THE HUNGARIAN LABOUR MARKET 2016

EDITORS
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KÁROLY FAZEKAS

INSTITUTE OF ECONOMICS, CENTRE FOR ECONOMIC AND REGIONAL STUDIES, HUNGARIAN ACADEMY OF SCIENCES
BUDAPEST, 2016

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Edition and production: Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences.
Copies of the book can be ordered from the Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences.
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The publication of this volume has been financially supported by Hungarian Academy of Sciences and the KJM Foundation.

ISSN 1785-8062

Publisher: Károly Fazekas
Copy editor: Anna Patkós
Design, page layout: font.hu
Typography: Garamond, Franklin Gothic
Printing: Oliton Kft.

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FOREWORD

The Hungarian Labour Market Yearbook series was launched in 2000 by the Institute of Economics of the Hungarian Academy of Sciences with support from the National Employment Foundation. The yearbook furnishes the present-day characteristics of the Hungarian labour market and of the Hungarian employment policy, and features an in-depth analysis of a topical issue each year. From the outset, the editorial board has striven to deliver relevant and useful information on trends in the Hungarian labour market, the legislative and institutional background of employment policy, and up-to-date findings from Hungarian and international research studies to civil servants, staff of the Employment Service, municipalities, NGOs, public administration offices, education and research institutions, the press and electronic media.

The research published in the yearbook series should provide a good source of knowledge for higher education on the topics of labour economics and human resources management. The yearbook series presents the main characteristics and trends of the Hungarian labour market in an international comparison using available statistical information, conceptual research and empirical analysis in a clearly structured and easily accessible format.

Continuing our previous editorial practice, we selected an area that we considered especially important from the perspective of understanding Hungarian labour market trends and the effectiveness of evidence-based employment policy. The yearbook has four main parts.

The Hungarian labour market in 2015

Economic trends relevant for the labour market were on the whole favourable in 2015. The Hungarian economy returned to sustained economic growth, with a GDP growth of nearly 3%, compared to 3.6% in 2014. Household incomes continued to increase, leading to an increase in consumption and consequently to the creation of new jobs. The number of persons in employment continued to grow in 2015, although not at the rate of the previous year. The yearly average exceeded 4 million 210 thousand, which was 110 thousand higher than the year before and reached the highest value since the start of the labour force survey in 1992. The employment rate of 63.9% in the 15–64 age group shows a 9 percentage point improvement compared to year 2010, the nadir of the crisis (although nearly 2 percentage points of this are attributable to a decrease in the denominator), closing the gap on the European average.

The favourable results are partly due to significant state intervention. The labour demand of businesses also considerably increased over the past two years.

Companies with at least five employees had to take active steps to fill 1.5 of 100 vacancies. The number of vacancies used as an indicator predicting economic boom (and the number of jobs to be filled) reached pre-crisis levels.

A paradigm shift in addressing unemployment created the segregated labour market of public works participants. Their numbers in 2015 were nearly 200 thousand on average, equal to 25% of the number of those employed in the public sector. Although the social acceptance of public works has improved a lot, forms facilitating reintegration to the open labour market have not yet been established. The pace of labour migration has not slowed down either. The three major target countries continue to be Austria, Germany and the United Kingdom but the structural characteristics of migrants differ according to country. In addition to regional imbalances in supply and demand, more attractive wages abroad greatly contributed to the lack of a qualified workforce in more and more professions in 2015. The unemployment rate decreased significantly in both 2014 and 2015; however, regional differences in this respect have become even more striking. Young adults leaving school education at the age of 16 with at most a lower-secondary qualification emerged onto the labour market in 2015 without any prospects other than the not too attractive public works.

Gross earnings increased by more than 4% in 2015 and the nominal wage reached 245 thousand HUF. The increase was slightly below this in the private sector and it was non-regular wage components, not representing long-term commitment, that were more dynamic. Earnings in the public sector were mainly influenced by the carry-over effect of a salary increase for teachers, in addition to a pay rise for police officers in July and the salary supplement for healthcare and social professionals. Since there were no changes to the rates of income tax and social security contributions, net earnings and gross earnings increased at the same rate, which – together with a 99.9% consumer price index – resulted in a 4.2% increase in real earnings. Family tax relief generated an extra 6 thousand HUF for families on average – according to model calculations, employees with at least three dependents retained 51 thousand more of their gross salaries than those not granted the tax relief.

In Focus

In 2015, *In Focus* addresses the issue of international migration. The decision was based on the series of events of recent years: while a few years ago it was the number of Hungarian emigrants increasing steadily from a considerably low level, since 2015 it has been the wave of refugees arriving in Europe that turned the spotlight on international migration and the role Hungary plays in it. International migration becomes deeply embedded in the labour market processes of the countries concerned: it has an impact on the level and structure of employment as well as on relative wage levels. When analysing emigration, the labour market related motivation of the decision to emigrate as well

as the short and long term consequences are to be considered. Immigration, on the other hand, raises the question of what impact a (potentially) large influx of immigrants has on the employment and wage levels of the residents of the recipient country. Most of the studies of the publication deal with processes directly affecting Hungary.

The introductory study of *Ágnes Hárs* provides an overview of emigration, return migration and immigration by investigating the Hungarian situation in a regional context, comparing it to the situation in the other new EU member states. The main finding of the statistics-based analysis is that although Hungary joined the east-west migration of Europe with some delay, after a significant increase it has now achieved a medium emigration level, which is, however, not balanced by immigration.

The two major chapters following the introductory study examine emigration from and immigration to Hungary separately. The second chapter, on emigration, contains studies with varied approaches and data sources, which predominantly present consequences in an indirect way. (Expected) Impacts on the labour market may be inferred from the extent and dynamics of emigration as well as the social composition of the emigrants. These factors are investigated by several studies of the publication. *Endre Sik* and *Blanka Szeitl* present the changes in emigration intentions, i.e. the so-called migration potential. Studies by *Zsuzsa Blaskó* and *Irén Gödri* as well as *Ágnes Hárs* and *Dávid Simon* focus on completed migration. While the former presents the social and demographic composition of the wider population emigrating from Hungary relying on several data sources, the study by *Ágnes Hárs* and *Dávid Simon* analyses in detail, on the basis of the Labour Force Survey, the composition of a smaller but important group of migrants – those undertaking employment abroad. A special and, in respect of social consequences, significant group among the people undertaking employment abroad consists of those who leave their family, including underage children at home. The number of families involved in this type of migration is specified in the boxed text by *Zsuzsa Blaskó* and *Laura Szabó*.

Studies focusing on a specific professional section of the labour market instead of a heterogeneous group further deepen the understanding of the expected impacts of emigration on the labour market. The two studies on the migration of doctors (analysed by *Ágnes Hárs* and *Dávid Simon* as well as by *Júlia Varga*) provide a detailed and accurate picture of how, and as a result of what factors, doctors emigrated from Hungary over the past decade and a half. The boxed text by *Moreh Christian* focuses on the Hungarians that have emigrated to the United Kingdom, presenting the main trends of migration from Hungary to the United Kingdom and the labour market characteristics of Hungarian immigrants living there.

Apart from detrimental effects, migration may also have positive impacts on the countries of origin. These include earnings sent home by emigrants,

which are often significant at national level as well as the human capital accumulated by migrants abroad and then invested on return at home. The analysis by *László Kajdi* presents the changes in the volume of money sent home by Hungarian emigrants whilst also covering the difficulties of measuring it. *Ágnes Horváth* gives a summary outline on the return migration to Hungary and provides the main conclusions of research undertaken in other countries of the region in this field. The same issue is addressed in the boxed text by *Judit Kálmán*, which reviews the international findings on public policies supporting return migration.

The third chapter discusses immigration and the impacts on the labour markets of recipient countries. Studies describing Hungarian tendencies rely on the data from the census. *Irén Gödri* identifies the factors affecting the labour market opportunities of immigrants to Hungary and how these opportunities differ between the various groups of immigrants. Her analysis reveals that the labour market indicators of immigrants in Hungary do not lag behind those of the Hungarian population – moreover, due to the composition (mainly due to higher educational attainment) of the group, they even exceed them. The findings are further interpreted by the boxed text by *Róbert Károlyi*, which states that this difference in employment is explained not only by the composition of the migrant cohort but also by the specific impact of some of their characteristics on the labour market. The boxed text by *János Köllő* reveals that – although the labour market advantage of immigrants in the 15–64 age group over the Hungarian population is the exception rather than the rule in Europe – when examining a broader age group, the increasing number of immigrants decisively contributed to the significant increase in employment in several European countries before the crisis.

The literary review by *Katalin Bördős, Márton Csillag* and *Anna Orosz* summarises the findings of surveys into the impact made by immigrants on the employment rate and wage levels of employees within the recipient countries. According to these, the short-term impact of immigration on the labour market is insignificant and there are mainly positive effects in the long run. The analysis of international data by *Dániel Horn* and *István Kónya,* examines the relationship between cultural and economic assimilation. The survey of 16 countries confirms the conclusion prognosticated by the study of *Irén Gödri*: linguistic assimilation is an important predictor of the labour market success of immigrants. In the final study of *In Focus*, *Judit Tóth* presents and explains the most important legal terms emerging in the discourse on migration.

When compiling *In Focus*, the aim was to present the ever-changing tendencies of migration up until a time as close as possible to the date of publication. In several cases it entailed the analysis of data which had only just emerged at the beginning of 2016. In other cases, however, the authors had to go back to the census of 2011 in order to get answers for some questions. This of course raises

the question of the timeliness of data but we decided to include these analyses because of the importance of the issues addressed.

The studies included in the publication do not directly reflect on the refugee crisis that Europe currently faces for the following two reasons. The studies of *In Focus* analyse the impact of migration on the labour market and in this respect it is irrelevant whether the immigrant wishing the find employment in a country arrives as a refugee or as an economic migrant. On the one hand, the expected impacts on the labour market are similar in both cases and they are determined by the same factors – consequently, the conclusions of the studies of *In Focus* investigating the conditions of the integration of immigrants also apply to the labour market integration of refugees. On the other hand, as mentioned before, the publication focuses on movements that are relevant for the labour market and concern Hungary. And the majority of refugees arriving in Europe either bypass Hungary or, even if they arrive in the country, most do not wish to settle down and find employment here.

Changes in labour policy tools (May 2015 – March 2016)

There were no significant changes in the policies affecting the labour market between May 2015 and March 2016. The most significant change in the institutional system is that a new client profiling system was introduced in 2016, which is expected to help to better target labour market programmes. A more significant government measure, which is, however, only announced as a plan is the transformation of vocational secondary schools into vocational "gymnasia" and vocational schools into vocational secondary schools – which would entail the decrease in the share of general knowledge subjects and would, in this way, limit opportunities to access higher education.

The budget of public works, the largest labour market programme, continued to increase in 2016. There were slight amendments made to the programme in order to raise the number of participants obtaining jobs on the open labour market. To further support this trend, the wages of public works participants has not changed, while the minimum wage was raised by 5.7 per cent in January 2016 (at the time of near-zero inflation). Finally, new active labour market programmes, primarily financed from EU funds, have been launched for supporting the long-term unemployed and young job seekers in finding employment. However, the public funding of NGOs assisting the rehabilitation of disabled job seekers has not been resolved and thus these services will be accessible to fewer clients from 2016 onwards.

Statistical data

This chapter, in the same structure as in previous years, provides detailed information on the major economic tendencies, the characteristics of the population, labour market participation, employment rate, unemployment, inactivity, wag-

es, education, labour demand, regional imbalances, migration, labour relations and welfare benefits as well as an international comparison of selected labour market indicators of the period since the political changeover.

The data presented here have two main sources: on the one hand, the regular institutional and population surveys of the Central Statistical Office – the Labour Force Survey, institution-based labour statistics, and the labour force account; on the other hand, the register of the National Employment Service and its data collections: the unemployment register database, short-term labour market forecast, wage tariff surveys, and the Labour Relations Information System of the Ministry for National Economy. More information is provided on these data sources at the end of the statistical section. In addition to the two main data providers, the Central Administration of National Pension Insurance has provided the data on old age and disability pensions and assistance. Finally, some tables and figures are based on information from the online databases of the Central Statistical Office, the National Tax and Customs Administration and the Eurostat.

All tables and figures can be downloaded in Excel format following the links provided. All tables with labour market data published in the Hungarian Labour Market Yearbook since 2000 are available to download from the following website: http://adatbank.krtk.mta.hu/tukor_kereso.

* * *

The editorial board would like to thank staff at the *Institute of Economics – Research Centre for Economic and Regional Studies – HAS, Central Statistical Office, the National Employment Service, the Central Administration of National Pension Insurance, the Ministry of Interior, the Ministry for National Economy, Ministry of Human Capacities, the Budapest Institute for Policy Analysis, the National Bank of Hungary, the Budget Committee,* and members of the *Economics of Human Resources Committee of the Hungarian Academy of Sciences* for their help in collecting and checking the necessary information and preparing this publication. Last but not least, we would also like to thank the leadership of the *Hungarian Academy of Sciences* and the Board of *Together for Future Jobs Foundation* for financially supporting the publication of the yearbook series.

THE HUNGARIAN LABOUR MARKET IN 2015

TAMÁS BAKÓ & JUDIT LAKATOS

ECONOMIC BACKGROUND

According to preliminary data, the growth rate of Hungarian GDP was nearly 3 per cent in 2015. The impressive growth was to a great extent due to an accelerated usage of EU funds, the strong economic performance of our main European partners and low oil prices, which also made it possible to finance the utility cost reduction programme of the government. About two-thirds of the foreign trade surplus is linked to services, especially to tourism, transportation and to a lesser extent to computing and information technology (*Central Bank,* 2016).

The domestic engine of economic recovery was industry and services on the production side, and exports, in addition to the rise in consumption, on the use side. However, disadvantaged groups and those living exclusively on social welfare and public works do not benefit from increased consumption. Nor was the significant gap in incomes and consumption reduced in 2015. Since such a high influx of EU funds is not to be expected in the long run, the maintenance of growth will become a challenge. Our lag in growth potential compared to other countries of the region increased according to the 2016 country report of the European Commission (*EC,* 2016). The report attributes it to low productivity, the weakness of innovation, insecurity concerning the private sector and special taxes in certain sectors deterring investment.

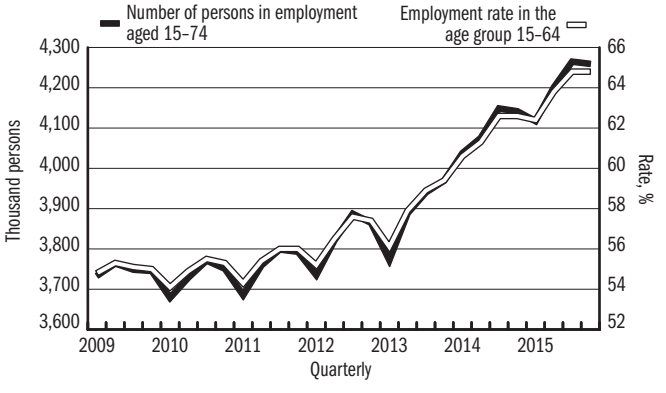
The impressive increase in the employment rate improved the contribution of labour to growth in spite of the adverse changes in the age composition of the population. Significant factors of the changes in employment indicators include the structural reforms of recent years, especially the reform of the unemployment benefit scheme, the expansion of eligibility for public works programmes and the strong restriction on early exit to the labour market. In principle the lowering of the obligatory school age from age 18 to 16 is also included here but its effect is not yet apparent.

The current key sectors maintain a medium development level but the focussed development of fields with high R + D potential is missing – and its prerequisites in terms of training are not fulfilled either. Central European countries, including – and to an increasing extent – Hungary, have to face the negative impacts of labour market migration due to the significant wage differences. It not only results in labour shortages in certain professions but it mainly concerns to a greater extent the professionally experienced and the more entrepreneurial, i.e. those who are also more needed in Hungary. Nevertheless, it is also obvious that the share of those who were unemployed earlier is higher among the commuters than among those employed in Hungary (*Bodnár–Szabó,* 2014).

LABOUR FORCE DEMAND AND SUPPLY

The size of the age group 15–64, constituting the labour force, was 60 thousand lower in 2015 than a year ago, which had both demographic causes (births and deaths) and the negative balance of international migration.[1] The retirement age is raised continuously, and in this way an age group of nearly 150 thousand increases the headcount of those supposed to be present in the labour market. The potential labour supply is further augmented – although less significantly – by two factors: the lowering of the obligatory schooling age to 16 and the elimination of the restrictions on employment whilst receiving child benefits. Thus the improvement of the employment rate in 2015 was partly due to changes in the denominator of the ratio (the fall in the size of the 15–64 age group), while the measures expanding the potential supply increased the numerator (*Figure 1*).

Figure 1: The number of persons employed (left axis) and the employment rate of the age group 15–64 (right axis), 2009–2015



Source: Labour force survey of the *Central Statistical Office* (CSO).

The number of employees had already reached the pre-crisis level in 2013, while in 2014 the labour force survey of the Central Statistical Office (CSO) reported a further significant increase of 208 thousand, about one-quarter of which was due to the expansion of eligibility of participation in public works. In 2015, even though not at the rate of the previous year, the number of those in employment rose further. On a yearly average, their numbers exceeded 4 million 210 thousand, which was 110 thousand higher than the previous year and reached the highest value since the start of the labour force survey in 1992. The employment rate of 63.9% in the 15–64 age group shows a 9 percentage points improvement compared to 2010, the nadir of the crisis (although nearly 2 percentage points of this are attributable to a decrease in the denominator), closing the gap on the European average.[2] The increase

1 Continuous estimation only takes account of registered immigration and emigration when calculating the balance of migration – and considering the free movement of labour within the EU and the lack of consequences of not reporting taking up employment abroad, it is certain to underestimate the number of emigrants.

2 In the third quarter of 2015, the employment rate of the EU–28 in the age group 15–64 was 66.1 per cent, while the Hungarian rate was 64.8 per cent.

– similarly to previous years – resulted from three factors but the significance of these in 2015 was somewhat different from the previous years.

1. The domestic primary labour market has become the most important factor of growth. According to the labour force survey of CSO, 62 thousand more persons found a job here than the year before. This coincides with the labour statistics of institutions[3] which registered a 54 thousand increase in the headcounts of businesses with more than five employees, employing a total of 1,910,000 persons.

The increase in headcounts in manufacturing, the largest branch of economic activity employing 646.6 thousand people exceeded the average of the private sector by 0.2 percentage point; however, changes in headcounts differed widely among sectors. In the automotive industry it increased by an outstanding 7.4 per cent and by 6.2 per cent in the industry group of rubber, plastic and non-metallic mineral product production. At the same time, textile, clothing, leather and leather product manufacturing as well as wood processing, paper production and printing were significant sectors with decreasing headcounts.

As for the sectors with more than one-hundred thousand employees, there was a 3 per cent rise in retail (in spite of the shops staying closed on Sundays) and vehicle repair: this entailed a 4.4 rise in full time employee numbers and a fall in part time employees. Headcounts in the administrative and support sectors grew by 4.9 per cent and in the construction sector by 1.3 per cent compared to the previous year.

Concerning sectors with lower headcounts, accommodation, rental and catering experienced an exceptional rise of 6.6 per cent due to the increase in household purchasing power and the better performance of tourism, while employers with more than five employees in the professional, scientific and technical sector saw an even higher growth of 6.9 per cent.

In the state sector, there were 0.5 per cent more employees in "regular positions" (i.e. not as public works participants), in total 698 thousand, than the year before. Most of this increase happened in public administration, defence and compulsory social security, while healthcare and social welfare experienced a decrease.

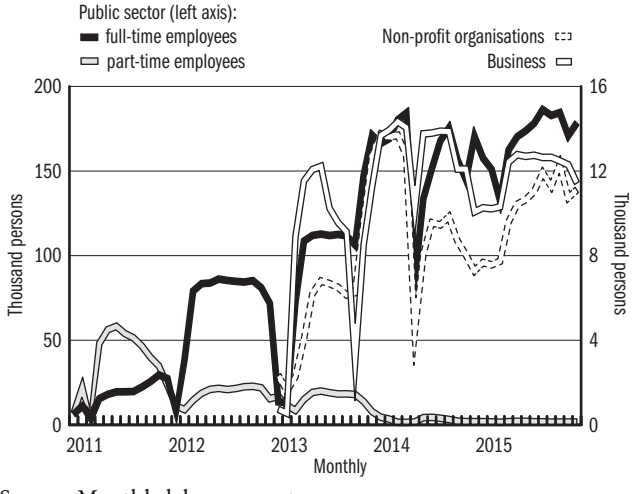
2. Public works significantly contributed to both the expansion of employment in 2015 and the current high level (as well as to the impressive unemployment figures) – although to a lesser extent than in the previous two years (*Figure 2*). According to the labour force survey, an average of 212 thousand worked in this category in 2015, 36 thousand more than in the previous year.[4] The annual report of the Ministry of the Interior in charge of public works programmes includes an average headcount of 208.1 thousand, while according to the data of the Central Statistical Office, 192 thousand participated in public works, a 5 per cent rise on the previous year. The important role

3 The statistics of institutions relies on the number of jobs and not the number of persons employed; however, the two figures are identical among businesses.

4 The headcounts data of CSO, and especially the yearly increase, are higher than the more reliable data calculated from the registry of the Ministry of the Interior. The main reason for this is probably the imprecise recall of respondents (*recall error*). Regular participants to public works, who are usually registered job seekers between the closure of a programme and the start of a new programme do not necessarily accurately remember their status during a specific week, and it is also possible that they also consider themselves public works participants in between programmes. Uncertainty is further increased if instead of the person concerned another adult member of the household provides information.

of public works in the employment rate and indirectly in living standards is even better described by Ministry of the Interior statistics, revealing that in 2015 there was already a total of 348 thousand people participating in public works for at least one day (but typically 6–10 months). More than one-third (36.2 per cent) of the registered unemployed exited the system to enter public works but this share among unskilled workers was over 40 per cent.[5]

Figure 2: The monthly numbers of public works participants in the state sector (left hand axis) and of employees of businesses and not-for-profit organisations (right hand axis) 2011–2015 (thousand persons)



Source: Monthly labour reports.

