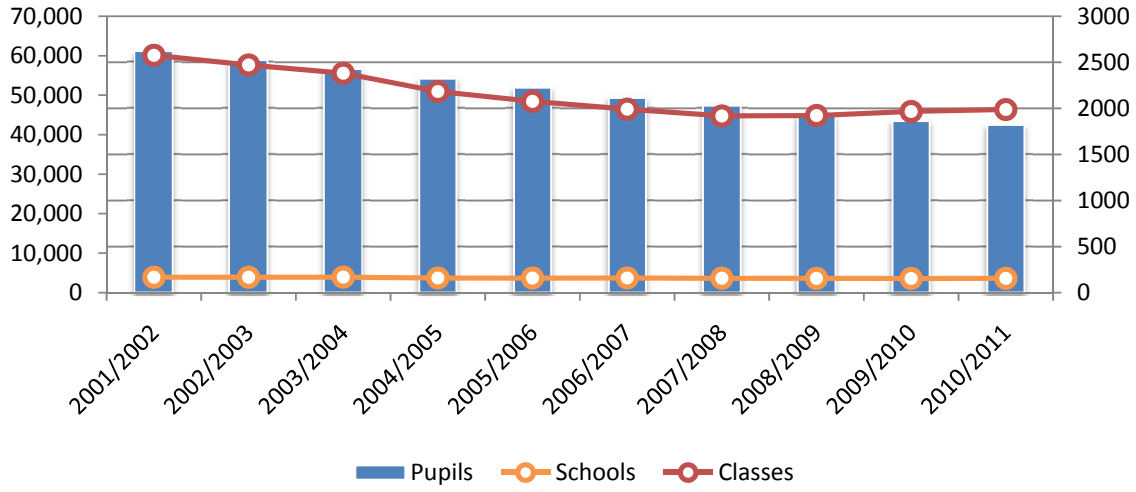
- Support to education of persons with special educational needs.
- Modern education for a knowledge-based society for the Bratislava region.
- Technical assistance for the Convergence objective.

Table 7.11: The list of higher education institutions in the CENTROPE region

University	Number of students		Location	Subject
	Slovak	Foreigners		
Comenius University in Bratislava	24,292	1,684	Bratislava	science; social sciences; humanities
University of Cyril and Method in Trnava	5,910	40	Trnava	particularly social sciences and humanities
Bratislava International School of Liberal Arts	57	1	Bratislava	social sciences, humanities
Pan-European University	4,214	604	Bratislava	social sciences, humanities
Slovak Medical University in Bratislava	2,653	224	Bratislava	medicine; nursing
St. Elizabeth University of Health & Social Sciences	11,745	2,007	Bratislava	medicine; nursing, social work
Trnava University in Trnava	7,414	75	Trnava	social sciences, humanities
Slovak University of Technology in Bratislava	17,697	445	Bratislava and Trnava	technology
University in Sládkovičovo	3,014	248	Sládkovičovo	economics and management; law
University of Economics	12,697	132	Bratislava	economics and management
School of Economics and Management in Public Administration in Bratislava	4,287	43	Bratislava	economics and management; law
Police Academy in Bratislava	1,478	20	Bratislava	
Central European University in Skalica	1,109	18	Skalica	economics and management; law
Academy of Performing Arts	977	105	Bratislava	arts
Academy of Fine Arts and Design	616	81	Bratislava	arts