Although it is obvious that income from public works is higher than the income from employment substitution support (which has been stagnating for years) and helps to maintain basic skills required for working, experience from recent years and several research studies show that it does not open up re-entry to the primary labour market (*Csoba–Nagy,* 2012, *Köllő–Scharle,* 2012, *Cseres-Gergely–Molnár,* 2015). In 2015, 65 per cent of funds aimed at tackling unemployment was spent on public works programmes, while little funding was allocated for programmes more efficiently supporting re-entry to the labour market. The labour market of public works is highly segregated in all respects, including regionally: in December 2015, one in three public works participants lived in either Borsod-Abaúj-Zemplén or Szabolcs-Szatmár Bereg county. Opinions regarding the expansive public works projects are mixed. The most recent country report by the European Union expressed that "The public works scheme has contributed to a fall in unemployment (and improves the employment rate), but it does not seem to sufficiently improve the employability of the participants, ... does not sufficiently support the reintegration of participants into the open labour market. This risks lock-

5 This indicator is the so-called public works rate, comparing the number of public works participants to the total number of public works participants and registered job seekers (*Ministry of Interior,* 2016).

ing participants into the scheme." (*EU,* 2016, p. 3. and p. 46.) Another important critical remark of the report, though only indirectly related to public works, is that the social welfare system is unable to protect the most vulnerable, that education does not help to reduce the gap in social disparities and unemployment benefits are granted for the shortest time in the EU and on average are not enough to assist in finding a new job. The expansion of public works has a significant impact on labour market figures not only in terms of general indicators but also from several other aspects (e.g. employment rate by educational attainment or regions).

3. The third, and less known dimension of employment growth is taking up employment abroad. In the 2015 labour force survey of the CSO, 111 thousand respondents (11 per cent more than the year before) said that they were working in another country, most of them in Austria, and based on their permanent address (counties near the border are strongly overrepresented) a significant part of them is likely to commute or work in seasonal jobs (*Table 1*). Germany came second and typically this is where main earners work while supporting their families at home. The third most important target country is the United Kingdom but obviously only a section of Hungarians working and living there are recorded in the Hungarian statistics. It may be due to the high share of young people, who are not regarded as part of the household by their parents any longer and also due to difficulties in maintaining two homes because of the distance from Hungary.

Table 1: The number of respondents declaring a job abroad in the Hungarian labour force survey

Country	2010	2011	2012	2013	2014	2015
Austria	17,463	22,866	29,820	44,702	44,102	52,684
Germany	11,347	13,682	23,771	28,630	29,723	31,277
United Kingdom	7,662	8,200	8,931	8,293	6,503	9,309
Other EU country	9,549	12,465	12,927	10,973	13,319	12,425
Other country	3,513	4,137	4,940	4,777	6,094	5,362
Total	49,534	61,350	80,389	97,375	99,741	111,057

Source: Authors' calculations based on *CSO* labour force survey.

These three countries together accounted for over 82 per cent of the Hungarians working abroad. This figure is exactly the same as the one regarding Hungarians living for at least one year in the country concerned in the European Labour Force Survey (EU–LFS),[6] but the proportions among the three target countries are markedly different from those presented in the CSO labour force survey. The Austrian survey records less than half the number of Hungarians working in Austria as the number recorded in the Hungarian survey, which proves that a significant part of Hungarians working in Austria are commuters without an Austrian address. As for the Hungarians working

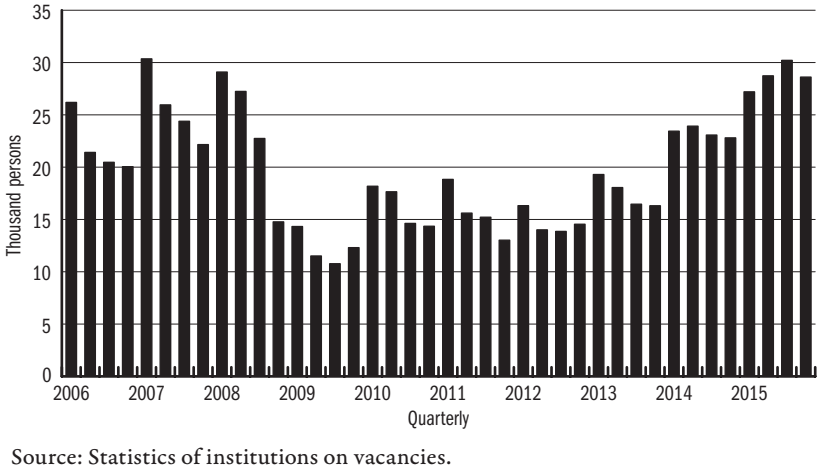
6 The most recent available EU data series is for 2014, thus it is compared to the 2014 Hungarian statistics.

in Austria the data of the two surveys may be added up. The figures of the German labour force survey are more than two and a half times more than the Hungarian survey but the two populations probably overlap to a larger extent than in the case of Hungarians working in Austria, since those working in Germany have to have a residence there. The largest difference between the two data series is in the case of the United Kingdom. While the Hungarian survey indicates a stagnating headcount of 7–9 thousand for the past five years, the equivalent UK statistics reveal four times as many Hungarian employees in 2011 and eight times as many in 2014.

Compared to 2011, the number of Hungarians reporting a job abroad also doubled in the Hungarian labour force surveys, just as it did in the EU labour force surveys between 2011 and 2014. However, in addition to differences between proportions, there is also a considerable difference in absolute terms: while the Hungarian labour force survey signals an increase of 47 thousand, the EU statistics show an increase of nearly 90 thousand between 2011 and 2014. In addition, a study by *Varga* (2015) warns that for medical doctors leaving the profession is an equally serious problem as their finding a job abroad.

The labour demand of businesses has also increased over the past two years. Companies with at least five employees took active steps to fill 1.5 of out of every 100 vacancies. The number of vacancies used as an indicator predicting economic recovery (and the number of jobs to be filled) reached pre-crisis levels. Nevertheless, the number of vacancies over time no longer follows the earlier pattern (involving a high level of vacancies due to retirements in the first quarter, which later gradually decreases), because in 2015 there was a further increase after the first quarter (*Figure 3*).

Figure 3: Vacancies in the private sector, 2006–2015 (thousand persons)

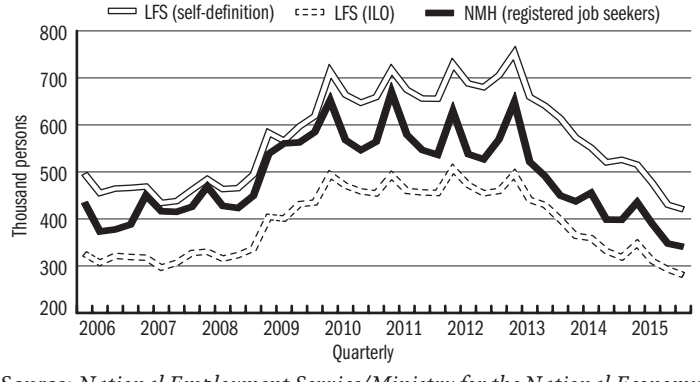


Source: Statistics of institutions on vacancies.

UNEMPLOYMENT AND THE POTENTIAL ADDITIONAL LABOUR FORCE

The fall in the number of the unemployed followed the rise in the number of employees with some delay (*Figure 4*). While the number of employees grew continuously from 2010 and reached pre-crisis levels in 2013, the number of the unemployed hardly changed until 2012. Even the fall that started in 2013 was below what would have been expected on the basis of the employment growth, since the expansion of public works also encouraged some of the earlier inactives to enter the labour market. This continuous influx had finished by 2015 and the number of the unemployed according to the ILO definition declined to a yearly average of 307.8 thousand in the labour force survey of the CSO, which implies a 6.8 per cent unemployment rate. Partly due to the government intervention to increase the employment rate, the Hungarian unemployment rate was now in the most favourable one-third of the European ranking. The number of the registered unemployed decreased from 422 thousand to 378 thousand in 2015 and the number of those defining themselves as unemployed in the labour force survey also fell to the level characteristic of the first half of the 2000s.

Figure 4: The number of registered job seekers, the unemployed according to ILO definition and those defining themselves as such, 2006–2015



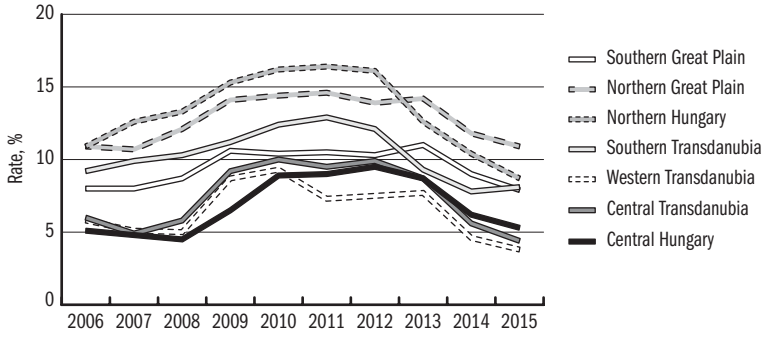
Source: *National Employment Service/Ministry for the National Economy, CSO* labour force survey.

The number of the so-called ILO unemployed continued to decrease from all important aspects. There were on average nearly 20 thousand fewer unemployed men and 16 thousand fewer unemployed women in 2015 than a year earlier. While as a result of the crisis the unemployment rate of men exceeded that of women, from 2013 on the figure has been again higher among women and the difference is increasing. In 2015, the unemployment rate for men was 6.6 per cent as opposed to the 7 per cent for women. The youth unemploy-

ment rate declined from 20.4 per cent to 17.3 per cent but still nearly one in five unemployed is younger than 25. While in many countries youth unemployment results from seeking employment alongside studying, in Hungary the majority of the young unemployed is characterised by early school leaving and a consequent difficulty in finding a job. In spite of the decrease in youth unemployment, the share of NEET young adults (young people not in employment, education or training) is still high.

The number of the unemployed with a maximum of a lower secondary education, similarly to those with a (upper) secondary school leaving certificate, who are also regarded in the labour market as unskilled, hardly decreased in 2015, while the number of those who finished vocational school fell by 13 thousand, and of those who finished vocational secondary school the numbers showed a fall of nearly 10 thousand. The fact that it was mainly those with a vocational upper secondary qualification who benefited from the decrease in unemployment (in addition to higher education graduates, who have an insignificant share in the unemployed) coincides with the finding that the number of employees of businesses employing a large number of persons with these qualification types increased to the greatest extent. The unemployment rate decreased in all regions but – similarly to the employment rate – it did not have an impact on the considerable differences among the regions (*Figure 5*).

Figure 5: Unemployment rates in the regions of Hungary, 2006–2015

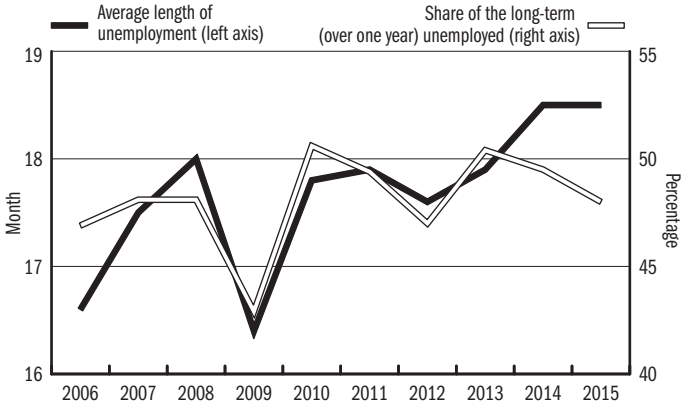


Source: *CSO* labour force survey.

The average length of unemployment was 18.5 months both in 2015 and in the preceding year; however, the share of the long-term unemployed fell from 49.5 per cent to 48 per cent, that is, the length of job-search for the long term unemployed increased (*Figure 6*).

The public works scheme has a stronger and more direct influence on the number of registered job seekers than on the ILO-unemployed. It is underpinned by the fact that in March, when the number of public works participants was the lowest as a result of the end of programmes that had started in the previous year, the number of registered unemployed rose to a yearly peak.

Figure 6: The average length of job-search (right hand axis) and the share of the long-term (over a year) unemployed (left hand axis), 2006–2015



Source: *CSO* labour force survey.

The effect of the reforms of the benefit system in 2011 (cutting back the job seeking benefit period to three months, limiting eligibility for job seeker's assistance to persons having not more than five years to work before retirement, linking income-tested benefits to participation in public works programmes and in other active programs) were already effective by 2014 but did not influence tendencies in 2015. 57 thousand were eligible to job seeker's benefits payable only to those insured, which is roughly the same as in the previous year, while regular social assistance was granted to 5 per cent fewer beneficiaries – the same as the increase in the number of public works participants.

In addition to the unemployed meeting the criteria of formal definitions (e.g. ILO-unemployed or registered job seeker), a considerable number are on the labour market who could (would) become employed if certain conditions were in place. The Eurostat defines potential additional labour force not covered by the ILO-unemployment definition as the following three categories: 1. The underemployed, who work part time but wish to work full time instead, 2. Job seekers unable to start work within two weeks 3. Jobless persons available for work but not seeking work for some reason. The potential additional labour force included 623.4 thousand in 2014 and 535.4 thousand in 2015, including 74.5 thousand who were underemployed. If adding the underemployed to the 460 thousand persons defining themselves as unemployed, the result equals the exact number of the potential additional labour force. The two data series indicate that although in principle there is a nearly half-million surplus on the supply side, yet because of their special circumstances, some of these people can only take up employment with difficulty or indeed cannot take up employment at all.

2 million 48 thousand of the working age population (aged 15–64) were not economically active in 2015 for various reasons, which is 5.9 per cent less than the year before (*Table 2*). The size of the largest category of these, the old age pensioners and annuitants was influenced by the incremental increase of the retirement age, while the size of the group of students was affected – in addition to demographic changes – by the lowering of the compulsory school age and the willingness to enter higher education, which was lower than in previous years. Because of the restrictions on the eligibility to unemployment benefits in cash, the number of those inactive on such payments decreased, while the expansion of the public works programmes and the economic recovery provided opportunities for a larger number of so-called other inactives to enter the labour market.

Table 2: The number of inactives aged 15–64 by gender and the reason for inactivity

	2015			2015/2014		
	male	female	total	male	female	total
Categories	thousand persons			percentage		
Old age pensioner, annuitant	316.6	475.4	792.0	88.4	92.8	91.0
Recipient of childcare benefits	3.1	236.9	240.0	104.0	100.9	101.0
Recipient of unemployment benefits	27.4	22.9	50.3	73.1	66.0	69.7
Students	345.1	343.7	688.8	97.8	98.5	98.2
Recipient of care allowance or orphans' benefit	13.9	33.5	47.4	99.8	111.2	107.6
Other inactive	91.3	138.0	229.3	93.8	90.8	92.0
Total of inactives aged 15–64	797.3	1250.3	2047.7	92.4	95.3	94.1

Source: *CSO* labour force survey.

EARNINGS

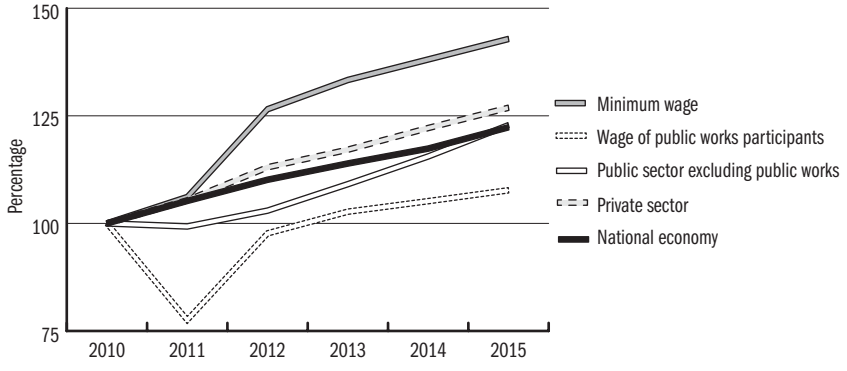
As regards the regulation of earnings, there are three segments of the economy: 1. the private sector, 2. the public sector and 3. public works, which is different in terms of wage determination (wages are solely determined by government decrees).

1. Gross earnings in the private sector (including non-profit organisations and majority-state-owned entities such as the Hungarian Post or the Hungarian State Railways) are shaped by the wage policies and business profits of economic organizations as well as the less significant wage agreements, the only single central intervention being the setting of the minimum wage. (*Figure 7*).

The minimum wage (or rather the guaranteed minimum wage) grew by 3.4 per cent in 2015 (the former to a monthly gross of 105 thousand, while the latter to monthly gross of 122 thousand HUF), which was slightly lower than the 3.9 per cent on average characteristic of the private sector. Nevertheless, av-

erage wages in the private sector and the minimum wage have been increasing at the same rate since 2013. This ensures that the lag of employees working in low-wage professions does not increase, and also that small businesses, where wages constitute only a part of the remuneration, pay taxes and contributions on at least the minimum wage and in this way their employees are entitled to various benefits (sickness benefit, old-age pension) based on increasingly higher contributions. However, the relatively high minimum wage reduces the chances of unskilled, low-productivity job seekers finding employment on the primary labour market thereby forcing them to accept low-paying public works permanently, which basically does not set performance requirements.

Figure 7: Gross earnings and the minimum wage (2010 = 100)

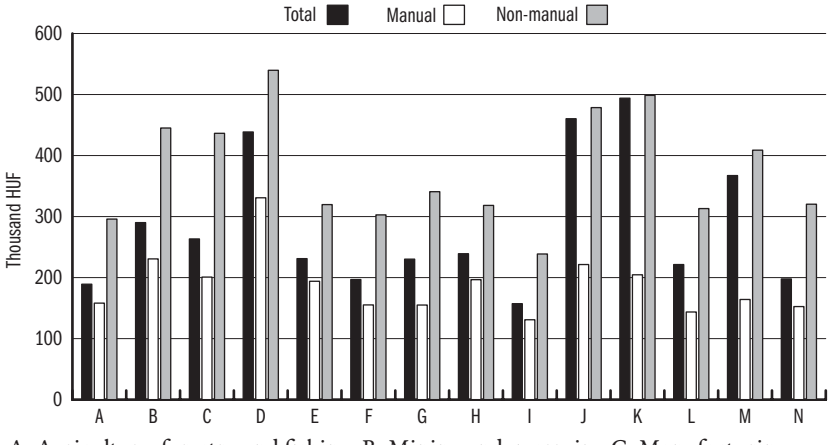


Source: *CSO* institutional labour statistics.

Despite 2015 being a successful year on the whole, the increase in earnings in the private sector was 0.4 percentage point lower than the year before. Similarly to the previous year, the significance of non-regular wage components did not increase. In 2014, in addition to the 3.8 per cent rise in regular earnings, non-regular earnings grew by 10.3 per cent compared to the previous year, while the same indictors were 3.7 per cent and 6.5 per cent in 2015 respectively. In 2015, non-regular wage components, accounting for 8 per cent of total earnings, amounted to 21.1 thousand HUF on average in the segment of the private sector reviewed. Its significance was outstanding in the electricity, gas, steam and air conditioning supply sector (17.0 per cent), in the finance and insurance professions (13.6 per cent) and was even higher in the crude oil processing and coke production sector (19.6 per cent) within the processing industry. As for manual workers, non-regular wage components accounted for 5 per cent of their total earnings, while for non-manual (white-collar) workers it accounted for 10.1 per cent. (The 2.15-fold difference between the earnings of manual and non-manual workers in the private sector in 2015 would only be 2.05-fold if non-regular wage components were shared equally between the two groups.)

In the economic sectors characterised by the dominance or exclusivity of the private sector, the highest earnings are traditionally in the finance and insurance professions, with an average monthly gross salary of 494.0 thousand HUF (*Figure 8*). This is followed by IT and communication (460.3 thousand HUF) and by the electricity, gas, steam and air conditioning sector (438.6 thousand HUF). In the processing industry, where earnings are average, coke production and crude oil processing came first, with an average monthly gross salary of 644 thousand HUF, followed by the pharmaceuticals industry with 440.2 thousand HUF. The latter was four times as high as the average of the lowest paying branch of the processing industry – textile, clothing, leather and leather products manufacturing (160.1 thousand HUF).

Figure 8: Gross earnings in the major sections of the private sector, 2015 (thousand HUF)



A: Agriculture, forestry and fishing, B: Mining and quarrying C: Manufacturing, D: Electricity, gas, steam and air conditioning supply, E: Water supply; sewerage, waste management and remediation activities, F: Construction, G: Wholesale and retail trade; repair of motor vehicles and motorcycles, H: Transportation and storage, I: Accommodation and food service activities, J: Information and communication, K: Financial and insurance activities, L: Real estate activities, M: Professional, scientific and technical activities, N: Administrative and support service activities.
Source: *CSO* labour force survey.

Although working conditions and the characteristics of work are more homogeneous in non-manual jobs than in manual jobs, more or less the same sectoral proportions are seen in manual and non-manual jobs; however, the relative earnings levels in a section also depend on the proportions of the two workforce categories. Thus although the electricity, gas, steam and air conditioning section was only in third place in the ranking of economic sectors in 2015, the gross earnings of both manual and non-manual workers were the highest (331 thousand HUF and 540 thousand HUF respectively). While average wages in trade vehicle repair were below the average of the private sec-

tor both in their levels and rate of increase, several big supermarket chains were forced to raise wages in the last third of the year due to increasing labour shortages. The flight of trade workers mainly resulted from the lower wages due to Sunday shop closure, the extra workload due to increased traffic on Friday and Saturday as well as the draining effect of higher earnings and better working conditions in the processing industry.

2. The public sector, employing 698 thousand people on average in 2015[7] is regulated centrally. The basic elements of the remuneration system[8] established in the 1990s have been unchanged since 2008, while some of the bonuses (such as the guaranteed 13th month salary) have been terminated. Recently there have been frequent wage adjustment measures, often in an ad hoc manner, focusing on certain groups of employees as well as the removal of certain restrictions. Since these changes are partial, occasionally they create tension even within a workplace.

A good example is the introduction of the teacher promotion system, which (although accompanied by significant increase in requirements) noticeably raised teachers' salaries, while the salaries of other staff working in the same institutions did not change. From the autumn of 2013 the salary of teachers, while from July 2015 the salary of law enforcement staff was raised to a great extent. The latter was an average of 30 per cent, which is to be followed by a 5 per cent annual pay rise until 2019, that is, similarly to the introduction of the teachers' promotion system, its effect will continue to be felt in the rate of salary increases of the following years. Several other measures (with less significant effects) have been implemented, typically involving certain groups of social welfare and healthcare workers. These fields have been suffering from labour shortages for years and neither the extent nor the way of implementing the wage adjustment (instead of raising the basic salaries, social welfare workers received a wage supplement in 2014, and extra compensation in 2015, similarly to healthcare workers, neither of which implies long-term commitment) was enough to stop the drain. Low-paying and not family friendly occupations are not popular with young people, therefore the retirement of the large age groups born in the first half of the 1950s (which is accelerated even more by the so-called 40-year rule for female workers), will further aggravate the already serious situation.

As a result of measures of recent years, the difference between the average wages of the private and public sectors has decreased. At a 6.3 per cent rate of increase, the gross earning of public sector employees was 256.4 thousand HUF on average in 2015, not including public works participants. This was only seven thousand HUF lower than the average of the private sector but the differences between the various occupational groups and the lag of public sector areas are still significant. Due to the method applied for wage adjustment, the significance of non-regular wage components also increased in

7 In case of government institutions, where the same person might work at several locations, the actual number of employees is lower than the number of jobs. Compared to the data of the tax authority, there is a difference of tens of thousands.

8 The system is far from perfect: e.g. the promotion levels have not yet been adjusted to the raised retirement age.

the public sector (similarly to the private sector): as opposed the 5.9 per cent increase in regular wages, they showed a 14.1 per cent rise in 2015 compared to the previous year.

As for the important sections of the public sector, the earnings of healthcare workers only increased by 2.3 per cent in spite of the extra compensation at the end of the year. The net salaries of 22 thousand manual workers was below one-hundred thousand HUF (99.1 thousand HUF) and the average pay of 78 thousand, mostly highly qualified non-manual workers was 157.9 thousand HUF. In the social welfare field earnings grew above average but this did not improve the net wage gap (the average net salary of manual workers was 86.1 thousand HUF, while that of non-manual workers was 114.6 thousand HUF). Employment in education was in the mid-range both in terms of average earnings and the rate of increase in 2015 (net salaries were 93.3 thousand and 140.3 thousand at a 5.2 per cent rate of increase), while the field including public administration, defence and obligatory social insurance, employing a total of 255 thousand persons, and with highly heterogeneous activities, experienced a 7.9 per cent increase in earnings. (The increase was especially high for manual workers – 16.2 per cent – owing to a special pay rise for law enforcement officers.) Thus the average net salaries of manual workers rose to 171.8 thousand, while that of the non-manual workers rose to 205.7 thousand HUF.

3. Public works is a different sector in terms of wage determination, since wages are solely determined by government decrees. In 2015, the salary of a "standard" public works participant was defined as 79,155 HUF, the salary of skilled participants working in low headcount positions was 101,480 HUF, and the salary of team leaders was 111,660 HUF. The average gross salary of public works participants was 79,756 HUF, which implies a net salary of 52 thousand HUF. As opposed to the two previous years, in 2015 the salary of public works participants (and consequently their average pay) did not increase as much as the minimum wage (there was an average rise of 2.2 per cent), but the difference is still not enough for a job with a minimum wage to be a real alternative to local public works without real performance requirements.

Fringe benefits – components providing a direct income for workers, e.g. cafeteria – basically did not change compared to the previous year (they amounted to a monthly average of 13.9 thousand HUF in the private sector and 12.3 thousand HUF in the public sector). Sectoral differences in fringe benefits are even higher than in salaries. While annual fringe benefits in the highly paid pharmaceutical industry amount to 730 thousand HUF, in the low-paid social welfare profession they did not even reach 34 thousand HUF.

Similarly to 2014, there were no changes in income tax rates and social security contributions in 2015[9] and in this way net earnings and gross earnings increased at the same rate. Net wages equalled 65.5 per cent of gross wages on

9 The rate of employee contributions increased by 0.5 per cent in 2011 and by a further 1 per cent in 2012 to 18.5 per cent (including 1.5 per cent solidarity contribution, 10 per cent pension contribution and 7 per cent health insurance), and has been unchanged since that time. With the phasing out of the super gross income, the personal income tax became a truly flat rate tax, increasing net earnings for those making over HUF 200 thousand per month and proportionately with the gross income. At the same time the upper threshold of the pension contribution was removed.

average, which is significantly more favourable than before 2011. The main beneficiaries of the tax reforms are obviously the high earners. So that the net salaries of low-paid workers do not decrease because of the phase-out of certain allowances, businesses had to supplement the salaries themselves (although they were eligible for bridging funds). This problem was regulated uniformly in the public sector. As a result of wage adjustment measures and the fluctuation of the workforce the number of employees concerned decreased continuously, but even in 2015 nearly 180 thousand received a monthly average of 9,600 HUF so-called social benefit for this reason (and 9,300 HUF for a few thousands in the non-profit sector), which is not part of the salary but a supplement.

Most of the contribution society makes to the costs of child rearing is through tax reliefs. For families with one or two children it was 62,500 HUF per child monthly until 2015,[10] while for families with three or more children it was 206,250 HUF. From 2014 low-paid employees were able to deduct it from the pension contribution or the healthcare contribution. According to model calculations, in 2015 the net salary of the minority of employees[11] with at least three dependents was 51 thousand HUF higher than that of those (the majority) who were not granted the tax relief. (*Table 3*).

10 From 2016 the allowance per child increases and the system provides a relative advantage for families with two children.

11 The model was based on the 6 per cent share of families with three or more children, although according to the continuous estimation based on the census it was less than 5 per cent in 2015, while the share of those not eligible for the family tax relief increased to over 50 per cent. Nevertheless, changes in the household structure do not have a significant impact on the net amounts by household types.

Table 3: Net and real earnings calculated with the family tax relief, 2015

Number of dependent children	Net earnings/month/person (HUF)	Net earning	Real earning*	Share of employees by number of children (percentage)
		Change compared to 2014 (percentage)		
0 child	158,945	4.2	4.3	48.6
1 child	166,002	4.1	4.2	25.5
2 children	185,827	4.0	4.1	20.0
3 or more children	209,639	3.8	3.9	6.0

* Calculated at the 99.9% consumer price index in 2015.
Source: *CSO* (2016) p. 6, Table 7.

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IN FOCUS

INTERNATIONAL MIGRATION

Edited by

ZSUZSA BLASKÓ

INTRODUCTION

This year, *In Focus* addresses the issue of the position of Hungary in the processes of international migration and how these processes (may) affect the labour market. The decision is justified by a series of events over the recent years. First, after a long period of a relatively low level of emigration the number of emigrants from Hungary started a steady and continuous increase around 2007, while in 2015 the massive wave of refugees arriving in Europe drew attention to international migration, and the possible consequences of immigration.

International migration is deeply embedded in the labour market processes of the countries affected; it has an impact on the level and structure of employment as well as on wage levels. From the perspective of the sending country, in the case of *emigration*, labour market-related motivations as well as the short- and long-term consequences of decreasing labour-supply must be considered. At the same time, *immigration* can also influence level of employment and wage levels in the receiving country.

The studies presented here intend to place Hungary in the context of international migration, both as a sending and as a (potential) receiving country. The first paper by *Ágnes Hárs* provides an overview of the processes of emigration, return migration and immigration to and from Hungary from a comparative perspective, looking both at the regional context and comparing to other EU Member States. A key conclusion of the throughout statistical analyses here is that although Hungary was somewhat late in joining in the recent East-West migration flows within Europe, after a substantial growth, annual emigration has by now reached the regional average and is not at all compensated for by immigration.

Following the first overview, Chapter 2 is analysing the main tendencies of *emigration* from Hungary in the past decade, focusing mainly on consequences in the labour market. The studies of Chapter 3. then take the perspective of the receiving country, and analyse the labour market consequences of *immigration*. Several studies in this chapter provide experiences from countries outside Hungary. This is because (so far) experience on the impact of immigration in Hungary is limited due to the relatively low number of immigrants in the country.

For the time being there is a shortage of standard labour market studies that would directly analyse the consequences of emigration in Hungary. The reasons are twofold: on the one hand, appropriate data is missing, on the other hand these processes are still relatively recent for causal relationships to be established. Therefore, the chapter on emigration includes a number of stud-

ies that explore the labour market implications indirectly, using a variety of approaches and methods. The (likely) labour market effects can be inferred from the extent and dynamics of emigration as well as from the social composition of emigrants. Various studies in this volume apply this approach. *Endre Sik* and *Blanka Szeitl* present the development of migration intentions, the so-called migration potential. Although migration potential is not directly related to realised migration, nevertheless it helps to understand the potential extent of future migration and the likely composition of emigrants. On the other hand, studies by *Zsuzsa Blaskó and Irén Gödri,* as well as by *Ágnes Hárs and Dávid Simon* address realised migration. While the former study presents the social and demographic composition of the general migrant population from Hungary using a variety of data sources, the study by *Hárs* and *Simon* examines changes in the number and composition of a narrower but nevertheless important group of emigrants – labour migrants – based on data from labour force surveys. A small but important group, particularly in terms of social consequences, is constituted by emigrants who go abroad for work, leaving behind a family with children. The boxed text by *Zsuzsa Blaskó* and *Laura Szabó* presents information on the number of families affected by this type of migration in Hungary.

Studies that focus on a specific subgroup rather than the entire heterogeneous group of emigrants help to better understand the expected labour market implications of emigration. Two studies in this chapter therefore concentrate on the submarket of medical doctors (*Ágnes Hárs* and *Simon Dávid,* and *Júlia Varga*) providing a detailed and accurate picture of the tendencies and the influencing factors in the emigration of medical doctors over the past 15 years in Hungary. The boxed text by *Christian Moreh* in turn focuses on a geographical segment: it is looking on Hungarian migrants in the United Kingdom. This study presents the main migration trends from Hungary to the United Kingdom as well as the labour market characteristics of Hungarians in the UK.

Although often neglected, emigration might also have positive effects on the sending country. These include remittances sent home by the emigrants (potentially contributing to the country's GDP to a significant extent), and also human capital accumulated abroad and consequently invested at home by returning migrants. *László Kajdi's* analysis presents the development of the volume of remittances sent home by Hungarian emigrants and also addresses measurement challenges. *Ágnes Horváth's study* provides an overview on return migration to Hungary and also presents the main conclusions from research studies on the topic from other countries of the region. The boxed text by *Judit Kálmán* addresses the same issue by reviewing the international experiences from return migration policies. These latter studies further refine the simplistic dichotomy of emigration and immigration. This is especially im-

portant because – as it clearly emerges from the introductory study by *Ágnes Hárs* as well as from *Christian Moreh's* piece – it is highly misleading to discuss emigration as a one-way process. Today's migration flows in Europe are especially characterised by *fluidity*, a series of out-, return and also remigrations.

Chapter 3 addresses immigration by looking at the potential labour market effects in the receiving countries. *Irén Gödri* applies population census data to show what factors shape the employment chances of immigrants in Hungary and how labour market chances differ across different groups of immigrants. The analysis suggests that the labour market indicators of immigrants in Hungary are not only comparable to those of the total population but they even surpass them. The labour market advantages of the immigrants according to this study are mainly due to their composition, most importantly to their high average level of education. These findings are further nuanced by *Róbert Károlyi's* boxed text, which argues that the employment differentials between immigrants and those born in Hungary can not only be linked to differences in their composition but also to the particular labour market implications of their social and demographic characteristics. *János Köllő's* boxed text puts these findings into a wider context. It shows that although the labour market advantages of immigrants compared to the national population among the 15–64-year olds found in Hungary are rather exceptional in Europe, when a wider cohort is being looked at we find that the increase in the number of immigrants has in fact contributed to the growth of employment in a number of European countries before the economic crisis to a significant extent.

The literature review by *Katalin Bördős, Márton Csillag* and *Anna Orosz* summarises the findings from a range of studies that examine the impact of immigrants on employment and wage level in receiving countries. These suggest that the short-term impact of immigration on the labour market is negligible, while the long-term effects tend to be positive. In their empirical study *Dániel Horn* and *István Kónya* examine the relationship between cultural and economic assimilation using international survey data. Their findings on 16 countries confirm the conclusion (suggested also by *Irén Gödri*) that linguistic assimilation is a key predictor of labour market success among immigrants.

The last chapter of *In Focus* by *Judit Tóth* presents and explains the key legal categories used in the discourse on migration.

When editing *In Focus* we aimed at presenting the constantly moving flows of migration based on data as up-to-date as possible. In some cases this meant that the analysis given here is based on data that just became available at the beginning of 2016. However, in other cases authors had to return to the 2011 Population Census in order to answer particular questions (e.g. on the situation of immigrants in Hungary). Naturally, this raises the issue of timeliness; however considering the significance of the topics in question and the

lack of more recent data, we decided that we can not avoid returning to these datasources.

The studies in this volume do not directly reflect upon the refugee crisis Europe is currently facing. The reasons for this are two-fold. First, from a labour market perspective it makes no difference whether immigrants looking for work have arrived in the country as refugees or as (economic) migrants. Assuming that other factors are equal, the potential labout market implications are similar and are also being shaped by similar factors in both cases. Therefore the findings of *In Focus* studies exploring issues around the integration of immigrants are also valid for the labour market integration of refugees. Second, as highlighted earlier, *In Focus* addresses migration flows affecting Hungary that are relevant from a labour market perspective. For the time being however, the masses of refugees arriving in Europe either completely avoid Hungary or if they enter the country they use it as a transit route and do not wish to settle and find employment here.

1 EMIGRATION AND IMMIGRATION IN HUNGARY AFTER THE REGIME CHANGE – BY INTERNATIONAL COMPARISON

ÁGNES HÁRS

After regime change, border restrictions were lifted, the state control of foreign travel ended, and the countries of Eastern Europe again became part of the international migration flows – although to a differing extent. In Hungary, increasing emigration over the last nearly ten years and the large wave of refugees since 2015 directed public discourse and attention to the phenomenon of migration. Public debates focused on low outmigration and the lack of migration propensity just over ten years ago, and prior to that on the relatively high immigration by regional comparison.

What is the real extent of emigration in Hungary, when and how did it change, and what position does the country occupy within the increasing Eastern European emigration? Does immigration offset emigration? This introductory chapter examines the changes observed in Hungary using descriptive statistics, and contrasts these to processes that have taken place in other Eastern European countries. Using comparative statistics it is shown how migration developed in other Eastern European countries, where factors that determine migration changed in a similar way and context. The first, longer part of the chapter examines emigration, the second part discusses immigration, and the final part draws out some relevant conclusions for Hungary.

Outmigration from Eastern European countries

Changes and expectations

The return to the permeability of borders after regime change created new opportunities in immigration, emigration and return migration for residents of Eastern European transition countries. Migration was no longer a one-off and unidirectional occurrence. Instead, with open borders constant flow, out- and return migration became natural. Due to the substantial economic disparities among regions, economists in the early 1990s – after earlier controls on foreign travel had been lifted – predicted a strong migration pressure and flows from Eastern European transition countries towards more developed regions of the world (*Layard et al.,* 1992). The unifying of Europe and the possibility of the opening up of European Union labour markets for nationals of Eastern European countries created East-West migration expectations within Europe and it triggered actual migration from Eastern Europe towards the more developed countries in Europe already during the period of preparation. The gradual dismantling of administrative barriers to mobility

made it easier – and thus encouraged – movement within Europe compared to other regions, and also reduced the financial and non-financial burden associated with migration.

The possibility of free movement in reality meant the freedom of labour allocation – as set out in Harris & Todaro's classic model – within the single European labour market via migration (*Harris–Todaro,* 1970). Studies that estimated the extent and characteristics of migration based on GDP differentials between economies (*Bauer–Zimmermann,* 1999, *Boeri–Brücker,* 2001, *Dustmann et al.,* 2003), as well as those that explored migration intentions and possibilities, predicted large variations in mobility across countries. The majority of studies examined the economic impact the gradually increasing access to the labour market (*Boeri–Brücker,* 2005, *Baas–Brücker,* 2008) and then actual migration (*Kahanec–Zimmermann,* 2010, *Kahanec,* 2013) on receiving countries. In the potential receiving countries regulations controlling migration, particularly restrictions on employment, put limitations on the freedom and intensity of processes, while the period preparing for European Union accession was characterised by labour migration regulated by bi-lateral agreements (*Hárs,* 2003). When a free market in labour commenced in 2004, a strong flow of labour migration began towards possible destinations.

According to the Accession Treaty of the European Union the 15 EU Member States could restrict the free movement of labour from the eight new Member States (EU–8), with the exception of Malta and Cyprus for a period of up to seven years. Only three countries opened up their labour market in May 2004: the United Kingdom, Ireland and Sweden. The majority of the countries took partial advantage of the seven-year transitional period and opened their labour markets gradually, while Germany and Austria bordering the Eastern regions of the European Union took full advantage of the transitional period, postponing free movement of labour until May 2011. During the transition period there were restrictions on the employment of EU–8 nationals in the affected countries. After the accession of Romania and Bulgaria in 2007, only the EU–8 countries opened up their labour market (with the exception of Hungary) for Romanian and Bulgarian workers, followed by Denmark, Greece, Portugal, Spain, and Hungary two years later. The other EU Member States delayed the introduction of free movement until 2014.

The following will examine the intensity of this process, the size of migration, as well as differences between countries, composition and trends.

About the data

The international comparison of emigration is made harder by the limited availability and reliability of data. Immigration statistics are available in destination countries, and outmigration from sending countries can be estimated using so-called *mirror statistics* – the stock of migrants in receiving countries. Therefore, for the extent of emigration *cumulative mirror statistics* were calculated by destination country – on the basis of available data on the num-

ber of outmigrants from particular countries. In the period after the regime change, a large proportion of emigration from Eastern European countries took place within Europe, and this has especially been the case since the EU's enlargement. Therefore it is probably not too flawed to limit the analysis of outmigration in the post-regime-change period to East-West migration flows within the EU.[1]

The global (UN and OECD) data sources include migration defined on the basis of birth country. This shows a much higher migrant population than statistics calculated on the basis of nationality and also includes a significant migrant population from outside Europe, which can be misleading. Around 70–90 per cent of people born in the EU–8+2 countries and living in the main destination countries outside Europe (United States, Canada, Australia, and Turkey in the case of Bulgaria) emigrated a long time ago and were already citizens of the receiving country in 2000.[2] Between 2000 and 2015 The EU was the main destination of outmigration, and overall, the share of EU nationals increased by 20–30 per cent in the emigrant population.[3]

Two data sources were used to calculate cumulative mirror statistics by sending country: the 2011 population census and the annual statistics on the number of migrants from the EU–8 + 2 to the EU–15 by country.[4] The analysis focuses on long-term (intended to be more than a year) emigration. The emigrant population was defined as nationals of particular countries living abroad, supposing that this better captures recent emigrants with stronger links to their native countries. The cumulative mirror statistics were calculated from databases available on-line, by identifying nationals for each sending country who were registered in an EU–15 country, and then these values were added.[5] The census data is more reliable, it indicates the emigrant population in 2011 (foreign nationals living in the particular country). The annual population data are from the register of migrants who live a particular country. This is suitable for longitudinal analysis, although there are gaps in the data; however, by filling in these gaps the data can be made suitable for comparative analysis.

Mirror statistics can be calculated using annual matrixes generated from the number of people relocating from specific sending countries to more developed EU countries for a longer period of time (usually at least one year). Given that the matrixes must be complete and the online databases have gaps in various countries, data had to be computed and harmonised with the relevant population censuses. To fill in the matrixes, data reported by *Fic et al.* (2011) was used up to 2011, and corrected using the updated Eurostat data. Missing data from the last three years was imputed using the appropriate methods from that source. Missing information on people living in the United Kingdom was imputed by estimating the annual increase on the basis of national insurance numbers (NINO) issued to new migrants. Migration was assumed to be constant in countries where migration was small and not increasing. Even accounting for a small bias in the estimated values, the dataset provides a good estimate of trends. Migrants cannot be accurately harmonised in the data on migrant population obtained this way due to differences in data collection between the countries. However, this is not a problem for comparisons because that is the same year after year for each country.

1 The rules of free movement within the European Union also differ from migration in other directions, therefore it is useful to analyse it separately. For sake of completeness EEA countries with a similar labour market status, primarily Norway and Switzerland, were also included in the analysis where possible.

2 Author's calculation on the basis of OECD DIOC database.

3 Based on the UN migration database.

4 Despite the obvious opportunity, we did not use *European Labour Force Survey* (*EU–LFS*) data to calculate mirror statistics, because they are available only in an anonymised format by nationality and place of birth of migrants.

5 Population census data available from: ec.europa.eu.

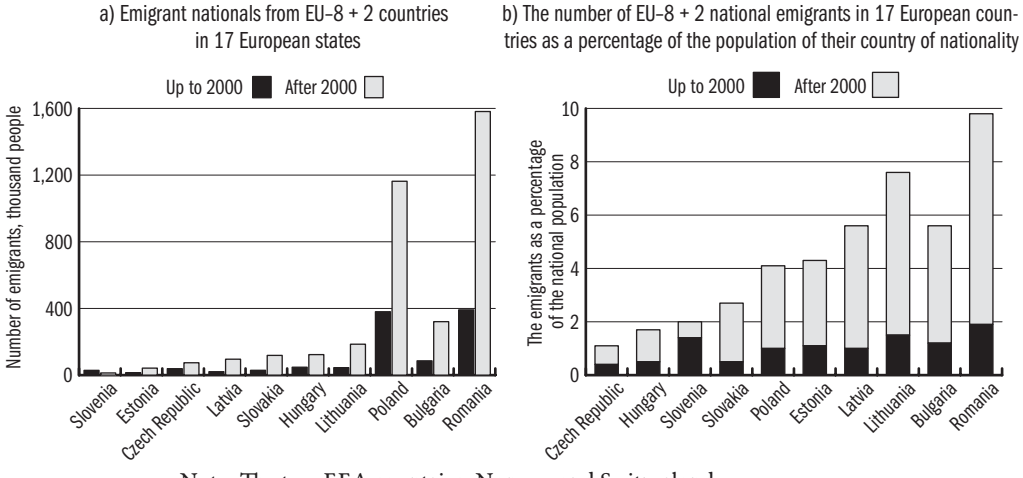
In the absence of good comparative data for migration flows, changes in migration are approximated using the traditional method and changes in stock are compared at different points in time; thus the data is limited to the description of the – ever changing – population of those legally residing and settled abroad at that particular time. This underestimates the total – short- or long-term – migrant population, and it cannot capture the totality of those involved in migration. The figures therefore provide the lower estimate of the number of long-term emigrants. The statistical comparison examines the extent of emigration and ratios. Motivations for emigration, composition and impact can be analysed on the basis of targeted research.

The size of the emigrant population

Figure 1.1 shows the Eastern European migrant population residing in Western Europe by sending country in 2011, displaying pre- and post-2000 emigrants separately.[6] The analysis of the post-2000 period provides a more accurate estimate for the size of the migration flow. Part a) of *Figure 1.1* shows the size of the emigrant population calculated on the basis of censuses in 2000 and 2011: the increase is substantial in this period. In terms of numbers, East-West emigration is completely dominated by outmigration from Poland and Romania.