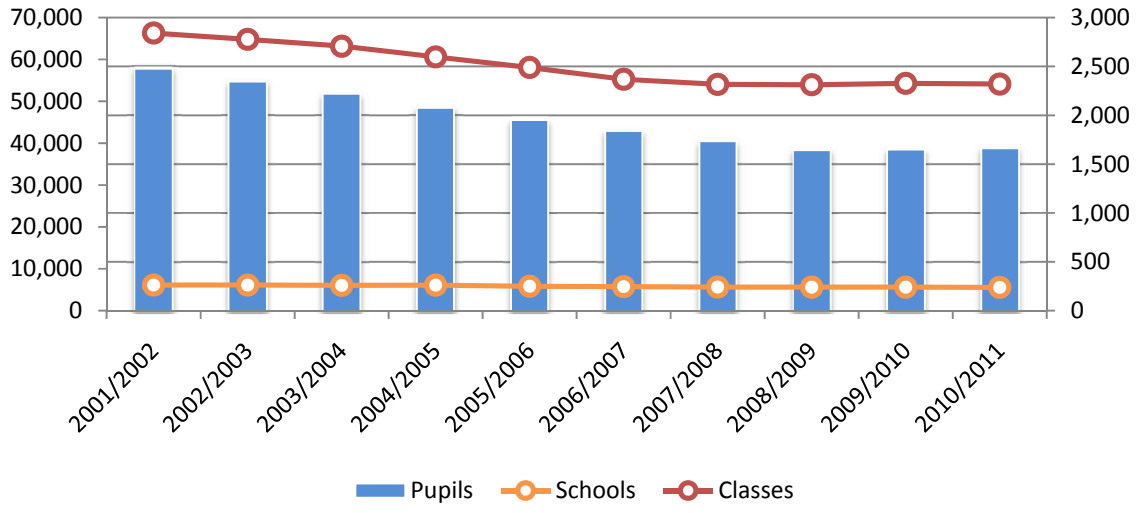
In Slovak parts of the CENTROPE regions the number of university students increases steadily. The Bratislava region shows similar level of tertiary students to South Moravia reaching almost 75 thousand of university students in 2010 and 2011. This is an increase by almost 50 % from 2001/2002. In the Trnava region this number increased almost tripled during the past decade reaching the level of 20 thousand students in2010/2011. Contrary to that development the number of children in the elementary schools decline steadily since 2001/2002 schools in both Slovak regions.

Figure 7.12: Primary education in Bratislava region



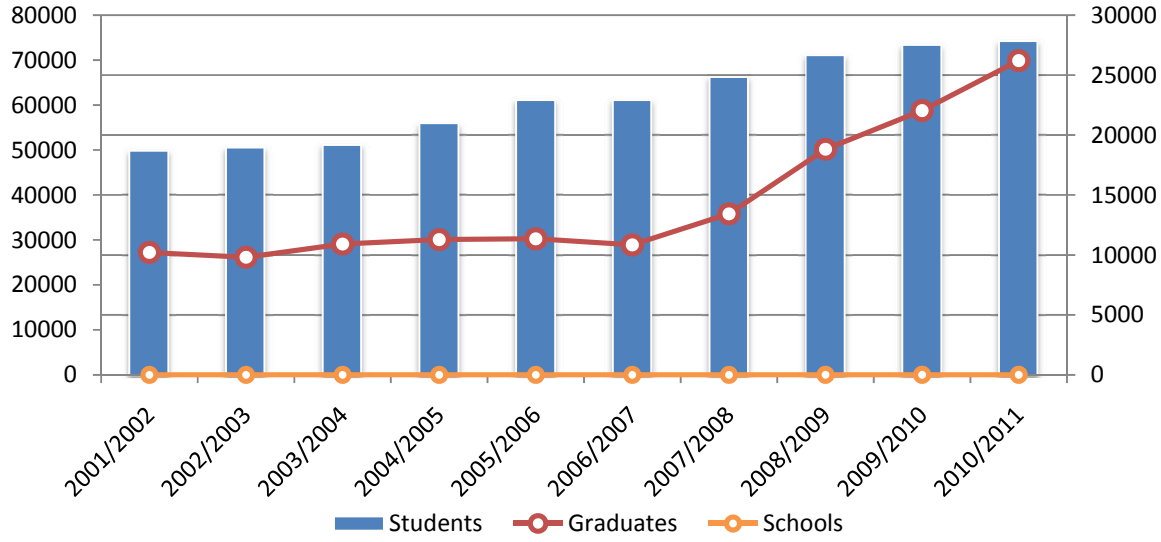
Source: Slovak Statistics Office.