6 The classification of periods is defined by the date of the previous census. This classification is more or less suitable to examine the increased migration following EU enlargement and the free movement of labour separately from earlier periods.

Figure 1.1: Emigrant population from the EU–8 + 2 countries to the EU–15 and two EEA countries before and after 2000, by nationality, 2011



Note: The two EEA countries: Norway and Switzerland.
Source: Author's calculation based on 2011 population census data from the specific countries.

From the perspective of sending countries, the key question is what proportion of a country's population lives abroad. These proportions, relative to the size of the population in the 2011 Census, are depicted in part b) of *Figure*

1.1. The majority of those living abroad in 2011 arrived after 2000; the outmigration of the population was the highest in Latvia, Lithuania, as well as Bulgaria and Romania in the period 2000–2011. In Poland – despite the sizeable emigrant population – the rate of outmigration was moderate, alongside Estonia and Slovakia somewhat lagging behind, and it was low in the Czech Republic, Slovenia and also Hungary.

Above, the number of emigrants has been compared to the total population of each country using cumulative mirror statistics. However, the censuses suggest that 85–90 per cent of the emigrant population is aged 50 years or younger in all countries and therefore it is more accurate to compare the emigration rate to the under-50 population of the sending country. This way, the emigration rate is nearly one and a half times higher. In 2011 15 per cent of the Romanian working age population aged 15–49 years lived in Western Europe, and the same figure was 12 per cent among Lithuanians, nine per cent among Latvians and Bulgarians, more than six per cent among Estonians and Poles, and two to four per cent among Czechs, Slovaks, Slovenes, and Hungarians.

The census-based cumulative mirror statistics also show that the majority of the emigrant population is economically active, which is indicative of labour migration in line with earlier forecasts. The economic activity of migrants aged 15–64 years from Eastern Europe well exceeded the average activity rate of 60 per cent in the EU–15 after 2000. The activity rate of Latvian, Lithuanian, Polish, Slovak, and Hungarian emigrants was especially high (around 80 per cent), however the rate of Romanians and Bulgarians was not much lower either (76–77 per cent). The activity rate of Czech emigrants stood at 75 per cent, and that of Estonians and Slovenians was somewhat lower (71–73 per cent).

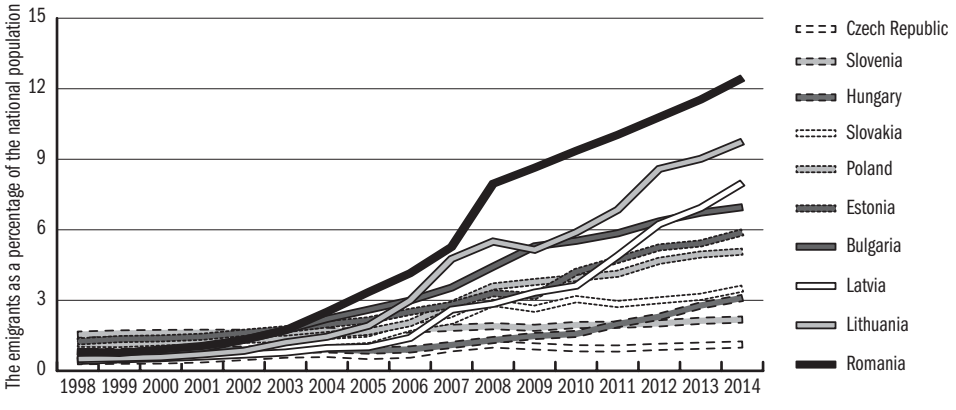
The dynamics of outmigration on the basis of changes in the number of people residing abroad

The observed country rates give a snapshot of the extent of migration from certain Eastern European countries in 2011. The cumulative mirror statistics calculated on the basis of population statistics indicate changes in outmigration over time. The data does not show how many people moved away and how many returned, but it does show net outmigration and how it changed. The proportion of the emigrant population within the national population by year and country is depicted on *Figure 1.2*. There was a rapid increase from each country after EU accession. While the proportion of Eastern Europeans living in Western Europe appeared to be around 1–2 per cent of the national populations according to statistics in 2004, this share increased in nearly all countries after 2004. However, the rate of the increase varies across countries.[7] Outmigration is especially intense from Romania, and among the Baltic countries from Latvia and Lithuania. They are followed by Poland, Es-

7 The regularisation of migrants already residing (non-legally) abroad also contributed to the rapid rise in the statistics in 2004. The sudden increase in migration made the large population of non-registered migrants who had arrived earlier from countries with a high migration propensity visible; however this effect evened out over time.

tonia, and Bulgaria where outmigration is smaller but it is still sizeable and continuous. The Slovak emigration rate gradually fell behind, while that of Hungary increased to a similar level. The level of Czech and Slovene emigration remains low.[8]

Figure 1.2: The share of EU–8 + 2 nationals resident in EU–15 countries as a percentage of the population of their country of nationality (as on Jan 1st of each year)



Source: Author's calculation on the basis of Eurostat data on the number of foreign nationals residing in the specific countries, missing data imputed using the methods described earlier.

The last 15 years can be divided into distinct phases: the period before the accession of the EU–8 countries (before 2004), the initial years of rapid growth in migration up to the crisis (2004–2008), the crisis (2008–2010), and finally the opening up of German and Austrian labour markets (after 2010). Although the rapid growth was briefly interrupted by the crisis, the trends seem fairly constant and the intensity of outmigration differed between countries in the different periods. Figure 1.3 shows annual average changes in emigration as a proportion of the total population of the country of nationality over time, calculated from cumulative mirror statistics.

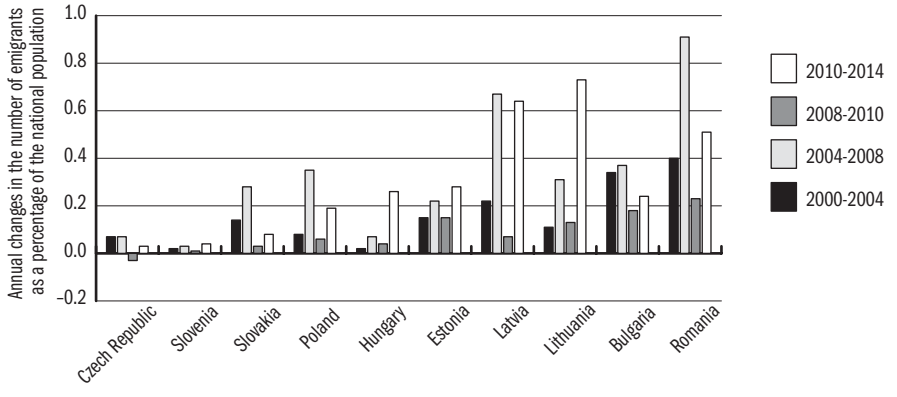
There had been varying degrees of outmigration from the majority of EU–8 countries already before EU accession; however this suddenly soared after 2004, slowed down everywhere during the crisis, and then accelerated again after 2010. In the EU–8, the intense growth observed prior to the crisis continued in the Baltic countries; however in Poland and especially in Slovakia – where the economic developments were favourable – it remained below pre-crisis levels. The Czech Republic and Slovenia were largely unaffected by outmigration. The situation was also similar in Hungary at the time of accession; however migration intensified after 2010. The processes in Bulgaria and Romania are somewhat different. Outmigration was already substantial in both countries at the time of their accession to the EU in 2007,[9] this in-

8 In principle outmigration by country can also be estimated on the basis of the EU–LFS mirror statistics, even though access to non-anonymised data is not possible. Such calculations are presented by the *EU* (2014) – on the basis of 2013 LFS data – on the migration of the population aged 15–64 years; the results are very close to the calculations presented here.

9 Labour migration to Spain, chanelled by bilateral agreements, as well as labour migration to Italy legalised by irregular and repeated amnesties were also common (see also *Peixoto et al.,* 2012).

creased even further, and then returned to a lower lever after the crisis. This is probably due to the deteriorating absorption capacity of the main Southern European destination countries.

Figure 1.3: Changes in the number of EU–8 + 2 nationals residing in EU–15 countries as a percentage of the total population of their country of nationality (Jan 1st of each year)



Source: Author's calculation on the basis of Eurostat data on the number of foreign nationals residing in the specific countries, missing data imputed using the methods described earlier.

Outmigration from Hungary – unlike that from other countries – started late. The strong pull effect created by EU accession had a limited impact in Hungary; the crisis and its consequences, the reforms with inevitable cuts in the second half of the 2000s, as well as the measures of the ruling government since 2010 all combined together to encourage migration (*Hárs,* 2013). Although the size of emigration remained well below the high emigration rates observed in other countries within the favourable context of EU enlargement – on average around 0.4 per cent or more of the national population annually – it did however reach the rates that characterise countries with medium-intensity outmigration: an average rate of 0.2 per cent on an annual basis. Migration to the EU–15 represented 3.1 per cent of Hungary's population at the beginning of 2014, according to cumulative mirror statistics. After EU accession, between 2004 and 2014, the proportion of the Hungarian population living abroad increased by 2.2 per cent. Outmigration increased steadily after 2007 and started to accelerate after 2010; the rate of those who have moved abroad increased by 1.6 per cent between 2010 and 2014. The increase in the rate of outmigration observed after 2007 was moderate; however, unlike in the Czech Republic or Slovenia, it did not stop during the crisis. This modest increase was also noted in the Hungarian literature (see e.g. *Blaskó et al.,* 2014, *Hárs–Simon,* 2015).

According to the most reliable estimates calculated on the basis of information from the Personal Data and Address Register of the Central Office for Administrative and Electronic

Public Services (KEK KH), 335 thousand people in the population aged 18–49 years were settled abroad at the beginning of 2013 (*KSH NKI,* 2013). For the total population this represents approximately 3.4 per cent. Differences between the two estimates for a similar time period are adequately explained by differences in the content of the data, in particular the fact that the computed mirror statistics are limited to the main EU–15 region due to technical issues. The mirror statistics provide a lower estimate of outmigration, namely how many people are settled in the EU–15.

Migration, labour market, economic expectations

Outmigration from the new EU Member States was primarily motivated by employment: work propensity and activity of emigrants was consistently high (*Kahanec et al.,* 2010). In addition to the potential wage gain associated with the economic differences between countries, the unfavourable labour market situation (the level of unemployment) in Eastern Europe, and economic prospects, country-specific characteristics also shaped the process of emigration.

Figure A1.1 of *Appendix A1* at the end of this chapter shows the changesof the main factors influencing outmigration in Eastern Europe by country, based on stylised facts: changes in unemployment indicate the labour market effect and annual GDP changes illustrate the economic prospects. The effect of substantial wage differentials between countries is assumed to be constant based on *Oblath* (2014).[10]

The structure of the economy transformed during the regime change and masses of jobs disappeared. Unemployment was high and employment prospects were unfavourable in most of the EU–8 countries during the first half of the 2000s. Outmigration quickly ensued in the context of high unemployment – over 10 per cent in the Baltic countries and in excess of 20 per cent in Poland and Slovakia – and the opportunities created by the free movement of labour and virtually unlimited labour demand in receiving countries. The high unemployment level started to decrease rapidly, however it soared again in the Baltic countries heavily affected by the crisis. This boosted migration again, which alleviated unemployment once more. The effect of the crisis was more moderate in Poland and Slovakia also stabilised relatively quickly; the net increase in outmigration slowed down, to which return migration also contributed. The fall in unemployment was accompanied by economic growth in Poland, the Baltic countries and Slovakia (*Kaczmarczyk et al.,* 2010, *Hazans–Philips*, 2010).

However, migration was not the cause, the improvement of economic indicators was determined by the economic growth cycles of these countries and the opportunities for outmigration simply coincided with these processes. Detailed analyses of labour market selection have also demonstrated for Poland and the Baltic States that labour over-supply fell as a result of migration and equilibrium in the labour market improved over the long run. This lead to a tighter labour market, where labour supply

10 The country studies that explore the impact and structure of outmigration in detail, also consider further issues such as demographic consequences, structural differences, as well as short- and longer term impacts (*Kaczmarczyk et al.,* 2010, *Hazans–Philips,* 2010, *Hazans,* 2013). These are not discussed here in detail due to limitations of space, only stylised facts are presented.

decreased, wages increased, and the conditions for modernisation of the economy were created (ibid).

The unfavourable labour market situation of Romania and Bulgaria had already set off a rapid outmigration before their EU accession in 2007; however this was not accompanied by a notable improvement in the economy: the GDP stagnated and outmigration was steadily increasing (*Mereuta,* 2013).

Heavy migration created structural deficits in the labour market, the impact of which depends on the structure of outmigration and the selection of migrants. Improvements in the economy or the labour market can be followed by return migration; the missing workforce can be replaced by return migration and immigration (this would be especially important in the Baltic States, where intense outmigration was sustained over a period of time). However, the return migration programmes of these Eastern European countries did not prove successful and immigration policies are also modest (*Hazans,* 2013, *Kaczmarczyk et al.,* 2010, *Kaczmarczyk,* 2013, *Mereuta,* 2013).

In Hungary (as well as the Czech Republic and Slovenia that are not included in *Figure A1.1*), however, unemployment was low and outmigration moderate in the period following accession. Around 2010 the increase and consistently high levels of unemployment (adjusted by workfare) started to have an effect, while, as illustrated by the stagnation of the GDP, economic prospects did not improve either. The short history of Hungarian migration is closest to the Romanian and Bulgarian models in Eastern Europe: besides the stagnating economy and unfavourable labour market prospects, additional country-specific factors also influenced emigration. This suggests a steadily increasing migration in the short run. There is no prospect of economic changes that would realise the economic benefits of migration, would lead to market equilibrium and to the structural modernisation of the economy.

Direction and patterns of migration flows

Migration flows, the net increase of annual migration by country are examined on the basis of mirror statistics (leaving out the Czech Republic and Slovenia again – see *Figure A1.2, Appendix A1*).

The direction of migration was determined by the migration opportunities that opened up following accession and the economic attractiveness of destination countries, as well as regional effects. The economic attractiveness and immediate opening up of the United Kingdom's (and Ireland's) labour market reshuffled the emigration patterns of EU–8 countries within a short period of time. Germany became one of the main destination countries everywhere, although the effect of restrictions on migration in the transition period is apparent prior to 2011; however, its attraction has been gradually increasing since that time. The direction of emigration from Romania and Bulgaria was different, towards the Mediterranean region.

The heavy migration shown earlier creates a double-hump graph in the Baltic States and Poland; the direction of migration was predominantly the United Kingdom and Ireland (in the case of Estonia the neighbouring Finland) in the first wave after 2004. After the crisis migration to Ireland stopped. The intense outmigration from Slovakia after 2004 was also heading towards the United Kingdom, and then it decreased gradually. Initially, the main destination country of Romania and Bulgaria was Spain (in the case of Romania also Italy to a smaller extent). Accession to the EU in 2007 quickly increased migration from Romania to Italy and from Bulgaria to Greece; however, the economic crisis in the following year shifted these directions.

Outmigration from Hungary was somewhat different from the mainstream: besides its low intensity it was also initially characterised by diversity. The main destination of the rapidly growing migration after 2010 became the United Kingdom. After the German and Austrian labour markets fully opened up in 2011 there was also a substantial increase in migration towards Germany, the traditional destination country of Hungarians. Overall, the intensity of outmigration is similarly large in both directions, and emigration to Austria has also substantially increased.

Does immigration offset outmigration?

Immigration flows also started as the borders opened up in Eastern European countries after regime change. Among the motivating factors the economic pull effect of migration, tradition, networks, and the receiving environment were all important (*Wallace–Stola,* 2001). The expectations of economic growth in the post-regime change period strengthened the potential of these countries to attract immigrants. The migration process of Mediterranean countries served as a model, where outmigration turned into immigration (*Peixoto et al.,* 2012). *Arango* (2012) describes the transformation of Eastern European countries into a destination for immigrants – alongside the old immigration countries from Western Europe and the new ones from the South – from a general theoretical perspective. Similarly to the previous section, this part presents immigration to Eastern European countries – with special attention to Hungary – in international comparison using descriptive statistics.

Data

The analysis uses census data and, similarly to the previous section, it examines long-term – for more than a year – residents by nationality, which provides a better estimate of recent immigration.[11] Shorter-term trends and flows are not visible, however population censuses provide more reliable *rates* for small samples.[12]

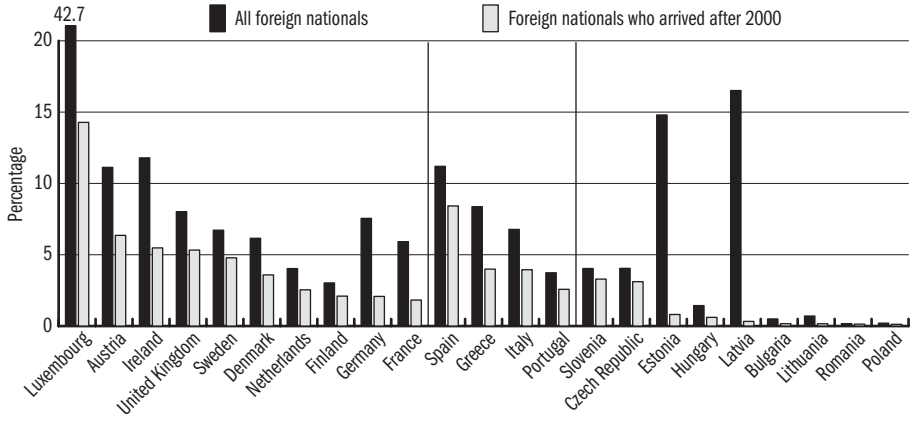
11 Immigration defined on the basis of nationality excludes new citizens naturalised on the basis of ethnicity from the migrant population.

12 The labour market survey is suitable for the analysis of immigration where the size of the migrant population is large enough; however, due to low levels of immigration and the inadequate weighting of the sample it does not measure the immigration of Eastern European countries reliably. For methodological difficulties see *CSO* (2015). Similarly to the previous section, census data of EU Member States available online was used to compare immigration.

Immigration – numbers and expectations

Figure 1.4 shows the share of foreign nationals and those who arrived after 2000 within the total national population. The latter provide a more valid picture of recent migration. The rates are determined by the migration processes of each country. Three groups of countries were distinguished: Northern and Western Europe, Southern Europe, and Eastern Europe. In the first, the rate of immigration varies across countries; however a substantial long-term migrant population had already accumulated in all of these countries prior to 2000 and the influx has continued after 2000 as well. However, in the majority of Eastern European countries the proportion of the immigrant population is low. The real extent of the influx was influenced by historical changes and ethnic rearrangements prior to 2000; therefore the number of immigrants after 2000 gives a better estimate of actual migration and it shows that the increase in immigration has been very low in the majority of countries since 2000. *Drbohlav et al.* (2011) examined migration flows and stocks in detail using the cases of Poland, the Czech Republic and Hungary. The authors described immigration in Eastern Europe in the late 2000s as a slowly growing "embryonic" process, where changes are visible but small. Hungary, after substantial immigration in the years of regime change, fitted into the regional trend of moderate immigration (*Hárs,* 2010).

Figure 1.4: Proportion of foreign nationals in the total population, total and post-2000 immigration in the EU states, 2011 (percentage)



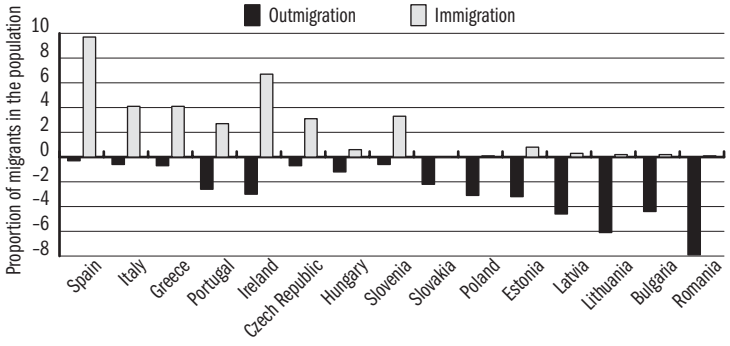
Note: Luxembourg's outlying number is not displayed in full, it is shown by a number at the top of the column. Immigration data for Estonia and Latvia also include non-citizen ethnic Russians, this shows virtual immigration (see *Lagzi,* 2008).
Source: Author's calculation on the basis of 2011 population census data in the specific countries.

Combined with modest immigration, as has been shown in the previous section, the rate of outmigration was significant and increasing rapidly in the

majority of Eastern European countries. Substantial outmigration can bring about shortages in the labour markets, and thus trigger immigration alongside an increase in local wages. Based on the short history of emigration, it can be concluded that although the wage effect exists, there is no visible immigration.

Figure 1.5 displays outmigration and immigration together in the EU–8 countries (and for comparison in the five, newly emerged destination countries in the EU). The change of trends seems obvious: immigration was more substantial in Eastern European countries where there was no outmigration. Slovenia and the Czech Republic were basically unaffected by emigration; however, the extent of immigration is comparable to rates observed in immigration countries. The picture is very clear in the new receiving countries: immigration was substantial in all of these countries and outmigration stopped after 2000. The processes are not simultaneous, immigration started with migration transformation, and can even be temporarily reversed if the economic conditions change.[13]

Figure 1.5: Immigration of foreign nationals after 2000 and the outmigration of local nationals in the EU–8 and the five new receiving EU states, 2011



Source: Author's calculation based on 2011 population census data in the specific countries.

Conclusion

The descriptive statistical analysis of migration by international comparison has shown that the rapidly growing rate of outmigration from – the latecomer – Hungary is (for now) below that of countries where this process had started earlier. Changes in the stock of migrants observed over time in the study could have taken place alongside smaller and larger migration flows.

When the migration pressure is strong, it is often assumed that the rapidly increasing outmigration is a unidirectional process. The overestimation of factors encouraging outmigration and the rejection of issues encouraging or forcing return migration are often behind this assumption. From the analysis of data of the main destination countries it can be concluded that in ad-

13 The migration transformation of mediterranean countries is discussed in detail by *Peixoto et al.* (2012).

dition to outmigration, the level of return migration is also substantial (see also *Chapter 2.7* of *In Focus*).

Besides increasing outmigration, the level of immigration to Hungary is modest similarly to other countries in the region. The heavy influx observed at the time of the regime change plummeted (and the data used for the analysis does not distinguish naturalised immigrants). Previous research and the other chapters of *In Focus* present the structure and labour market implications of immigration, as well as its potential economic role.

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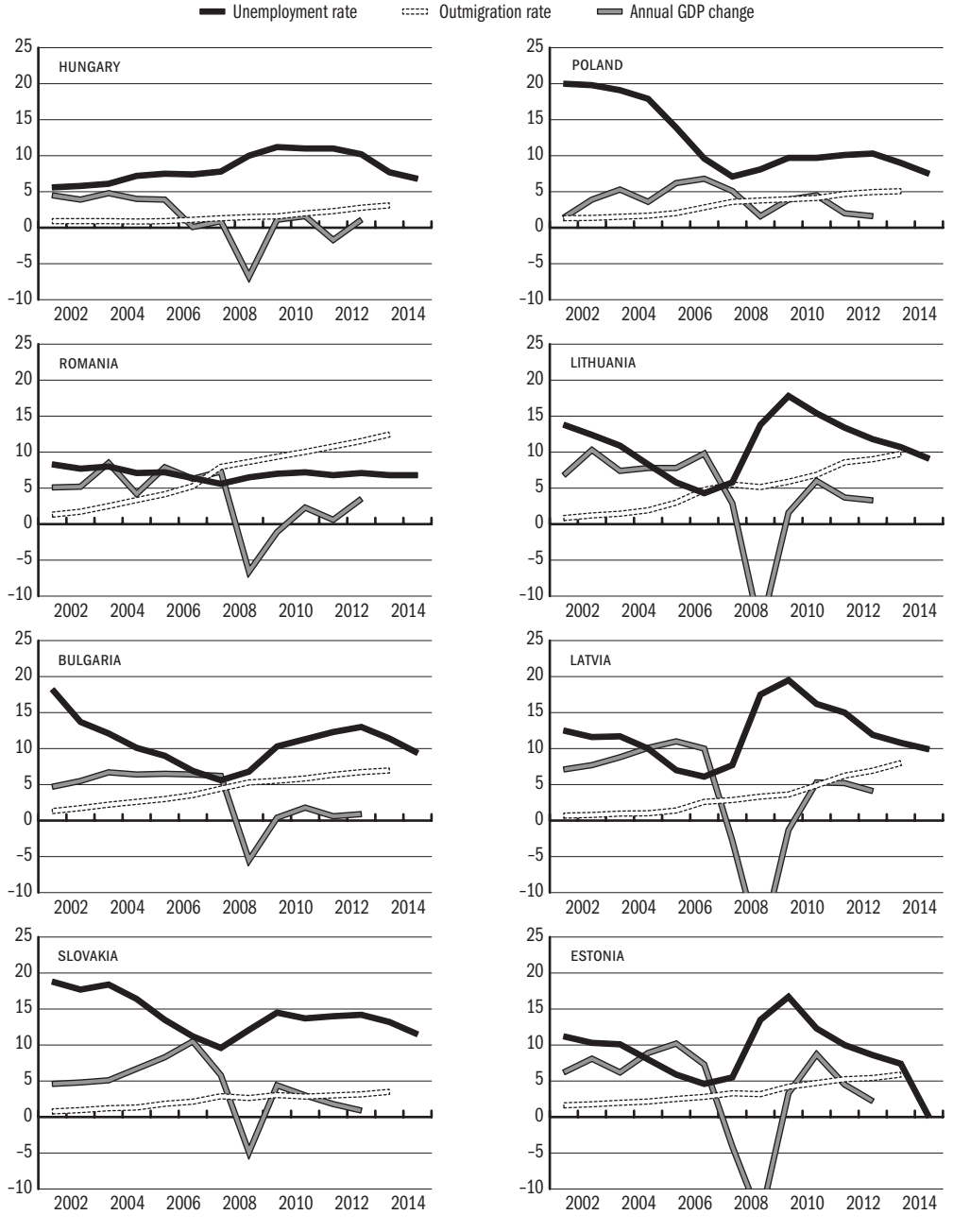
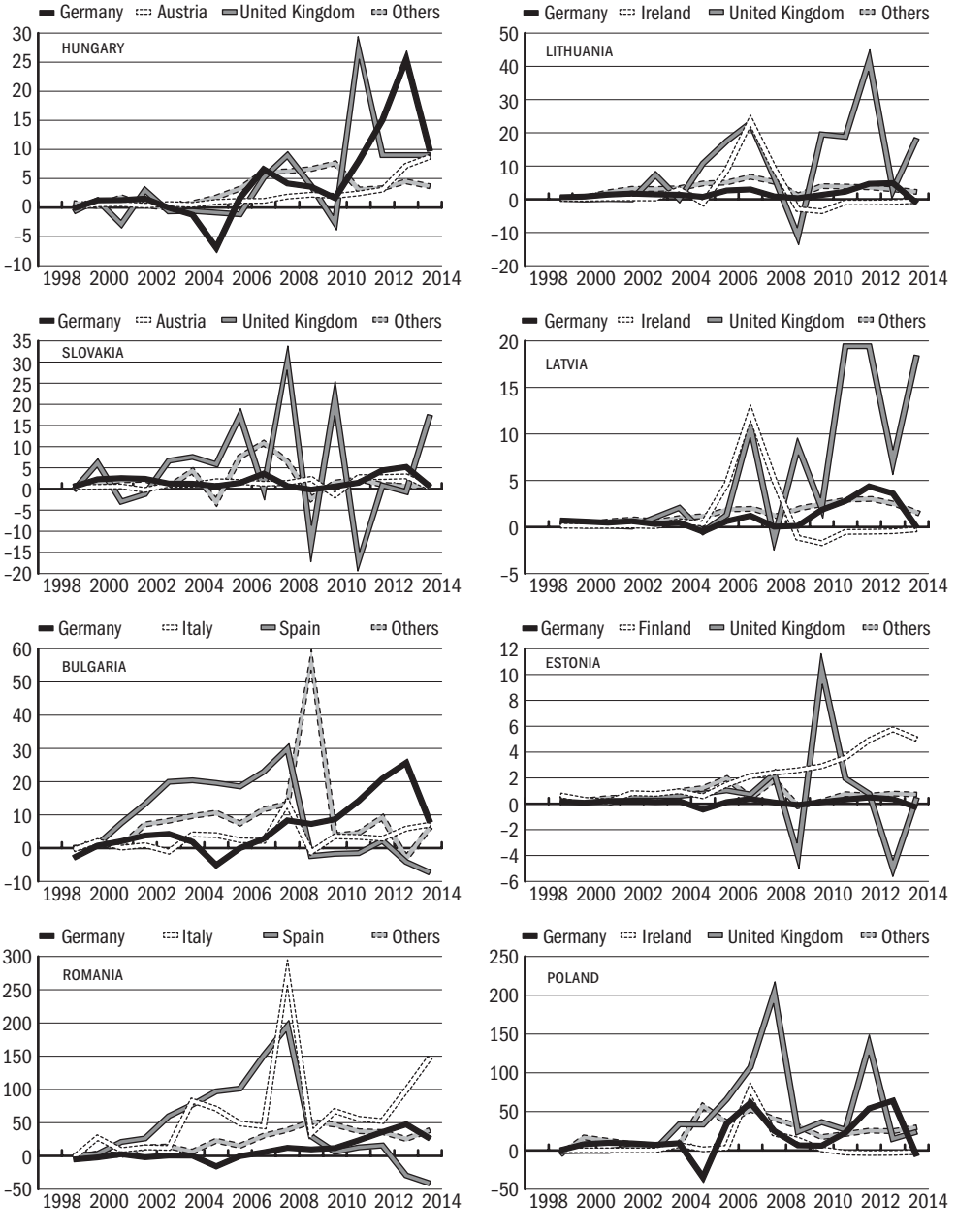
Appendix A1

Figure A1.1: Changes of the migration rate, annual GDP growth, and the unemployment rate, percentage



Source: Outmigration rate: *Figure 1.2*, unemployment rate and annual GDP change: *Eurostat*.

Figure A1.2: Changes in the number of EU–8 nationals migrating to EU–15 countries by destination country, thousand people, as on January 1



2 EMIGRATION

2.1 MIGRATION INTENTIONS IN CONTEMPORARY HUNGARY

ENDRE SIK & BLANKA SZEITL

The indicator of migration intention (or potential) measures the intention or plan of finding work abroad or of emigration.[1] The indicator is no more than a simple rate, the proportion of a given population planning emigration.[2] From a labour market perspective, migration potential can be considered a supply-side approach and as such it is not suitable to estimate the probability of labour mobility because the labour market is more strongly influenced by the demand side. Therefore it can rather be considered as an early predictive information (*Gödri–Feleky,* 2013) on the size and the composition of future supply.[3]

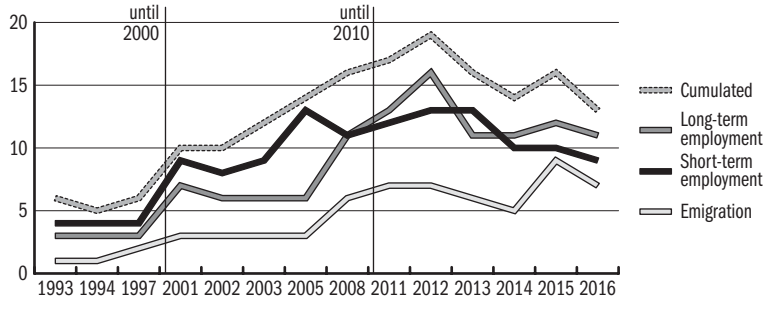
This study aims to answer two questions:

1. How has migration potential developed in the Hungarian society since the 1990s?

2. What are the factors most strongly associated with the development of migration intentions in 2015/2016?[4]

The analysis is carried out separately for the three different types of migration intention distinguished by timeframe and/or purpose (short- and long-term employment and emigration) to avoid the equalising effect caused by excessive aggregation.[5]

Figure 2.1.1: Migration potential of the Hungarian population between 1993 and 2016 (percentage)



Source: *TÁRKI* Monitor- and „Omnibus" survey, January 1993 – January 2016.

Figure 2.1.1 shows that the migration potential of the Hungarian population increased both in terms of short- and long-term labour migration plans by the early 2000s compared to the 1990s. Following a peak in 2012 it declined until 2014 and has remained around 9–11 per cent with very little variation

1 The definition includes both "intention" and "plan" for a reason: the extent of migration potential is largely dependent on the wording of the question. The wording used here – "are you planning" – is the most rigorous option of possible question wordings (e.g. "have you thought about..." or "would you like to...").

2 The internal validity of the research, namely how well it captures the seriousness of migration intention, can be improved if additional "filter" questions are used to distinguish "dreaming" and satisficing from actual migration potential. There are many possible ways of doing this; for example (as in this study) by asking additional questions on the timeframe of migration, when or where they are planning to go, in case of labour migration what job are they planning to do and for what pay (for more detail see *Sik,* 2003).

3 Research on the socio-demographic composition of migration by destination country (*Blaskó-Gödri,* 2014) found a very similar picture to the results of migration potential studies.

4 The three surveys in 2015 and the survey in January 2016 used the same method on a nationally representative sample of the adult population aged over 18 years. For each wave the sample size was around 1,000 people.

5 Respondents answered three questions separately (Are you planning to go abroad to work for a few weeks? Are you planning to go abroad to work for a few months/years? Are you planning to emigrate?) The cumulated migration potential is based on the proportion of those who answered at least one of these questions with 'yes'.

since then. The proportion of those considering emigration hardly changed prior to 2005 and then fluctuated between five and six per cent until 2014. In 2015 the share of those planning to emigrate doubled, then slightly decreased by 2016. The cumulated value of migration potential has not changed greatly since its peak in 2012; it fluctuated between 13 and 16 per cent between 2013 and 2016.

As regards the migration propensity of different social groups, previous research has shown that this is higher than average where opportunities (young age, more human and network capital) and pressures (discontent, pessimism, discrimination) mutually strengthen each other (*Sik–Simonovits,* 2002, *Sik–Örkény,* 2003). *Table 2.1.1* shows the factors influencing short- and long-term labour migration as well as emigration.

Table 2.1.1: Factors affecting the likelihood of migration potential by timeframe of migration (2015/2016 joint database, N = 3,919, logistic regression odd ratios)

	Short-term	Long-term	Emigration
	labour migration		
Pseudo R^2 (percentage)	18	21	19
Age group (reference category: aged over 65 years			
18–28 years	10.42*	14.2*	6.44*
29–38 years	4.17*	6.10*	3.42*
39–53 years	2.49*	2.29*	0.49**
Sex (reference category: female)			
Male	2.14*	2.01*	1.81*
Region (reference category: Central Hungary)			
Western Transdanubia	2.83*	ns	ns
Northern Hungary	2.23*	ns	ns
Type of settlement (reference category: town)			
Budapest	1.79**	ns	ns
City (county capital)	0.51**	0.57*	0.36*
Ethnicity: Roma	1.71**	ns	ns
Attends church	1.36**	ns	ns
Fidesz – Hungarian Civic Alliance voter	0.61*	0.66**	0.53*
Jobbik – Movement for a Better Hungary voter	1.70*	1.41**	ns
DK – Democratic Coalition voter	1.98**	1.75***	ns
Uses the Internet	1.57**	1.55**	1.85*
Home owner	0.72**	0.70**	0.61*
Owns other property	1.54**	1.97*	1.71**
Gets by with careful budgeting	0.66*	ns	ns
Financial situation likely to improve	1.67*	1.81*	1.76*
Good financial situation	ns	0.71***	ns
No financial difficulties	ns	ns	0.41**
Education – vocational qualification	ns	ns	0.54**

Notes: Only odd ratios that are significant at least once are presented in cells. Categories that are not significant in any of the cases: Central Transdanubia, Central

Hungary, Southern Transdanubia, Southern Great Plain, Northern Great Plain, village, MSZP – Hungarian Socialist Party voter, all categories of voting intention, car ownership, bad financial situation, financial situation likely to get worse, has to go without things, enough income, graduate, primary education.
Significant at: ***1 per cent, **5 per cent, *10 per cent; ns: not significant.

For all three types of migration plans, the likelihood of migration potential is significantly increased if the respondent is young and male. The effect of internet use, property ownership and belief in the improvement of one's financial situation have a similarly strong effect in *increasing* migration potential (and cover all three types); while living in cities, home ownership and support for the governing (Fidesz) party *reduce* migration potential.

As regards short-term labour migration, those who live in Budapest, Western Transdanubia or the Northern Great Plain, have Roma ethnic background, support the Democratic Coalition (a leftist party) (also applies for long-term labour migration) or Jobbik (an radical rightwing party), or attend church are more likely than others, while those who only get by with careful budgeting are less likely to consider migration.

Plans for long-term labour migration as well as for emigration differ from the above picture in that a good financial position (or a vocational qualification in the case of emigration) decrease this type of migration potential.

The larger sample size of the joint database allows for a more detailed analysis of the destinations of migration intentions (*Table 2.2.2*).

Table 2.1.2: Distribution of destination countries among those planning either a short- or a long-term labour migration or emigration (2015/2016, in decreasing order of destination country by short-term migration intentions, percentage)[a]

	Short-term migration N = 686	Long-term migration N = 823	Emigration N = 494		Short-term migration N = 686	Long-term migration N = 823	Emigration N = 494
Austria	51	44	34	USA	4	5	9
Germany	42	46	30	Canada	4	3	6
United Kingdom	28	30	29	Finland	3	1	3
The Netherlands	11	9	9	Denmark	2	3	4
Neighbouring countries to Hungary (except Austria)	6	4	2	France	3	2	2
Ireland	6	7	6	Spain	2	3	1
Sweden	5	4	4	Other non-European countries	2	3	5
Other European countries	5	3	4	Greece, Belgium, Luxemburg, Italy, Portugal	1	1	1

[a] The full sample is the group of countries (up to three destination countries) indicated by respondents for all three types of migration.
Source: Tárki „Omnibus" Survey, 2015 – January 2016.

As has been shown by other studies, Austria (mainly for short-term labour migration), Germany (particularly for long-term labour migration) and the United Kingdom were the main destinations of people planning migration (*Nyírő,* 2013).

Table 2.1.3 examines whether the composition of factors influencing short- and long-term labour migration as well as emigration intentions differ across Austria, Germany and the United Kingdom.[6]

6 The likelihood of choosing a particular destination country was examined within the group of respondents planning a certain type of migration. For example, we analysed the likelihood of someone who is considering short-term migration to select Austria (as well) as the destination country etc.

Table 2.1.3: Factors influencing the likelihood of choosing a specific destination country by timeframe of migration in the case of Austria, Germany, and the United Kingdom (2015/2016 database,logistic regression odd ratios)

	Short-term migration potential N = 381			Long-term migration potential N = 475			Emigration N = 326		
	Austria	Germany	United Kingdom	Austria	Germany	United Kingdom	Austria	Germany	United Kingdom
	N = 193	N = 159	N = 107	N = 211	N = 219	N = 140	N = 111	N = 99	N = 96
Type of settlement (reference category: village)									
Budapest	ns	ns	ns	3.94*	ns	ns	7.5*	3.24**	ns
Town	2.08**	1.99**	ns	1.84**	ns	ns	ns	ns	ns
Region (reference category: Central Hungary)									
Western Transdanubia	0.14*	ns	ns	ns	ns	ns	0.23**	3.23***	4.92**
Southern Transdanubia	ns	ns	ns	ns	ns	ns	0.23**	ns	ns
Northern Hungary	ns	0.31**	ns	2.63**	0.33**	ns	ns	ns	ns
Northern Great Plain	ns	ns	ns	5.74*	ns	ns	3.46***	ns	ns
Southern Great Plain	ns	ns	0.17*	ns	ns	ns	0.38***	ns	ns
Age (reference category: 54–65 years)									
29–38 years	ns	0.34**	ns	ns	ns	ns	ns	ns	ns
Education (reference category: degree)									
Vocational qualification	ns	ns	ns	ns	2.15***	0.23*	ns	ns	ns
Secondary education	ns	3.94**	ns	ns	ns	ns	ns	3.38***	ns
Home ownership (no)	ns	ns	ns	0.53**	ns	ns	0.45**	ns	ns
Roma ethnicity (no)	0.39**	ns	ns	3.21*	ns	ns	ns	ns	ns

Note: All models include only those respondents who are planning a given type of migration. Only odd ratios that are significant at least once are presented in cells. Categories that are not significant in any of the cases: county capital, Central Transdanubia, Central Hungary, church attendance, car ownership, graduate, 18–28 years, 39–53 years.
Significant at: ***1 per cent, **5 per cent, *10 per cent; ns: not significant.

In the case of short-term labour migration intentions, it clearly appears that the choice of destination country is strongly influenced by regional location. This is not surprising given that cross-border commuting is also included in short-term labour migration, and this is most viable from regions nearer to the destination country. Even among those considering emigration, living in Western Transdanubia increases the likelihood of choosing Germany or the

United Kingdom. Emigration to Austria and Germany is much more likely from Budapest than from any other part of the country and home owners are less likely to consider employment in Austria. As regards to short-term migration plans, being Roma somewhat reduces the short-term migration potential to Austria, while younger (but not the youngest) individuals and those with secondary education would prefer to go to Germany.

Long-term employment in Austria is mainly intended by those from towns and the most disadvantaged regions. Those with a vocational qualification are twice as likely to plan long-term employment in Germany (on the other hand, they are very unlikely to consider working in the United Kingdom); while being Roma strongly increases, and owning a home decreasesthe likelihood of long-term migration to Austria.

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2.2 THE SOCIAL AND DEMOGRAPHIC COMPOSITION OF EMIGRANTS FROM HUNGARY

ZSUZSA BLASKÓ & IRÉN GÖDRI

The demographic and social composition of emigrants has important implications for the countries affected. For sending countries the impact on the labour market is crucial, which is largely shaped by the age, education and previous labour market status and experience of those moving away. The emigration of the educated and of those with professional qualifications can have negative implications for the economic growth of the country. Furthermore, the demographic implications (that also have an impact on the labour market in the long run) following from the age, family status as well as the number of existing and future children of the emigrants must also be considered. Although losses in the human capital might be compensated by return migration in the long run (see *Chapter 2.7* of *In Focus* on this), in the short term the effects are predominantly negative.

The analysis of the social and demographic composition of emigrants of a country poses a number of methodological difficulties. Available data sources typically do not cover the total population to be studied only different – partly overlapping – groups; the data is not sufficiently detailed, often not reliable enough and not up-to-date. In what follows we provide a brief overview of available data sources on the number of Hungarians living/working abroad, the main advantages as well as limitations of these. Then, based on these data emigrant profiles are presented using descriptive statistics. Finally a more nuanced picture of the composition of emigrants is drawn up using multivariable analysis of data from a sample survey.

Data sources

The 2011 Population Census distinguished two groups of the population residing abroad: those temporarily (up to 12 months) and those permanently (more than 12 months) residing abroad. For the former group, the same information was recorded as for the population residing in Hungary (using the same personal questionnaire); while for those living abroad permanently, only their number was recorded on the dwellings questionnaire (therefore their regional distribution is known). However, individuals who moved abroad with their whole household and have their real estate in Hungary either unoccupied or rented out, were not necessarily recorded in the Census.[1]

The so-called mirror statistics – namely the immigration or labour statistics of receiving countries – are also an important source of data for the analysis of emigrants. The main advantage of these is that registration of those liv-

1 Obviously, the Population Census does not provide information on those emigrants who have left the country on a permanent basis (i.e. they no longer have a registered address in Hungary).

ing or working in a destination country for an extended period of time tends to be more accurate than the registration of emigrants in a sending country. Furthermore – unlike the Census – mirror statistics also include those residing abroad with their entire household. Eurostat collates and publishes the immigration statistics of EU Member States on an annual basis. These include as immigrants individuals who are planning to stay in the destination country for at least 12 months and are officially registered. Immigrants from a country of origin can be listed by citizenship as well as by country of birth. However, the scope of recorded attributes is rather limited: it only allows for an analysis by sex and age group.

A specific group of those living abroad, namely labour migrants – those working abroad for at most 12 months and are aged 15–74 years – are recorded by the Labour Force Survey (LFS) of the Central Statistical Office on a regular, quarterly basis.[2]

Two – recent – sample surveys also provide information on emigration. The *Turning Points of the Life Course* study between November 2012 and February 2013 used a sample of 8,917 individuals aged 18–49 years and with a registered address in Hungary (the sample was selected from the National Register of Addresses). The study was conducted by the Hungarian Demographic Research Institute. In those cases, when the individual in the sample could not be found at the given address, the interviewers attempted to find out the reason for their absence. In a large number of cases the reason identified was residence abroad (they were either not visiting home during the time period of the survey or if they were, they responded that they lived abroad). In these cases the interview included the reasons for living abroad, as well as the destination country. Furthermore, sex, age and the location of the registered address of these individuals were registered (*Kapitány–Rohr,* 2014).[3]

The other survey – the *Hungarians abroad* study – was also conducted around the same time and it was linked to the Labour Force Survey in the first quarter of 2013 as part of the SEEMIG (*Managing Migration and Its Effects in South-East Europe*) project. This survey was also conducted by the Demographic Research Institute. It collected more detailed data on emigrants than the *Turning Points of Life Course* study and compared to other data collections, it included a wider range of emigrants. In the 27 thousand households included in the sample, the survey identified 1,606 emigrants – individuals living abroad (i.e. residing outside Hungary most of the time) at the time of data collection – who were either members of these households (former or current) or siblings of household members (*Blaskó–Gödri* 2014, *Blaskó,* 2015).