Figure 7.13: Primary education in Trnava region



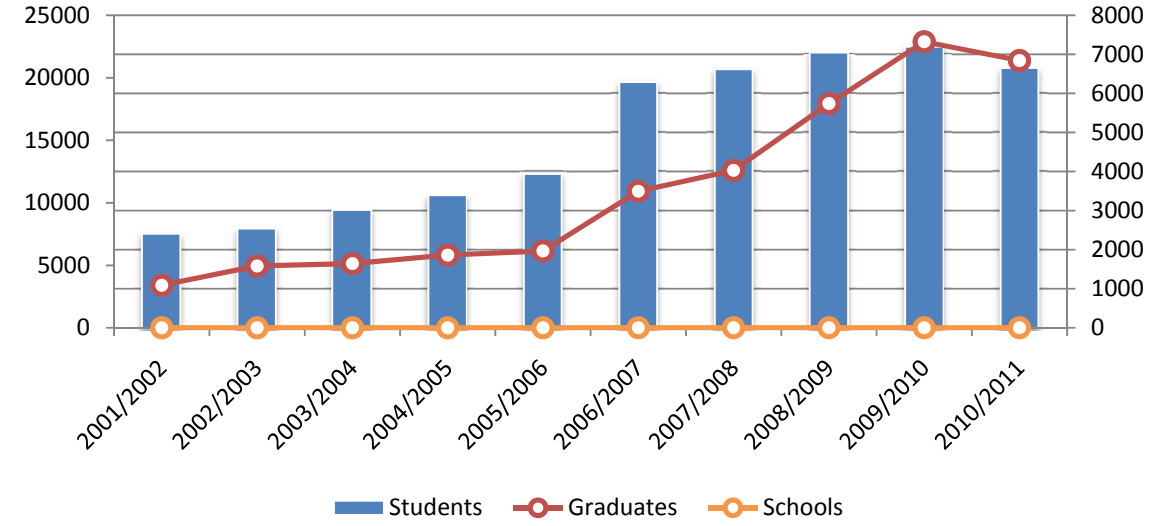
Source: Slovak Statistics Office.

Figure 7.14: Tertiary education in Bratislava region



Source: Slovak Statistics Office.

Figure 7.15: Tertiary education in Trnava region



Source: Slovak Statistics Office.

7.4.6. References and information sources:

Operational Programme Education, URL: http://www.asfeu.sk/operacny-program-vzdelavanie/

National Strategic Reference Framework, URL: http://www.nsrr.sk/dokumenty/zakladne-dokumenty/

The most reliable information regarding the education system can be found here https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Slovakia:Overview .Most of the information in the stock-taking report is based on the information from this site.

The information on competences on individual level of public administration is available here: https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Slovakia:Administration_and_Governance_at_Central_and/or_Regional_Level#Regional_school_authority

Statistical information, analyses and forecasts are elaborated by the Institute of Education Information and Forecasts and are available here http://www.uips.sk/publikacie-casopisy/analyzy-prognozy-studie

The statistical yearbook of education can be found here http://www.uips.sk/publikacie-casopisy/statisticke-rocenky

PART THREE: CONCLUSIONS

8. Summary

Already a first glance at the main macro-economic aggregate labour market indicators suggests that CENTROPE is a region with a more favourable labour market situation than the EU 27 in average. The unemployment rate of the region as a whole has been continuously below the EU 27 average in each and every year since the year 2000, with the lead of CENTROPE amounting to 2.2 percentage points in the average of the last decade. Also most of the regions of CENTROPE are privileged in terms of unemployment rates relative to their respective countries. This applies in particular to the Hungarian and Slovak CENTROPE but also to the Austrian provinces of Lower Austria and Burgenland. Furthermore only Trnava region and Vas had an unemployment rate exceeding the EU 27 average in 2010.

Similar evidence also applies to employment growth and employment rates: Since 2005 employment (i.e. the year after EU-accession of Hungary, Slovakia and the Czech Republic) grew more rapidly (declined by less) than the EU-average in CENTROPE in all years except for 2006 and the cumulative employment growth advantage of CENTROPE over the EU 27 amounted to 1.2 percentage points since 2004. In addition also employment rates are by 4.3 percentage points higher in the CENTROPE aggregate than in the EU-average.

The labour market of CENTROPE also experienced substantial institutional change in the last decade. In particular on May 1st 2011 the derogation periods on freedom of movement of labour, that were in force until then, were abolished and since this time workers from the other CENTROPE countries do not need to apply for a work permit when they find a workplace in Austria. Thus since 1st of May of 2011 CENTROPE disposes (at least formally) of an integrated labour market and in Austria it was expected that this liberalisation would lead to an increase in the labour supply of foreigners from the EU 10-countries by around 25,000 persons.

Given the good labour market situation in CENTROPE and the substantial institutional changes last year the focus and stock taking report on human capital, education and labour markets aims to determine stylized facts, recent trends, common problems and potential areas of co-operation in the field of labour market policy among the CENTROPE

regions. In a first analysis we used comparable data on the labour market situation in CENTROPE provided by EUROSTAT. Here we used both NUTS 3 level data as well as NUTS 2 level data, although we are well aware that the latter are only a proxy measure for CENTROPE.

In a second step of the analysis we then went into some more detail and analyzed two comparable data sets on the cross-border labour market and the cross-border education system in CENTROPE. The first of these contains data on unemployment and vacancies for 10 occupational groups in the CENTROPE and allows us to determine what proportion of unemployment in these occupations could be avoided if the unemployed were perfectly mobile across regions. The second of these contain data of a questionnaire on student mobility conducted by the project team in CENTROPE. Finally also a set of country studies that focus on more recent data and on the institutional aspects of labour market and education system governance in the individual regions of CENTROPE augment results.

8.1. Main Results for the Labour Markets of CENTROPE

8.1.1. Two common labour markets problems are the low employment rates of the older and high unemployment rates of the less skilled

The results of this analysis suggest that despite the overall rather favourable development some common challenges in labour market policy remain. This applies in particular to the low employment rates of the older and the high unemployment rates of the low skilled.

One common problem shared by almost all regions of CENTROPE is the low employment rates of the elder (i.e. persons in the age of 55 to 64 years). While employment rates are higher (by between 2 to 9 percentage points) in the CENTROPE average than in the EU 27 average for all age and gender groups, they are consistently lower (by 6.5 percentage points in average) for the elder (55 to 64 year olds). Furthermore this stylized fact applies to all regions of CENTROPE and both genders (although it is more pronounced with females). From a policy perspective this implies that joint cross-border initiatives in the area of active labour market policy and training to increase the employment chances of the elder may be an area for co-operation in cross-border labour market policy

A second shared problem is the high unemployment rate of the low skilled in particular in the EU 10-parts of CENTROPE. Despite low unemployment rates in aggregate, the

unemployment rates of the low skilled in CENTROPE reach to over 15% in some regions and in particular in the EU 10-parts of CENTROPE skill gradients in unemployment rates (the difference between the unemployment rate of the high skilled and low skilled) are substantially higher than in the EU 27 average. This implies that unemployment problems are disproportionately strongly concentrated among low skilled in CENTROPE. Policies directed at retraining and qualifying the low skilled are therefore of high importance, when it comes to combating unemployment in the region.

Furthermore, a common stylised fact applying to all regions of CENTROPE except for the capital city regions Vienna and Bratislava region is the strong orientation on medium skilled human capital segments which is also reflected in CENTROPE's strong industrial base. Almost 70% of the economically active in the region (as opposed to 48.6% in the EU-average) have an intermediary (ISCED 3 or 4) education. Although this difference to the EU diminishes somewhat when considering employment by occupations – which reflects positively on CENTROPE's education system, since it implies that it provides its students with skills that can also be used in higher occupations – the general picture does not change.

From a policy perspective this therefore implies that guaranteeing and improving the employability of this intermediary educated workforce will be an important condition for continued labour market success in the region, and that therefore aside from cross-border programs focusing on the high skilled, similar programs for intermediary education levels are and will be of particular relevance for CENTROPE for some time.

8.1.2. A high share of mismatch unemployment is another important shared problem

Evidence also suggests that both skill and regional mismatch contribute substantially to unemployment in the region. In particular the regional mismatch component to unemployment is a sign of lacking (cross-border) mobility, which could be combated by programs to increase cross-border mobility. In our analysis using the labour market monitoring tool in CENTROPE we were able to quantify the spatial mismatch component of unemployment for 10 selected occupational groups.

This analysis showed that there is a relatively high heterogeneity regarding distribution of labour supply and labour demand across CENTROPE and that in the average of the years 2010 and 2011 – depending on the occupation considered – between 5.5% (for IT specialists) and 24.6% (CNC operators) of the unemployment in CENTROPE could be

mediated away if workers were perfectly mobile in the region. Although such perfect mobility is clearly an unrealistic assumption, this high and persistent regional mismatch unemployment in CENTROPE even within closely defined occupations provides some indication of the costs of barriers mobility and the potential gains that could arise if internal migration and commuting (and thus labour mobility) could be increased in CENTROPE.