The composition of emigrants based on the 2011 Population Census

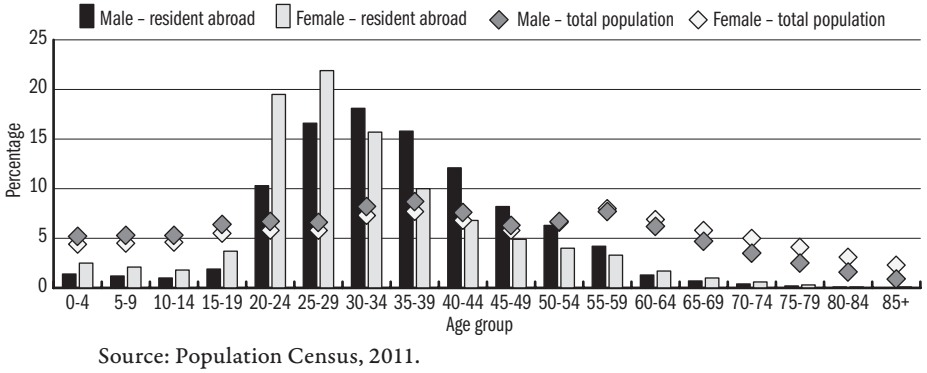
The 2011 Population Census recorded 70,059 individuals resident abroad for less than 12 months – and thus considered part of the permanent population

2 For more information on this data source and key conclusions see Chapter 2.5 of *In Focus* on labour migration by Ágnes Hárs and Dávid Simon.

3 The main findings of the *Turning Points of Life Course* study relating the composition of emigrants coincide with findings from other data sources, therefore, due to limitations of space they are not presented here.

of Hungary.[4] Males are heavily overrepresented (65 per cent) in this population, and even more so (70 per cent) among the 35- to 59-year-olds – the group with the highest level of labour market activity. As regards the composition of the group by age, the usual characteristics of the migrant population can be observed: younger age groups are overrepresented among both sexes compared to their share in the total population; in particular women aged 20 to 34 and men aged 20 to 44 years (see *Figure 2.2.1*). By contrast, the share of under-15s is low and that of over-65s is negligible. Due to the young age profile, the share of singles is higher than in the total population: 62 per cent of women and 50 per cent of men aged 15 years or over were unmarried, while the same figures in the total population were 27 per cent and 39 per cent, respectively. The gender differences in the pattern of short-term (or at least intended short-term) migration are highlighted by the fact that 43 per cent of male temporary migrants aged 15 years or over were husbands or cohabiting partners in a household left behind, while only 20 per cent of females were wives or cohabiting partners.

Figure 2.2.1: Age distribution of the population resident abroad for less than 12 months and the total population



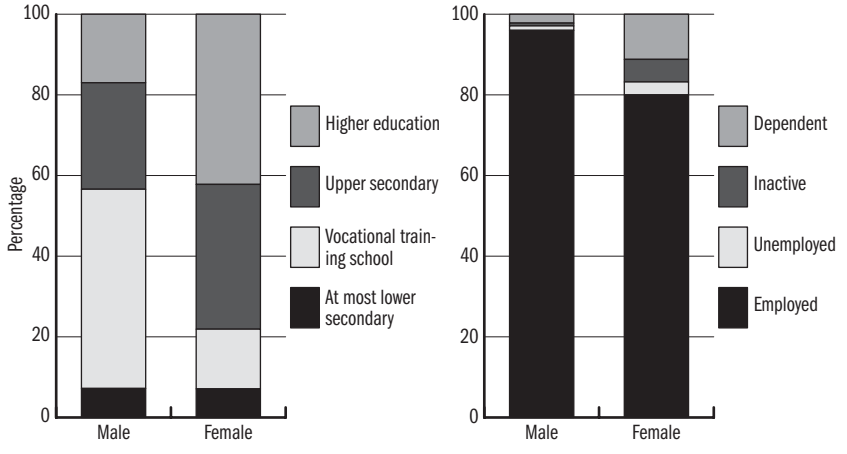
Source: Population Census, 2011.

The selection of migrants by *level of education* is especially important from the perspective of the sending country. Women temporarily living abroad were characterised by a considerably higher-than-average education: among the 18–64 year olds 80 per cent had at least secondary education, while among the 25–64 year old, 42 per cent held a higher education degree (compared to 60 per cent and 24 per cent in the respective age groups of the total population) (*Figure 2.2.2*). Among men, neither indicators of education were particularly high; however, in both age groups the share of those with a vocational qualification was well above average. This indicator was especially high among those aged between 35 and 55 years and those from villages (57–60 per cent, and 56 per cent respectively). Holding a higher education degree was most frequent among younger females aged between 25 and 34 years (47–51 per

4 Nearly two thirds lived in just three destination countries: Germany (33 per cent), the United Kingdom (16 per cent) and Austria (14 per cent); considerably lower but not negligible is the share of those residing in the Netherlands (5 per cent) and Italy (4 per cent).

cent), and it was also frequent among males and females from Budapest (46 per cent, and 56 per cent).

Figure 2.2.2: Distribution of the male and female population aged 25–64 years resident abroad for less than 12 months by level of education and labour market status



Source: Population Census, 2011.

The distribution of temporary migrants by economic activity (*Figure 2.2.2*) shows that emigration from Hungary is predominantly employment-related. Eighty-six per cent of those aged 15–64 years, and 91 per cent of the 25–64-year olds were employed (while the same figures in Hungary were 57 and 64 per cent). The employment rate of 25–64-year-old men was especially high (96 per cent). Women in the same age group were also most likely to be employed (80%), but a significant share (11 per cent) of dependents were also present here.

According to the Population Census the share of those with foreign citizenship (9.6 per cent) as well as those born outside Hungary (8.8 per cent) is higher in the population resident abroad than in the total population (where these are 2.3 per cent and 3.9 per cent respectively). This seems to corroborate the relationship that emerges from other data as well, namely previous experience of migration increases the likelihood of a subsequent migration, and it also indicates the higher migration propensity of the foreign-born population as well as their weaker attachment to Hungary (*Blaskó–Gödri,* 2014).

The composition of emigrants based on mirror statistics

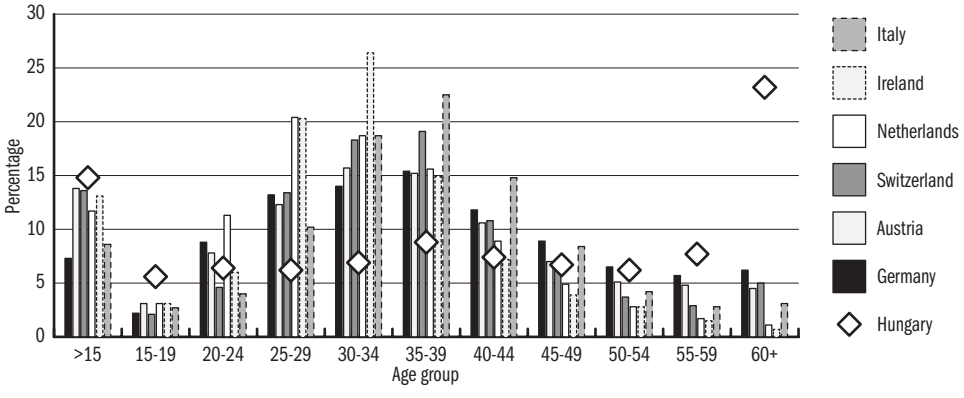
Based on aggregated data from mirror statistics, there were approximately 330 thousand Hungarian nationals living in European destination countries at the beginning of 2014 (*Gödri*, 2015).[5] These sources reveal very little information on the socio-demographic composition of this group, only their distribution by sex and age is known. According to this, the picture of a group

5 Compared to temporary migrants, long-term migrants were even more concentrated in the three main destination countries: 38 per cent lived in Germany, 23 per cent in the United Kingdom and 14 per cent in Austria; followed by Switzerland and the Netherlands with much smaller shares.

that is younger than the population of Hungary emerges, characterised by a slight male-majority (55 per cent). However, there are major differences in the composition of migrant population by destination country.

Men are considerably over-represented (62 per cent) among *Hungarian citizens* living in Germany and somewhat over-represented (52–56 per cent) in the United Kingdom, Ireland and the Scandinavian countries. By contrast, the large majority (72 per cent) of those in Italy are female, and there are also slightly more women (53–55 per cent) among those who live in Austria, the Netherlands, Spain and Belgium. All destination countries are characterised by a young age-composition; the share of 20–39-year olds was between 51 and 68 per cent in all the main destination countries, while in Hungary this was only 28 per cent. The share of young people was especially high in the new destination countries, such as the Netherlands and Ireland; while in more traditional destinations (Germany, Austria and Switzerland) older age groups were relatively better represented (*Figure 2.2.3*). In the United Kingdom – although the Eurostat database does not include information on age – the picture of a very young migrant population emerges (see *K2.2.1* text box).

Figure 2.2.3: Age distribution of Hungarian nationals in main destination countries and the total population in Hungary (January 1, 2014)



Note: The figure includes main destination countries (where at least 7.5 thousand Hungarian nationals lived); for Austria the only available data is from 2013; the United Kingdom is not included due to missing data.
Source: *Eurostat* database (last updated: January 28, 2016).

The number of *Hungarian-born population* is higher in most receiving countries – particularly in more traditional destination countries – than the number of Hungarian nationals. These groups are characterised by a sex distribution similar to what was described above (the female majority is even more marked in Italy, 75 per cent); however their age distribution is considerably older. Among those living in Austria the share of over-65s (21 per cent) is sim-

ilar to that in Hungary, while in Switzerland it is much higher (31 per cent), and it is also around 13 per cent in Italy and the Netherlands. Out of the main destination countries, only in Ireland is the age composition of Hungarian nationals and Hungarian-born population similar, which indicates the presence of a relatively new (post-2004) migration wave here.

The composition of emigrants based on the *Hungarians abroad* study

In the followings a detailed analysis is provided based on the sample of Hungarian citizens aged 20–59 years from the SEEMIG survey, *Hungarians abroad*.[6] In this age group there were 1,198 individuals in the sample who emigrated after 1989, and out of this 618 people did so after 2009. In line with data from other sources, this population also appears young and economically active. In terms of education, those with no more than lower secondary education are strongly under-represented (6 per cent), while those with higher education – both college and university – are over-represented (college: 20 vs 12 per cent; university: 13 vs 8 per cent in the population of Hungary). The share of males and females is virtually identical among those who emigrated after 1989 and it is also very similar among post-2009 migrants, although this latter group is characterised by a slight male majority.[7]

In order to examine the net effects of inter-related social and demographic characteristics multivariable analysis – logistic regression – was used, whereby those residing abroad were compared to the population resident in Hungary. Models were estimated for the entire after-1989 emigrant population followed by separate analyses of the sub-group that emigrated after 2009. The results of the analyses are presented in *Table 2.2.1.*

The main finding of the analysis from a labour market perspective is that education in itself is a key factor associated with the likelihood of emigration. The higher level of education found among emigrants is not caused by the fact that they come from a younger and more educated population. Even after controlling for age (and other characteristics), it still holds that those with vocational training or secondary education are two and a half times more likely, while graduates are nearly five times more likely to emigrate compared to those with at most lower secondary education. However, the over-representation of graduates is declining somewhat over time: among post-2009 emigrants the odds ratio of graduates drops to below four.

The effect of age among post-1989 emigrants shows a particular reversed U shape: compared to the 20–29-year olds those aged 30–39 years are significantly more likely, while those aged 40–49 years somewhat less likely, and those over 49 years significantly less likely to live abroad. However, the increased likelihood of the 30–39-year olds can be attributed to the time passed since migration (i.e. those who migrated in their twenties have also aged). This is also supported by the fact that no significant difference is found in

6 The detailed description of this analysis can be found in *Blaskó–Gödri* (2014).
7 For detailed findings see Table F1, *Blaskó–Gödri* (2014), p. 303.

the likelihood of those in their 20s and those in their 30s if we look at the group of post-2009 emigrants.

Table 2.2.1: Factors associated with the likelihood of living abroad among 20–59 year olds (odds ratios of logistic regression models)

	Post-1989 emigrants	Post-2009 emigrants	
	Model 1	Model 2	Model 3
Explanatory variables		Exp(*B*)	
Sex (reference category: female)			
Male	1.17**	1.23**	1.58
Age (reference category: aged 20–29 years)			
30–39	1.27***	0.72	0.97
40–49	0.77**	0.46***	0.46***
50–59	0.34***	0.23***	0.21***
Education (reference category: at most lower secondary)			
Vocational training school	2.70***	2.70***	1.91***
Upper secondary school	2.69***	2.35***	2.30***
College	4.77***	3.72***	3.48***
University	5.13***	3.59***	3.37***
Marital status (reference category: unmarried)			
Married	0.70***	0.53***	0.51***
Widowed	0.74	0.00	0.00
Divorced	0.76**	0.85	0.89
Place of birth (reference category: Hungary)			
Not Hungary	2.02***	2.66***	2.80***
Sex × age			
Male × 30–39			1.87***
Male × 40–49			1.28
Male × 50–59			1.92
Sex × education (reference category: female × education)			
Male × vocational training			2.95***
Male × secondary education			1.06
Male × college			0.73
Male × university			0.65
Sex × marital status (reference category: female × marital status)			
Male × married			2.27***
Male × widowed			0.58
Male × divorced			2.20***
–2log likelihood	9702.90	6020.17	5936.60
Cox & Snell R^2	0.036	0.022	0.024
Nagelkerke's R^2	0.144	0.131	0.144

Note: Controlled for region and type of settlement of last known address before emigration.
Significant at ***1 per cent, **5 per cent, *10 per cent.
Source: SEEMIG – Hungarians abroad 2013 (*Blaskó–Gödri,* 2014, p. 286).

Unsurprisingly, married people are less likely to move abroad than the unmarried, while being born abroad increases the likelihood of emigration. Concerning gender differences: controlling for other factors SEEMIG data also show the slight over-representation of men for the period as a whole as well as for the most recent years. However, this result is further refined by Model 3 that incorporates interaction effects into the model. These estimations make it possible to establish the likelihood of emigration for smaller, specific sub-groups of the population. The results show that only in some subgroups are men more likely to emigrate than women. These include: people aged 30–39 years, those with a vocational qualification, as well as the married and the divorced.

The multinomial regression analysis (*Blaskó–Gödri,* 2014) also highlights the differences in the composition of migrants by destination country. According to this, compared to other emigrants, those moving to the United Kingdom are more likely to be unmarried and young and less likely to have a vocational qualification. At the same time migrants to Germany are more likely to have a vocational qualification, be older, and married.

Conclusions

Our analyses based on various data sources have shown that Hungarian emigrants from the past decade(s) are on average more educated, younger, more likely to be unmarried than the total population. Also, males are somewhat overrepresented among them. We have also found that these features are still characteristic of emigrants even when other factors are controlled for. However, behind the general picture there are important and marked differences between migrant groups, either by destination country or according to other characteristics. As regards selection by education, which is key from a labour market perspective, the different data sources clearly and unanimously indicate the over-representation of skilled workers and graduates among emigrants. However, while some of the sources (Population Census, Labour Force Survey) suggest the dominance of skilled workers, data from the SEEMIG survey indicate that graduates are the most overrepresented group. These discrepancies are probably due to differences in the migration strategies of different educational groups, and can be explained by the uneven representation of the different emigrant sub-populations in the various statistics. The SEEMIG data (which indicates the strong migration activity of graduates) does not include cross-border commuters (or only those who do not travel very often between the two countries and spend most of their time abroad), but it includes those who moved abroad with their whole household. (The large majority of respondents in the sample had been living abroad for well over a year at the time of the survey.) By contrast, data sources that suggest a stronger presence of skilled workers and a smaller share of graduates tend to

include (more) temporary migrants with strong links to households in Hungary. The Population Census includes people who were away temporarily – for less than 12 months – but their household members lived in Hungary at the time of the census. The sample of the Labour Force Survey includes individuals – among them many cross-border commuters – who have been working abroad (for up to 12 months) and whose household members live in Hungary.

This suggests that the two groups who have the most-sought after labour market knowledge and skills – skilled workers and graduates – pursue different migration strategies: graduates are more characterised by longer-term migration, together with their family, while skilled workers are overrepresented among short-term temporary migrants who retain their link to Hungarian households as well as among cross-border commuters.[8]

8 This is also supported by various indirect information. SEEMIG data show that skilled workers are more likely to financially support a household in Hungary on a regular basis than graduates (*Blaskó,* 2015). The findings presented in Chapter 2.5 of *In Focus* also resonate with this: Blaskó and Szabó show that two thirds of migrants leaving children behind have a vocational qualification.

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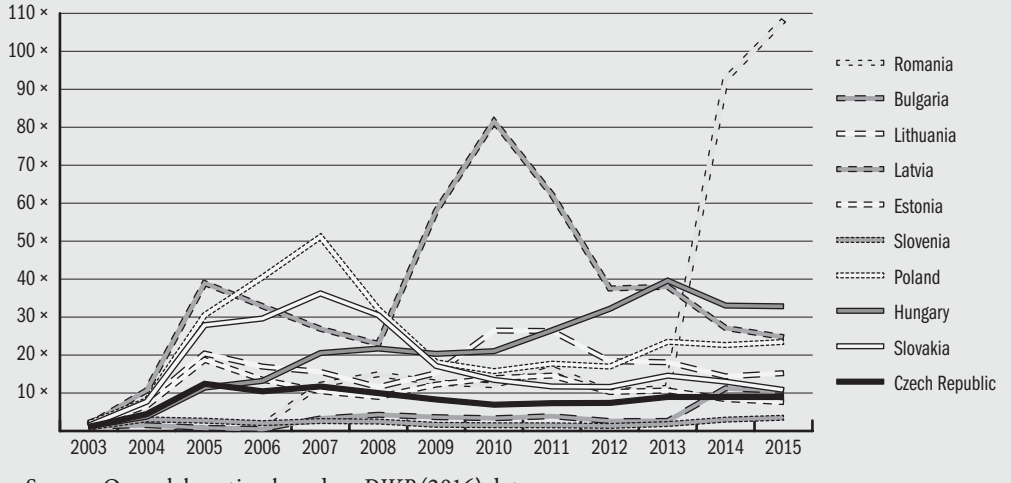
2.2.1 Hungarian immigrants in the United Kingdom

CHRIS MOREH

For Hungarian citizens working abroad the United Kingdom is currently the second most important country of destination after Germany. In the seven years following the 2004 European Union accession – the period when the British labour market, in contrast to that of most other Western European countries, fully opened up for Hungarian workers – the number of immigrants originating from Hungary rose by 39,400. However, the greatest increase was registered in the following years: the number of Hungarian immigrants entering the National Insurance (NI) system between January 2011 and December 2015 was 48 percent higher than the number of those registering in the 2004–2011 period (DWP, 2016).

Hungarian migration trends differ from that of citizens of other countries in the region (*Figure 2.2.1.1*). Compared to pre-EU-accession levels, since 2003, migration from the Baltic States has followed a "double-humped" trajectory, while migration from the Central-Eastern European countries that joined the EU in 2004 mainly developed along a "single-humped" pattern peaking in 2007. From this pattern the mobility of those originating from Hungary has begun to deviate during 2008. In this year the relative rate of immigration from the other countries began to decline, while the immigration of Hungarian workers stabilised at 14,000 per year (twentyfold the pre-Accession annual levels), then began visibly increasing between 2010 and 2013, while since 2014 we witness a slight moderation. Today the immigration rate of Hungarians is the highest among those who became EU citizens at the same time as them, overtaken only by that of Romanian citizens who have had unrestricted access to the labour market since January 2014.

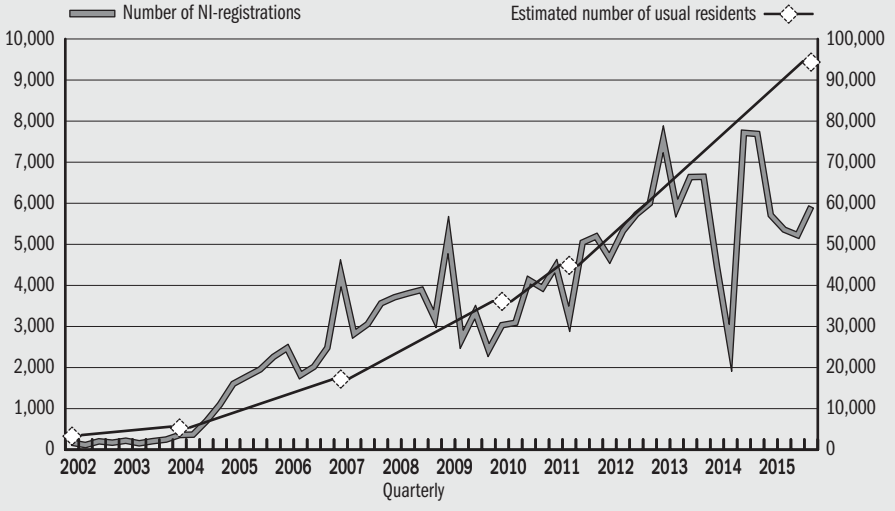
Figure 2.2.1.1: Patterns of Central-Eastern European migration in the United Kingdom (annual increments, 2002 = 100 percent)



Source: Own elaboration based on *DWP* (2016) data.

According to our estimates – the methodology of which relies on an inferential procedure based on contrasting a Census 2011 dataset with NI data (for details see *Moreh*, 2014: 147–150) – at the beginning of 2016 the number of usually resident Hungarians in the United Kingdom exceeded 94,000, which is more than double of the 44,877 Hungarian citizens registered in the Census (*Figure 2.2.1.2*).

Figure 2.2.1.2: Development of the number of Hungarian migrants in the United Kingdom (all NI registrations since 2002: 190 775)



Note: The dip in numbers in the April-June 2014 quarter is not an actual decrease, but, according to the DWP, it was caused by a change to the process of recording registrations. This, however, does not influence the yearly data.
Source: Own calculations based on different national data sources (see *Moreh,* 2014).