Furthermore, the average mismatch rates over the years 2010 and 2011 suggest that this regional mismatch unemployment accounts for more than 20% of unemployment for butchers and social workers and for between 10% to 20% of all unemployment for cooks, welders, bricklayers, drivers and logistics workers. This therefore underlines the importance of increasing cross-border mobility not only for highly skilled workers, but also for persons with intermediate apprentice level qualifications

8.1.3. Introduction of Freedom of movement of labour led to an increase in immigration to Austria, signs of negative labour market effects are rare

Low cross-border and internal mobility in CENTROPE at all qualification levels is therefore one important reason contributing to persistent unemployment. With the 1st of May 2011, however, the institutional regime affecting cross-border labour mobility within CENTROPE changed dramatically, as the derogation periods for the freedom of movement of labour in Austria ended: Thus from this time on citizens of the 10 EU-countries that joined the EU on 1st May 2004, who previously needed a work permit to legally work in Austria, could assume work without any further legal requirements.

While clearly it is still too early to fully analyze the extent and the structure of additional cross-border mobility induced by this liberalization, first results available from a labour market monitoring system of the PES and BMASK suggests that the stock of foreign employees from the countries affected working in Austria increased by around 24.000 employees (or around 0.7% of total employees) relative to 1st of May 2012 by January 2012 and by 31.500 or 0.9% of all employees relative to January 2011. Thus by and large migration developed as expected in the pre-liberalization period.

Of these new employees approximately 10.500 were commuters and more than half of all commuters and migrants (13.500) settled in the Austrian CENTROPE, with in particular the Burgenland experiencing a large inflow of 1.7% of its employees in this time period. In addition also a large part of the new foreign workers from the neighbouring countries in Austria (around 10.500) were of Hungarian nationality.

An analysis of the changes in unemployment vacancy ratios for the 10 selected occupations since the second quarter of 2010, however, suggests no general and easily visible impact of the increased migration both in sending and receiving countries. In Lower Austria the unemployment vacancy ratio increased noticeably relative to the same quarter of 2010 for bricklayers (by around 10 unemployed per vacancy) after accession (i.e. in quarters 2, 3 and 4 of 2011), in Burgenland similar trends can be seen for cooks (by 1.6 unemployed per vacancy), waiters (by 2.0 unemployed per vacancy) and drivers (by 0.5 unemployed per vacancy), while in Vienna few effects are visible. Furthermore in the important sending regions of the Hungarian CENTROPE only few reductions in unemployment-vacancy ratios are visible. This leads us to conclude that the labour market effects of the immigration to Austria since 1st May 2011 most likely remained focused on individual occupations (such as in construction and gastronomy) and individual regions (in particular Burgenland).

8.2. Main Results for the Education of CENTROPE

8.2.1. A strong university system is a backbone of CENTROPE's education system.

An appraisal of the education system in CENTROPE based on the available EUROSTAT data and the evidence provided in the country studies of the report suggests that the university system is definitely one of the most important advantages of CENTROPE relative to other EU regions. There are more university level students per inhabitant in this region than in the EU-average (almost 5% of the CENTROPE population as opposed to 4% of the EU's population studies at universities), student numbers have also increased more rapidly in CENTROPE (by 30%) than in the EU 27 (by 7%) average in the last decade and the region has increasingly assumed over-regional importance as a centre of university education. Furthermore also the share of doctoral students in the population is higher than in the EU 27-average (0.3% in CENTROPE as opposed to 0.1% in the EU 27-average) and aside from a specialization in teacher training, humanities and languages, there is also a weaker specialization in sciences, mathematics and engineering.

Trends in the number of students in the school system, by contrast, are influenced by a number of countervailing influences such as demographic developments, trends towards attaining higher levels of education and a changed perception of the role of early childhood education in the society in general, so that here neither strengths nor weaknesses can be determined.

8.2.2. Low rates of participation in life-long learning are a common challenge in CENTROPE

Other parts of the education system in CENTROPE, however, show a clear disadvantage relative to the EU 27. This applies in particular to life-long learning, where participation is still very low in the EU 10-parts of CENTROPE and some way from the most advanced countries in Austria. In CENTROPE in 2010 only 8.3% of the population older than 25 and younger than 65 years took part in some form of formal training, while in the EU 27 the percentage was 9.1% and in some of the most advanced European economies (e.g. Finland and Sweden) more than 20% of the population were involved in such activities.