Although the British statistical sources do not permit the measurement of migration *flows*, (since there is no reliable data on the number of those leaving the country), the method used for estimating the number of Hungarian immigrants also allows us to make some inferences in this respect. Accordingly, if we compare the number of those who arrived after January 2004 and were still present on Census day with the number of NI numbers issued during the same period, we find that overall 50 percent of those issued with a National Insurance number were still present in 2011 at the time of the Census. However, 63 percent of those who obtained a NI number between 2004 and 2007 were still present, while of those who were registered during 2007–2010 and after 2010 only 45 and 47 percent (respectively) were present on the day of the Census. We can think of the proportion of those who had left in the meantime as the 'onward migration rate' or 'mobility rate', although other factors must have also contributed to the disparity noted above.

It is possible that among those who obtained a National Insurance Number during the three years following EU Accession there were many who had arrived earlier with plans of long-term settlement, but did not qualify to apply for a NINo before. This hypothesis is supported by the fact that a similar disparity also characterises the development of the 'mobility rate' of Polish migrants. In the case of Poles, 80 percent of those who arrived between 2004 and 2007 were present in 2011, compared to only 45 percent of those who arrived during 2007–2010, and 58 percent of those arriving between January 2010 and the day of the Census. Overall, however, as we can see, Hungarian migrants are more 'mobile' than the Poles.

There is a lack of reliable statistical data regarding Hungarian immigrants' labour-market incorporation. However, the comparative analysis of the Quarterly Labour Force Survey (UK–LFS) data series containing unique household data for the years 2008–2015 highlights some important character-

istics.[1] It is noteworthy, first of all, that among the Hungarians included in the sample the ratio of under-16s is 14 percent, which is similar to that observed among 'old-EU' national groups (EU–15), but lower than in other 'new-EU' groups (EU–11) among whom the rate of those younger than 16 is 22 percent.

Restricting our sample to those aged 16 to 64 we find that the economic activity rate of immigrants originating from Hungary is somewhat higher than that of those from other 'new' member states, which is due mostly to the difference in the number of those economically 'inactive' who are 'looking after the family home' (*Table 2.2.1.1*). At the same time, among the economically active, the percentage of those self-employed is lower, which can be accounted for by the higher rates observed among Romanian and Bulgarian workers for whom it was difficult to obtain employee status before 2014. Furthermore, the unemployment rate – according to the International Labour Organisation (ILO) definition – is also the lowest in the case of Hungarian migrants in our sample.

1 Since the number of Hungarians in each quarterly dataset is very low, in order to maximise the number of cases in our sample we have decided to aggregate data for the 2008–2015 period. However, aggregating data from each quarter is limited by the rotational panel sampling design of the LFS by which each selected household remains in the survey over five consecutive quarterly waves, while at the same time new households are introduced so that between any consecutive quarters there is an overlap of about 80 percent. Consequently, in order to work with unique cases, only every fifth quarter was included in the analysis, proceeding backwards from the latest available survey (July–September 2015). This method yielded a total of 527 unique cases (Hungarian national respondents).

Table 2.2.1.1: Economic activity between 2008 and 2015 among the 16–64 year olds (percentage)

	Hungarian	UK	EU-15	EU-11*	Other foreign nationals	Total
Active	82.5	71.7	72.6	80.5	61.0	71.5
– Employee	73.3	61.7	61.8	67.6	52.8	61.4
– Self-employed	9.2	9.6	10.5	12.7	7.7	9.6
ILO unemployed	4.7	5.1	5.4	5.0	6.9	5.1
Inactive	12.8	23.2	22.0	14.5	32.1	23.4
– Inactive (student)	4.0	4.9	6.3	3.9	10.6	5.2
– Inactive (looking after family home)	5.8	5.5	6.4	7.7	12.6	5.9
– Inactive (retired)	0.2	4.4	2.6	0.3	1.1	4.2
– Inactive (other)	2.7	8.4	6.7	2.6	7.8	8.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	446	422,526	8,559	9,270	19,766	460,567

* EU–11 refers to the countries that joined the European Union in 2004 and 2007, without Hungary.
Source: *UK–LFS*.

Looking at employment broken down by main industries we find that more than one quarter of Hungarians in the UK are employed in one of the subdivisions of the 'hotels and restaurants' sector, a rate more than twice higher than in the case of those from EU–11 countries (*Table 2.2.1.2*). The ratio of health and social workers is also notably higher among Hungarians compared to other migrants from Central-Eastern Europe, while the percentage of those employed in manufacturing and construction is considerably lower. In respect to the latter industries, as we can see, Hungarian migrants in our sample are rather following the patterns of those from 'old-EU' member states.

Table 2.2.1.2: Active workers by main industry sectors between 2008 and 2015 (percentage)

	Hungarian	UK	EU–15	EU–11*	Other foreign nationals	Total
Hotels and restaurants	26.5	4.3	8.3	11.2	10.3	4.8
Wholesale, retail and motor trade	13.4	14.0	10.2	14.5	12.3	13.9
Real estate, renting and business activities	13.1	12.9	17.1	12.4	16.9	13.1
Health and social work	12.3	13.7	14.0	7.6	18.9	13.8
Manufacturing	11.5	10.8	9.3	23.2	8.2	10.9
Transport, storage and communication	6.3	6.2	6.2	8.5	5.9	6.3
Other community, social and personal	5.5	6.1	5.8	3.6	4.6	5.9
Construction	4.9	7.4	5.2	10.3	3.3	7.3
Education	3.8	10.6	12.3	2.8	7.8	10.3
Other	2.7	14.1	11.6	5.9	11.7	13.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	366	312,660	6,337	7,430	12,077	338,870

* EU–11 refers to the countries that joined the European Union in 2004 and 2007, discounting Hungary.
Source: UK–LFS.

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2.3 LABOUR MIGRATION, CROSS-BORDER COMMUTING, EMIGRATION

Factors explaining the employment-related emigration of Hungarians and changes since EU accession

ÁGNES HÁRS & DÁVID SIMON

Emigration and employment

Since Hungary's accession to the European Union in 2004 Hungarians have had freedom of employment in European countries, their employment opportunities have expanded, and the cost of working abroad has decreased. In principle, it is possible to take up employment abroad under the same conditions as in Hungary, although the characteristics of labour demand and regulations of the host country must be taken into account. There has been an array of studies exploring the attraction of working abroad and its implications for the labour market, the push and pull factors influencing decisions, the selective nature of migration, and the social and individual factors beyond the economic and labour market explanations (*Hazans–Philips,* 2010, *Kahanec*, 2013, *Kahanec et al.,* 2010, *Kahanec–Zimmermann,* 2010, *Kaczmarczyk,* 2010, *Massey et al.,* 1993).

The intended permanence of migration, its costs in terms of working time, job difficulty, and sacrifices for private life result in a diversity of employment patterns for migrants. One-way migration and variable, circular forms of migration and cross-border commuting co-exist and characterise the range of migration and labour market strategies of emigrants. Some migrants move away in the hope of financial security or for other reasons, and plan for a long-term future abroad, while others consider working abroad as temporary or instrumental means – as defined by *Piore* (1971) – of earning money. There are no definitive and sharp boundaries between groups, there are many variations. However, it is possible to distinguish between labour migrants and those who decide to settle abroad, based on factors associated with migration and its impact. This study examines labour migration: what groups are affected and how this has changed over time.[1] Its impact on the Hungarian labour market can be estimated based on the description of migration.

Data and methods of analysis

Labour migrants in the Labour Force Survey

A clearly defined segment of emigration is *labour migration*. The CSO's *Labour Force Survey* (LFS) offers a unique possibility to examine the factors associated with labour migration on a large dataset using individual-level data

1 See Chapter 2.2 of In Focus by Zsuzsa Blaskó and Irén Gödri on people moving away.

and detailed explanatory models. On the basis of data available in the LFS, labour migration is analysed using the cases of individuals *working abroad*.

In the Labour Force Survey if the answer for the question on the location of the employer is not Hungary, then the response "abroad" is recorded alongside the name of the country. This question applies to those who are currently working abroad, or whose last job (within the previous eight years) was abroad. The group of those who previously worked abroad is heterogeneous and not reliable, therefore the current analysis focuses on individuals currently working abroad. Those identified by the LFS as working abroad only include people with a household in Hungary (that could be reached by LFS interviewers) but excludes those whose families have moved abroad either recently or in the past. People who live abroad but are not in employment, as well as refusers are not part of the sample either.[2]

From the LFS it is possible to identify workers who are still connected to the Hungarian labour market via their families but are employed abroad. In the following analysis this sub-group of migrants is referred to as *labour migrants*.[3] It is assumed that those who work abroad do this as an alternative to employment in Hungary.[4] This study presents findings for this population for the period between 2004, the year of accession to the EU, and the end of 2014.

2 The data was made available in a non-anonymised format to the databank of MTA KRTK by the CSO for the study.

3 *Hárs–Simon* (2015) and *Czibik et al.* (2014) analysed this group previously.

4 Those working abroad are also included in the number of employees calculated on the basis of the CSO LFS, and thus affect the employment rate in Hungary while also forming part of the emigrant population.

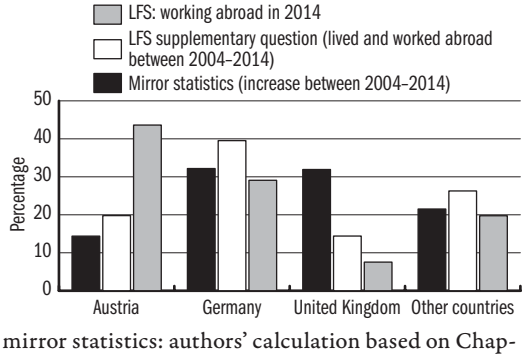
Characteristics of the sample

The number of labour migrants has been increasing steadily, similarly to the trends described in other studies based on other sources of data; however the increase appears to be slowing down towards the end of the period. This is shown by part a) of *Figure 2.3.1*: the right axis depicts the development of total labour migration, the left axis represents trends by destination country.

Figure 2.3.1: Trends in labour migration and distribution by destination country

a) Labour migration between 2004–2014 by destination country (thousand people)

b) Labour migration and other migration categories by destination country (percentage)



Source: labour migration: LFS; mirror statistics: authors' calculation based on Chapter 1, In Focus; work history abroad 2004–2014: LFS ad hoc module, 2nd quarter, 2014.

Labour migrants represent a particular group: the share of those working in Austria is high in the total sample, while the share of those working in the United Kingdom is low, and declining towards the end of the period. The

characteristics of labour migration are examined in comparison to two data sources: the mirror statistics show the increase in the stock of Hungarian nationals residing abroad between 2004–2014, the supplementary questions of the LFS in the 2nd quarter of 2014 show non-commuters who lived and worked abroad for at least six months between 2004–2014 (the latter obviously includes only those who were residing or had a household in Hungary at the time of the survey). Despite their different composition, the groups are comparable by destination country and the percentages are shown by part b) of *Figure 2.3.1*.

In this comparison, the share of labour migrants in Austria is extremely high and the share of those in the United Kingdom is very low in our sample. The supplementary questions of the LFS on work history in the period between 2004–2014 also indicate that the share of those who worked or are still working in the United Kingdom is low. This suggests that the share of whole households moving to the United Kingdom is higher than in the case of other destination countries – the LFS only includes those who have a household in Hungary. This assumption is also supported by *Blaskó* (2014) and *Blaskó* et al. (2014) who attempted to estimate long-term emigration. Both studies concluded that a high proportion of long-term emigrants live in the United Kingdom. The assumption is also in line with the fact that labour migration was initially low, then stagnating and declining by the end of the period, which might be explained by the growing number of people emigrating to the United Kingdom.

The exceptionally high share of labour migrants in Austria is explained by a high level of cross-border commuting; however, non-commuting labour migration is also significant. The LFS does not have any variables that would allow us to distinguish cross-border commuters from other labour migrants. Cross-border commuting can be estimated for the 2nd quarter of 2014. Based on the supplementary questions and the basic variables of the LFS it is possible to compare the work history of labour migrants as well as non-migrants. The supplementary questionnaire excluded commuters, therefore it is possible to distinguish non-commuters (those who lived and worked as well as those who worked abroad for at least six months) and those who did not reside abroad but are labour migrants, thus cross-border commuters. This is presented in *Table 2.3.1*. Sixty percent of the labour migrant population were not commuters, (out of this 53 percent worked abroad for at least six months); 40 percent were cross-border commuters. The share of commuters was over 60 percent in Austria and considerably lower in other destination countries.

Employment can be stable either with or without cross-border commuting: although the average duration of employment is below the Hungarian average (nine years), but these are people working abroad long-term.[5] The average duration of employment with the current employer was longest in Austria

5 The average duration of employment was calculated for the first quarters of 2010–2015 – a period characterised by increasing labour migration – based on LFS data. As the number of labour migrants increases, the average duration of employment decreases, although of course the length of employment of new labour migrants is uncertain.

(4.6 years), in Germany 3.7 years, in the United Kingdom 2.4 years and also relatively high, 4.2 years in other EU countries.

Table 2.3.1: Commuting and non-commuting labour migrants (percentage)

Work history abroad between 2004 and 2014	Labour migration by destination country				Total labour migrants
	Austria	Germany	United Kingdom	Other country	
Lived and worked abroad	39	77	81	77	60
Out of this: lived and worked abroad for at least 6 months	34	70	68	64	53
Cross-border commuter (did not live abroad but labour migrant)	61	23	19	23	40
Total labour migrants	100	100	100	100	100

Source: labour migration: LFS 2nd quarter 2014; work history abroad 2004–2014: LFS ad hoc module, 2nd quarter, 2014.

Method of analysis

Logistic regression models were used to explore the factors that explain labour migration as opposed to employment in Hungary, and how these changed in the period between EU accession and the end of 2014 in regard to total labour migration and main destination countries (Austria, Germany, United Kingdom, and other EU and EEA countries). The equation of our model for all destination countries was as follows:

$$\ln\left(\frac{p}{1-p}\right) = b_0 + b_1X_{nem} + b_2X_{kor} + b_3X_{kor}^2 + b_4X_{isk} + b_5X_{fogl.kat} +$$

$$+ b_6X_{fogl.visz} + b_7X_{szerz} + b_8X_{váll.munkaidő} + b_9X_{fogl.stat1.éve} + b_{10}X_{régió} + b_{11}X_{szül.orsz} +$$
$$+ b_{12}X_{csal.áll.} + b_{13}X_{gyerm.0-6éves} + b_{14}X_{gyerm.7-18éves} + b_{15}X_{nyugd.házt.tag} +$$
$$+ b_{16}X_{segélyezett.házt.tag} + b_{17}X_{nem}t + (...) + b_{32}X_{segélyezett.házt.tag}t + b_{33}X_{nem}t^2 + (...) +$$
$$+ b_{48}X_{segélyezett.házt.tag}t^2 + b_{49}t + b_{50}t^2 ,$$

where p denotes the proportion of labour migrants in the total population under study (i.e. total number of employees in Hungary and labour migrants), as well as by destination country.

Demographic variables

X_{nem}: sex (reference category: males)

X_{kor}: age (centred on workers in Hungary)

X_{isk}: highest level of education (reference category: no more than primary education)

Labour market variables

$X_{fogl.kat}$: profession (reference category: machine operator or unskilled job)

$X_{fogl.visz}$: type of employment (reference category: employee)

X_{szerz}: type of contract (reference category: open-ended)

$X_{váll.mukaidő}$: acceptable working time (hours/week) (centred on workers in Hungary)
$X_{fogl.stat1.éve}$: labour market status in the previous year (reference category: in employment)
Regionality variables
$X_{régió}$: region (reference category: Central Hungary)
$X_{szül.orsz}$: country of birth (reference category: Hungary)
Household variables
$X_{csal.áll}$: marital status (reference category: spouse)
$X_{gyerm.0-6éves}$: number of children aged 0–6 years in the household (reference value: 0)
$X_{gyerm.7-19éves}$: number of children aged 7–18 years in the household (reference value: 0)
$X_{nyugd.házt.tag}$: number of old-age pensioners in the household (reference value: 0)
$X_{segélyezett.házt.tag}$: number of welfare recipients in the household (reference value: 0)
Time
t: quarter (reference value:3rd quarter of 2004)

The models' goodness of fit was examined using multiple methods. The creators of the commonly used Hosmer–Lemeshow test argue that for large samples even minor departures from the proposed model appear as significant errors (Paul–Pennell–*Lemeshow,* 2013). In addition to this, the Link test (*Pregibon,* 1980) – also sensitive to sample size – and the ROC (Receiver Operating Characteristic) analysis – unrelated to sample size – were used alongside the c statistic to examine the models' goodness of fit.[6] Furthermore, the value of Nagelkerke's pseudo-R^2 is also presented for each model (goodness-of-fit parameters are summarised in *Table 2.3.2*). Based on the *c* statistic each model is at least acceptable; according to the Link test the explanatory power of the models is significant and they show a slight (although in some cases significant due to the sample size) departure from the goodness-of-fit. The Hosmer–Lemeshow test is significant but this is not considered a problem in the light of the above. The value of Nagelkerke's pseudo-R^2 for the models ranged from 0.19 to 0.26.

The constant of the models is significant in all cases, however change over time independent from other factors is only significant for the total sample – showing that, all other conditions being equal, the probability of labour migration is increasing at a growing rate. The results of the models are presented via changes in marginal probabilities and marginal effects over time (when change over time is not significant, the odds ratio is presented). For marginal probabilities, the estimated probability of labour migration or employment

6 According to *Hosmer–Lemeshow* (2000) for the *c* statistic a value over 0.7 is acceptable, over 0.8 is very good, and over 0.9 is excellent.

in a particular country is presented for the total population (employees in Hungary and labour migrants).

Table 2.3.2: Goodness-of-fit parameters of the models

	Total sample	Austria	Germany	United Kingdom
c-statistic	0.849	0.812	0.802	0.741
Link test: model explanatory power	2.610***	2.253***	2.350***	1.633***
Link test: departure from goodness-of-fit	0.994	1.020***	1.013***	1.010***
Hosmer–Lemeshow test[a]	17.12(8)*	24.92(8)**	84.63(8)***	106.90(8)***
Nagelkerke's R^2	0.190	0.271	0.189	0.262

[a] In parentheses: degree of freedom.
Significance level: ***1 percent, **5 percent, *10 percent.

Factors affecting labour migration and their changes over time

All labour migrants and those in three main destination countries (Austria, Germany and the United Kingdom) were analysed. The total sample also shows the effect of a more heterogeneous labour migration to other EU countries (and to a lesser extent outside the EU); however this is not discussed here in detail. Labour migration appears highly selective according to main destination country; the effect of individual and demographic factors, employment and household characteristics are presented together for each destination country as well as total labour migration.

The effect of individual and demographic factors

Women are half as likely as men to work abroad, and this has not changed significantly over time. The odds are similar to the total sample in Austria, somewhat lower in Germany (0.4), while in the United Kingdom sex has no significant effect on labour migration.

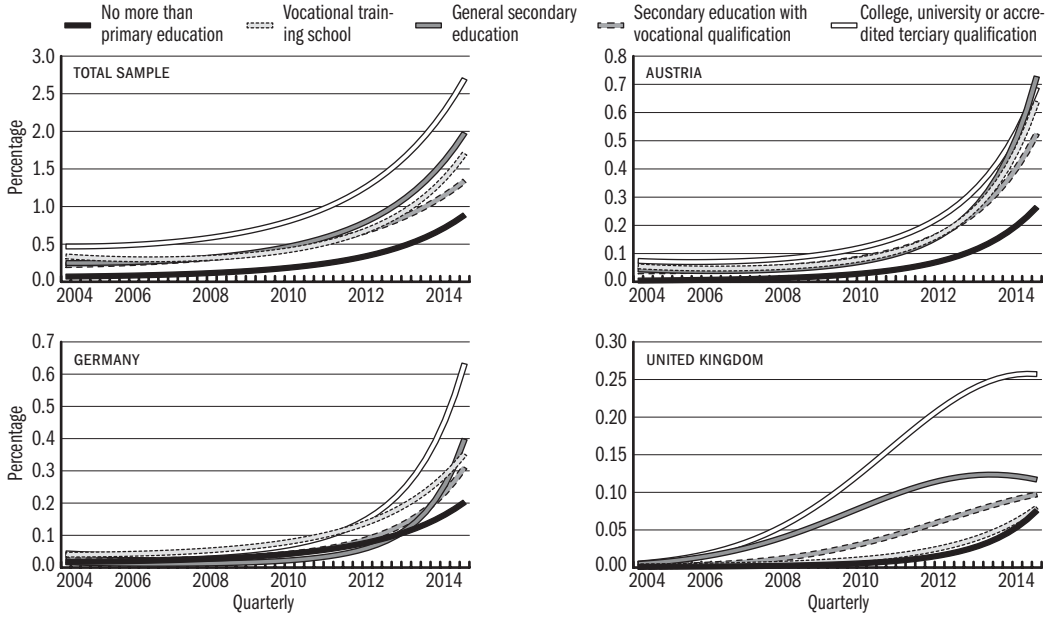
The probability of labour migration changes with *age*. In the full sample the effect of age did not change significantly over time: up to the age of 39 years the marginal probability of labour migration is increasing, then it declines (in 2014 it was 0.55 percent at the age of 25, and 0.8 percent at 39 years). Because change over time was found to be significant in the model (see earlier), the marginal probability of labour migration is growing at an increasing rate annually (at the end of 2010 the marginal probability of labour migration for 25-year-olds was just under 0.15 percent and 0.2 percent for those aged 39, in 2013 these were 0.4 and 0.55 percent respectively). In Austria the effect of age was similar to that in the full sample, while in Germany there was no significant effect. The marginal probability of labour migration also changed over time in the United Kingdom: during the years of the downturn the average age was rising; however, more recently labour migrants have become increas-

ingly younger. In 2004, the year of EU accession, the marginal probability of labour migration was highest at the age of 30, in 2009 at the age of 33, in 2010 at the age of 33–34, in 2011 at the age of 35, in 2012–2013 at the age of 34, and at the end of 2014 at the age of 32.

Place of birth is associated with propensity for mobility: people born outside Hungary were more mobile than those born in Hungary. Their odds were 4.8 times higher and this did not change significantly over time. At the end of 2014, all other conditions being equal, being born outside Hungary increased the probability of labour migration by 1.3 percentage point in the total sample. In 2014 the same effect was 0.64 percentage point for working in Austria and 0.2 percentage point for Germany. The size of the marginal effect increased rapidly in both countries, but especially in Austria, after 2011.

In the full sample of labour migrants, the probability of working abroad increases significantly with education (*Figure 2.3.2*). This was stable over time, with the exception of vocational education, for which the probability of labour migration grew at an increasing rate.