This below average share of life-long learning activities in CENTROPE is primarily due to a low participation in the EU 10-parts of CENTROPE. In Austria between 9.9% (in Burgenland) and 17.4% (in Vienna) of the population took part in life-long learning activities, in the EU 10-parts of the region this share reached only 6.0% in the Czech CENTROPE and Bratislava and was below the 3% both in the rest of the Slovak and in the Hungarian parts. This therefore suggests substantial room for improvement in terms of implementation of lifelong learning strategies in CENTROPE. Joint initiatives to increase participation in life-long learning could therefore present another area of co-operation in CENTROPE.

8.2.3. Student mobility is low in CENTROPE and mostly directed to other countries

Taken together the results for the university system therefore suggest that while the CENTROPE's university system is still at some distance from top locations in terms of research output, in terms of teaching the system has been performing rather well. Increased co-operation amongst universities with the aim of improving the joint standing of the CENTROPE's university system and increased student exchange could therefore be initiatives that could further strengthen this system and help to boost comparative advantage of the region of the whole.

To gauge the potentials of student mobility in the region we conducted a questionnaire on mobility behaviour among students. The results showed that most of students participating in the survey had not studies abroad yet. In total only 7% of the interviewed stated that they had stayed abroad before, with Austrian and Hungarian students having studied abroad more often than Czech and Slovak students.

On the other hand side, almost half of the respondents (43%) stated that they had serious plans to study abroad in the future, with only Czech students being noticeably less willing to study abroad. This implies a high potential of mobility of the CENTROPE students. The most preferred countries for such a stay abroad, however, are the UK, Germany, Finland, France and the US. Among CENTROPE students other CENTROPE countries are less attractive. Only 16.6% of the interviewed students in the Austrian CENTROPE, 15.8% of the students in the Slovak CENTROPE and 10.5% of the students in the Czech CENTROPE could imagine studying in another CENTROPE country. The only region where students are more prone to study in other CENTROPE countries is the Hungarian CENTROPE where 38.1% of the interviewed can imagine studying in Austria, 11.9% in Slovakia, and 7.1% in the Czech Republic.

8.2.4. Low prestige of universities and higher attractiveness of more distant, English speaking locations are main reasons for avoiding CENTROPE

Furthermore while increasing expertise, improving language skills and the possibility to make new international contacts were the most frequently stated reasons for studying abroad, the respondents also often stated that the CENTROPE was unattractive for them because they preferred to study in an English speaking country (between 32% and 49% of the students) because the students expected a low prestige or bad quality of the university (between 29% and 44% of the students) or because they preferred destinations further away (between 12% and 40%). Only few students (between 2% and 7%) had problems with lacking exchange programs or bilateral agreements on student exchange in CENTROPE

Summarising therefore the questionnaire results suggest that choosing the CENTROPE region as a target destination for study stays abroad crucially depends on prestige of CENTROPE universities and the possibility to study in English there. Cross-border policy therefore should focus on increasing the prestige and providing more English language training if higher mobility of students within the region is sought for. In this respect the cases of Finland or the Netherland which are also small countries with little spoken languages but are more attractive for CENTROPE students that want to study abroad than the individual CENTROPE countries suggest that such a policy can indeed be successful.

8.3. Policy conclusions

In sum therefore probably the most important and also very consistent result of the current study is that - irrespective of which part of the population is analysed - the national borders in CENTROPE are still a strong barrier to mobility. This applies to both student mobility, where the attractiveness of CENTROPE relative to other regions seems to be a problem, as well as labour mobility, where evidence suggests that lacking regional mobility increases aggregate unemployment in CENTROPE. Therefore measures are needed to reduce barriers to cross-border mobility at all levels of education.

8.3.1. Improving cross-border placement activities could help to avoid mismatch employment and increase cross-border labour mobility

In particular with respect to labour mobility our results suggests that – although the liberalization of cross-border commuting and migration flows on May 1st, 2011 has given rise to increased cross-border labour mobility in CENTROPE – regional mismatch unemployment is still a problem. Improving cross-border placement activities is therefore a natural starting point for a policy that aims to reduce unemployment in the region.

While the logical actor to be involved in such cross-border co-operation should be the public employment services (PES) rather than regional authorities (since in all of the CENTROPE countries the PES systems are also responsible for providing placement services and thus have the highest competencies for such activities), anecdotal evidence and a number of interviews that we have conducted in the course of the current project with regional PES organisations suggest that such cross-border placement activities are currently hampered by a long list of practical problems: Very often methods of data exchange and administrative procedures still have to be devised before such a more intensive co-operation in placement activities can be achieved. In addition also some problems arise on account of subtle differences in education systems, which lead to some uncertainty, as to whether a particular person is qualified for a position in another country. This applies in particular to vocational education, where it is not always clear whether persons with the same formal education also have received similar contents of training.

As a consequence a number of projects are currently attempting to improve the preconditions for cross-border placement and are also involved in increasing knowledge on different vocational curricula in different countries. Our results indicate that such activities could potentially yield high rewards by reducing unemployment in CENTROPE in

aggregate. Therefore existing attempts to improve cross-border placement activities should be continued and enlarged in future.

8.3.2. Exchange of best practices and co-ordination of active labour market policies could improve situation for individual target groups

Aside from placement activities a large potential for co-operation also exists in active labour market policies. Here in addition to the PES also some of the regional labour market actors (in particular territorial employment pacts or regional organisations) could be partners in co-operation. Previous experience in these activities, however, suggests that such co-operation should be focused to particular target groups and should also incorporate elements of exchange of experience among organisations, since this is usually very positively evaluated by participants in existing co-operations.

Existing efforts to design measures for specific target groups where cross-border activities can be expected to be particularly useful (e.g. with respect to minority groups of other countries living in countries of CENTROPE) and in areas where common labour market problems exist in the region (e.g. the integration of older workers and of less skilled workers) should therefore be supported and also expanded. Furthermore, also increased co-ordination of the use of existing infrastructure (e.g. training centres) as well as the exchange of best practice measures with respect to certain target groups provides fruitful areas in which co-operation can be strengthened.

8.3.3. Co-operation of education institutions could improve participation in life-long learning

In addition, the low rates of participation in life-long learning in many of the regions of CENTROPE suggest that also co-operation of providers of training (such as schools and adult training institutions, that are often organised in the form of non-profit organisations or are supported by public funds in the region), could be a focus in cross-border labour market policy. Here the experiences made by the set of learning region strategies developed and implemented in the framework of the Austrian program for rural development could be used to design similar, more local activities in a cross-border context.

The results of this program in general suggest that a better co-ordination of the providers of education in a region (schools, adult education institutions), in fields such as the co-

ordination of opening and training times, joint awareness building measures, provide low cost possibilities to increase the uptake of training measures by the population.

8.3.4. Improved co-ordination needs tools to monitor-cross border labour markets

Irrespective of the concrete forms of co-operation, increased co-ordination will also require common tools for monitoring regional labour market policy. In this respect data are mostly available in sufficient quality and quantity to allow operative decisions for labour market governance on a national level. In a cross-border context, however, differences in definitions and incomparability of data very often render national sources useless for the day to day business of decision makers. Designing data sources that are both recent and comparable enough to be useful for operative decisions therefore remains to be a major challenge in CENTROPE. Initiatives that are currently attempting to design such data (such as for instance the labour market monitoring tool used in this study) should therefore be continued and expanded.

8.3.5. Efforts have to be made to make CENTROPE universities more attractive for international students

Furthermore also student mobility (at all levels of education) remains to be an issue in CENTROPE. In this respect the results of our study highlight a number of potential interventions. For instance results of our survey among university students together with the analysis of recent trends in human capital and education in CENTROPE suggest a number of ways how student and pupil mobility can be increased.

In particular considering the tertiary education level the survey shows a high potential of student mobility in CENTROPE. However, most students prefer English language programs to others and the quality and reputation of study programs in CENTROPE is a crucial factor limiting the attractiveness of CENTROPE universities. English study programmes at the universities in CENTROPE should therefore be increased. Also university managements should put more effort in building awareness for their universities. Regional authorities could support such policies through education trade and job fairs, joint workshop series and conferences, organising student competitions and could also use existing partnerships between the cities and regions to support student as well as teacher exchange programmes among the CENTROPE universities and schools. In addition also direct support of student mobility through scholarships and research fellowships for student mobility in CENTROPE could be made available

8.3.6. Student mobility at all levels of secondary education should be supported

In addition also the mobility of secondary level students needs to be supported. While here similar instruments as those for the tertiary level can be used, requirements may differ in particular when vocational and apprentice schools are considered. Focusing on students or pupils who do not want to continue studying at universities education of other languages than English – particularly of neighbouring countries – should not be neglected. Apart from this support for cross-border excursions and educational trips, cross-border scholarships financially supported by regional and municipality authorities can be used to make such mobility more attractive.

9. Literature

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