Figure 2.3.2: The effect of education on labour migration, marginal probability (percentage)



Reference category: no more than primary education.
Total sample: *significant over time:* vocational training school *not significant over time:* general secondary education, secondary education with vocational qualification, tertiary education.
Austria: *significant over time:* all variables.
Germany: *not significant over time:* vocational training school, *not significant:* general secondary education, secondary education with vocational qualification, tertiary education.

United Kingdom: *significant over time:* general secondary education, secondary education with vocational qualification, tertiary education, *not significant:* vocational training school.

Selectivity by destination country is strong: for Austria all education levels that are higher than primary education significantly increase the probability of labour migration. After 2011 – when the Austrian labour market fully opened for Hungarian nationals – the increase was substantial and by the end of 2014 the marginal probabilities for all non-primary education levels were largely similar to each other and significantly exceeded the probability of labour migration of those with no more than primary education. In Germany – all other conditions being equal – the labour migration of those with vocational training school was increasing significantly. In the United Kingdom the steady increase in the labour migration of those with secondary and tertiary education stopped, and even started to decline among people with general secondary education. This suggests that these groups are increasingly opting for long-term emigration. Similar changes can be observed in the marginal probability of labour migration for these with secondary vocational qualification. The probability of labour migration was lower for skilled, semi-skilled and unskilled workers (people with vocational training school or primary education); however it was growing in line with increasing labour migration.

The *region of residence* has a significant effect on the probability of labour migration in the full sample, and only Northern Hungary remained unchanged in the studied period (*Figure 2.3.3*).

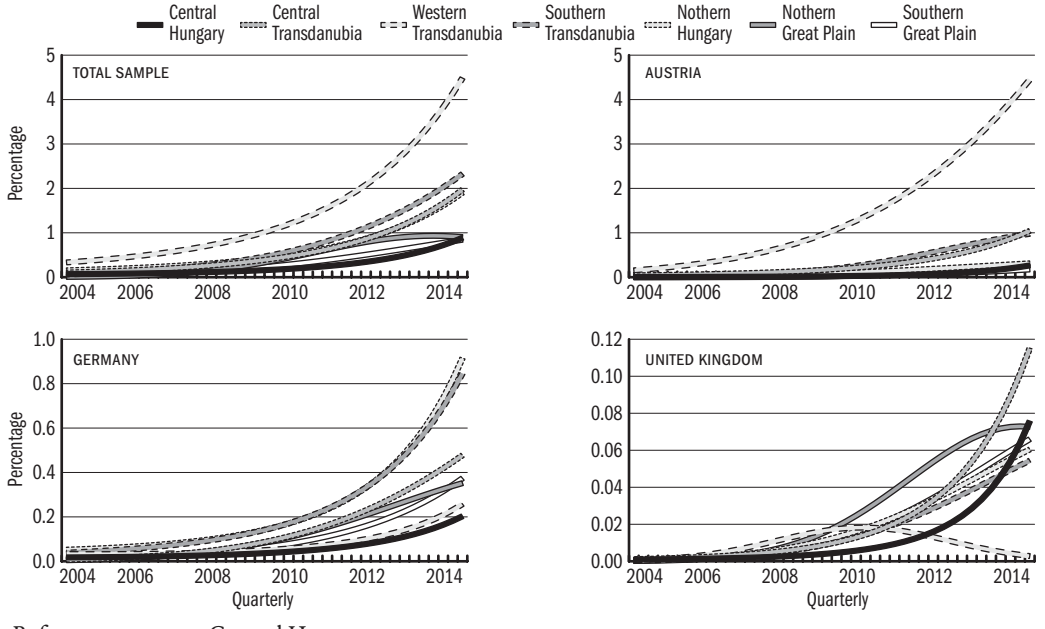
The probability of labour migration is by far highest in Western Transdanubia and is growing at an increasing rate: here, all other conditions being equal, the probability of labour migration was 4.5 percent at the end of 2014. The marginal probabilities of labour migration in Southern and Western Transdanubia were lower, nevertheless increasing steadily; similar trends can be observed in Northern Hungary. The marginal probabilities of labour migration were low in the Northern and Southern Great Plain, with a slowing rate of increase.

Based on the region of residence, labour migration is highly selective by destination country. The marginal probability of labour migration to Austria is by far the highest in Western Transdanubia (4.5 percent at the end of 2014); it is more than four times higher than the marginal probabilities in other Transdanubia regions. This suggests that the regional labour market is a strong incentive to work in Austria and cross-border migration plays an important role (more than 80% of labour migrants in Western Transdanubia region work in Austria).

Migrant labour in Germany also seems selective by region, although less so than in the case of Austria. All other conditions being equal, the marginal probability of labour migration is highest in Northern Hungary and Southern Transdanubia, and this effect is stable over time. This suggests long-term relations, traditional cooperation, or even organised recruitment in these re-

gions. The marginal probability of labour migration to Germany is increasing by a lesser rate in other regions, with the exception of the Northern Great Plain where it is declining.

Figure 2.3.3: The effect of the region of residence on labour migration, marginal probability (percentage)



Reference category: Central Hungary.
Total sample: *significant over time:* Central Transdanubia, Western Transdanubia, Northern Great Plain, Southern Great Plain, Southern Transdanubia, *not significant over time:* Northern Hungary.
Austria: *significant over time:* Northern Hungary, Northern Great Plain, Southern Transdanubia, *not significant over time:* Central Transdanubia, Western Transdanubia, *not significant:* Southern Great Plain.
Germany: *significant over time:* Central Transdanubia, Northern Great Plain, Southern Great Plain, *not significant over time:* Western Transdanubia, Southern Transdanubia, Northern Hungary.
United Kingdom: *significant over time:* Northern Great Plain, Western Transdanubia, Southern Transdanubia, Northern Hungary, Southern Great Plain, *not significant over time:* Central Transdanubia.

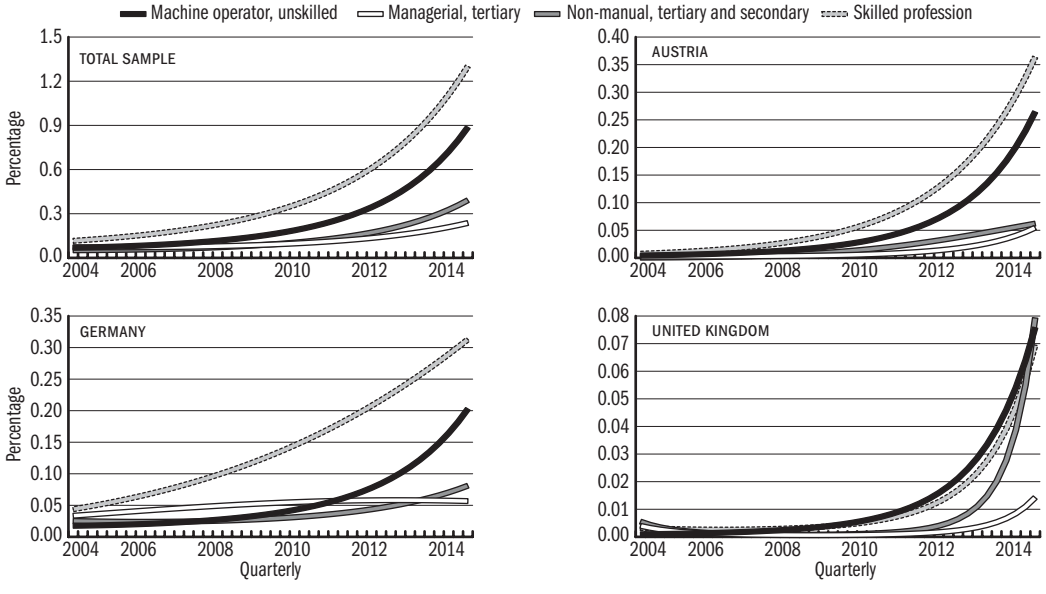
In the case of the United Kingdom, there is no evidence of clear regional selectivity. The marginal probability of labour migration is increasing faster in Central Hungary than in any other region; however, overall, regions have a very small effect on the marginal probability of labour migration.

The effect of labour market factors

In the case of labour migration, professions requiring a vocational qualification increase the prospect of working abroad most of all (*Figure 2.3.4*). In the total sample, the marginal probability of labour migration among skilled

workers – all other conditions being equal – was 1.3 percent at the end of 2014; and the effect did not change significantly over time. White-collar professions did not have a significant effect on the probability of labour migration.

Figure 2.3.4: The effect of profession on labour migration, marginal probability (percentage)



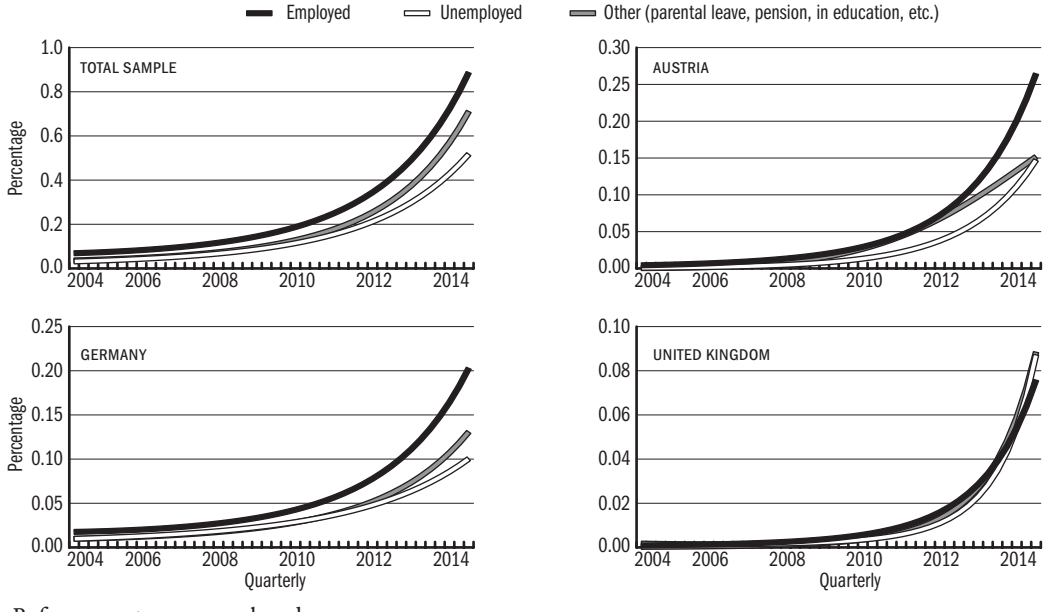
Reference category: machine operator, unskilled.
Total Sample: *significant over time:* skilled professions, *not significant:* managerial professions requiring tertiary qualifications, non-manual professions requiring tertiary or secondary qualifications.
Austria*: significant over time:* non-manual professions requiring tertiary or secondary qualifications, *not significant over time:* managerial professions requiring tertiary qualifications, skilled professions.
Germany*: significant over time:* skilled professions, *not significant:* managerial professions requiring tertiary qualifications, non-manual professions requiring tertiary or secondary qualifications.
United Kingdom: *significant over time:* all variables.

In Austria, the marginal probability of skilled professions increased and that of non-manual professions decreased the marginal probability of labour migration compared to the reference group of machine operators and unskilled professions. Skilled professions – all other conditions being equal – increase the probability of labour migration the most in Germany as well, although this effect is slowing over time. A somewhat different picture emerges for the United Kingdom: compared to unskilled and machine operator professions, all other professions diminish the marginal probability of labour migration. However, apart from managerial professions that require tertiary qualifications, marginal probabilities for all other professions converged and were largely identical by the end of 2014.

The *type of employment* also affects the probability of labour migration. Casual employment, with all other conditions being equal, increases the probability of labour migration compared to employee status in the total sample: by just over 0.05 percentage point, at the end of 2010, by 0.02 percentage point at the end of 2012, and by nearly 0.8 percentage point at the end of 2014. In Austria, casual employment also increases the likelihood of labour migration at a growing rate (at the end of 2014 marginal probability was 0.4 percent). In Germany the marginal probability of this was more modest (0.1 percent) and stable over time. There was no significant effect in the United Kingdom.

Another hypothesis has been that a previous unfavourable labour market situation – unemployment or difficulties in returning or entering the labour market after education or looking after children – increase the probability of labour migration. However, contrary to our expectations – with all other conditions being equal – being out of work *in the previous year* reduces the probability of labour migration among those working abroad. (*Figure 2.3.5*).

Figure 2.3.5: The effect of labour market status in the previous year on labour migration, marginal probability (percentage)



Reference category: employed.
Total sample: *not significant over time:* unemployed, other (parental leave, pension, in education, etc.).
Austria: *significant over time:* other (parental leave, pension, in education, etc.), *not significant over time:* unemployed.
Germany: *not significant over time:* unemployed, *not significant:* other (parental leave, pension, in education, etc.).
United Kingdom: *significant over time:* unemployed, *not significant:* other (parental leave, pension, in education, etc.).

In the total sample, the marginal probability of labour migration is reduced by being unemployed or any other labour market status in the previous year compared to the reference group of those in employment. At the end of 2014 the marginal probability of labour migration was 0.5 for those who had been unemployed in the previous year, 0.7 percent for *other* labour market status (on parental leave, in education), and 0.9 percent for those who had been in employment. Previous labour market status has a similar effect in Austria and Germany; however the *other* labour market status reduces marginal probability of labour migration in Austria only after 2011. There seems to be no difference in marginal probabilities in the United Kingdom.

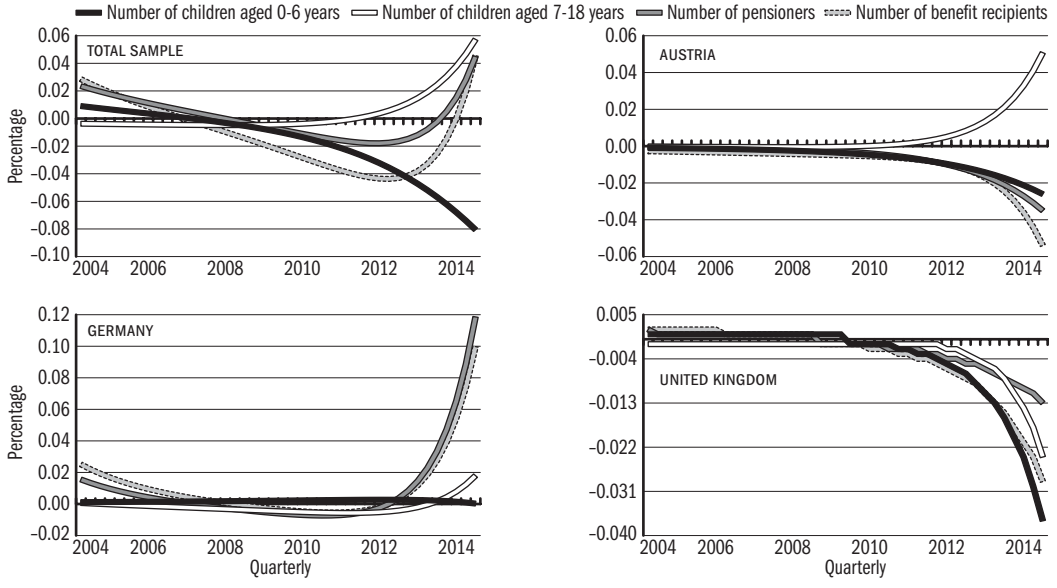
The *acceptable working time* – the opportunity cost of labour migration – increases the probability of labour migration, but the effect is very weak. An additional working hour, with all other conditions being equal, increased the probability of labour migration by just under 0.035 percent at the end of 2014. The effect increases over time: at the end of 2010 longer working hours meant less than a 0.01percent increase in probability. In Austria the effect is very small and decreasing over time, in Germany and the United Kingdom it is also small and stable over time.

The effect of household characteristics

The number of dependants in the family, including younger or older children, benefit-recipients as well as old-age pensioners can also influence decisions around labour migration (*Figure 2.3.6*).

In the total sample of migrants, the number of pensioners and benefit recipients increased the likelihood of labour migration after EU accession and reduced it in the years of the economic crisis. By the end of the period the trend changed once more, and it again increased the probability of labour migration; however, its marginal effect was very small: an additional pensioner or benefit recipient in the household equally increased the probability of labour migration by 0.04 percent at the end of 2014. However, the number of children did not have a significant effect. In Austria, the number of children aged 0–6 years and benefit recipients significantly reduced labour migration, while the effect of other inactives was not significant. In Germany, where labour migration was highest from the most disadvantaged regions from a labour market perspective, both the number of pensioners and benefit recipients substantially increased the probability of labour migration. This effect was increasing rapidly over time after 2011, when the German labour market fully opened to migrants from accession countries. An additional pensioner in the household increased the probability of labour migration by 0.12 percent, an additional benefit recipient by 0.1 percent. In the United Kingdom, every inactive family member decreased the probability of labour migration.

Figure 2.3.6: The effect of household composition on labour migration, marginal probability (percentage)



Total sample: *significant over time*: number of pensioners in the household, number of benefit recipients in the household, *not significant:* number of children aged 0–6 years, number of children aged 7–18 years.
Austria*: not significant over time:* number of children aged 0–6 years, number of benefit recipients in the household, *not significant:* number of children aged 7–18 years, number of pensioners in the household.
Germany: *significant over time:* number of pensioners in the household, number of benefit recipients in the household, *not significant:* number of children aged 0–6 years, number of children aged 7–18 years.
United Kingdom: *significant over time::* number of children aged 7–18 years, number of pensioners in the household, *not significant over time:* number of children aged 0–6 years, number of benefit recipients in the household.

Conclusion

This study has examined the factors affecting labour migration, a clearly defined segment of migration. It has been shown that alongside demographic factors, regional selection and the type of profession had the most important effect on labour migration. The analysis of changes over time has highlighted that the rapid increase of labour migration in itself increases the marginal probability of working abroad for all those in the sample. In fact, this was found to be the strongest effect, while the effect of specific factors often remained unchanged over time. Labour migration represents a stable and long-term strategy for skilled migrants in Austria and Germany. Labour migration towards the United Kingdom is somewhat different: here more highly educated labour migrants are more likely to work in semi-skilled or skilled professions; therefore overeducation is probably very common. It has been

shown that another aspect of migration (not discussed here) is relocation, which would complement the picture that has emerged here based on the analysis of labour migration. In addition to the destination countries presented here, labour migration to other EU countries is also fairly substantial but more heterogeneous, characterised by trends found in the United Kingdom, as well as those in Germany and Austria.

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2.3.1 Migrants with left-behind children in Hungary

ZSUZSA BLASKÓ & LAURA SZABÓ

According to a comprehensive report (*EC,* 2012) of the organisation *Children Left Behind* (www.childrenleftbehind.eu) it is estimated that at the beginning of the 2010s, some half a million children lived left behind by one or more abroad-working parents in the European Union. The majority of these children lived in Romania and Poland, but from other sources it is known that Bulgaria, as well as some countries outside the EU, such as Moldova are also seriously affected (*Blaskó*, 2016). Although the number of emigrants in Hungary does not reach a level as high as in the countries just mentioned, the increase in emigration here makes the examination of this issue undoubtedly relevant. Studies pointing at significant detriments to the child's well-being (as measured for example by progress in school or state of health) associated with the absence of the parents underline the importance of the problem.[1] These detriments occur notwithstanding the positive income effect of the remittances enjoyed by the households. Negative impacts on the children can not only appear in the absence of the mother: some of the studies do not even differentiate as to which parent is abroad; while other studies are looking at the impacts of the father's absence.

Our brief analysis presents some first estimations on the extent of emigration with left-behind children in Hungary based on Population Census data from 2011.[2] Following to the logic of the Census, we distinguish between two cases: when parents (one or both) are away temporarily or permanently. In the first case, families raising children younger than 18 were considered as affected when it was clear that either one of the parents or both of them were (*temporarily*) living abroad. In these cases it was possible to identify single-parent families (when even this only parent was abroad), looking at a relatively wide range of information on the individuals concerned. In the case of *permanent* residence abroad (lasting over a year), strict assumptions had to be applied, as in their cases the census only contains dwelling-level data not broken down by individual. Therefore, a family was considered as having left-behind child(ren) due to permanent migration of one parent if they lived in a dwelling from which at least one individual was living abroad, while the family affected had only one parent present, and the marital status of this parent was "in partnership". We considered a family to have two parents resident abroad permanently if an individual under the age of 18 was living in the household with no parent (but possible with other relatives or other non-related grown-up persons) and the dwelling had at least two individuals resident abroad. It is possible however that the individuals attached to the dwelling but living abroad are in fact not the parents of the child in the household; therefore our figures concerning permanent absence of the parents in two-parent families should be considered as an upper estimate.

Our analysis is therefore focusing on families raising one child or more under 18 living in Hungary: a total of 1,056,674 families in 2011. According to our estimates 11,064 of these were missing one or both parents due to temporary residence abroad (a maximum of one year as reported by the respondents). Besides, the number of families (or households) with at least one parent permanently (for over a year) abroad was estimated at 2,947.

1 See for example *Giannelli–Mangiavacchi* (2010), *Mazzucato–Schans* (2011), *Antman* (2013), *Gréen* (2014),*Mastrorillo–Fagiolo* (2015), *Botezat–Pfeiffer* (2014), *Sorensen–Vammen* (2014) – Hungarian language summary: *Blaskó* (2016).

2 We currently have access to two data sources at our disposal for the study of left-behind children in Hungary: one is the 2011 Population Census; the other is the CSO's Labour Force Survey (LFS) for the first quarter of 2013, supplemented by data from the SEEMIG survey. As we have shown elsewhere (*Blaskó*, 2015), the data from the LFS–SEEMIG dataset is for the most part similar to the census; however, somewhat higher. Since these estimates are more uncertain, they are not presented here.

Most of the affected families are two-parent families with the father working abroad (in 10,002 cases temporarily; in 2,391 permanently). All in all, only 413 two-parent families were identified, where the mother was engaged in temporary foreign employment, and a further 211 in which the mother was permanently abroad. The number of families raising children under the age of 18 in which both parents reside abroad was 530. We also found a relatively small number of cases in which a single parent went abroad for work.[3]

The number of children affected by parental migration is obviously higher than the number of affected families. In total, 18 thousand children aged 18 or younger had one or both of their parents temporarily abroad at the time of the 2011 Census. Out of this, 16,721 children had their father and 1063 their mother abroad, while 245 children were missing both of their parents. Of the children affected, 36 per cent had not yet reached school age (*2.3.1.1. table*). A total of 296 children aged six years or younger had a mother living abroad either alone or together with the father (single mothers included). Considering also the number of children with one or two parents permanently abroad (4,361) we can estimate that in Hungary altogether approximately 22 thousand children are potentially affected by consequences of parental migration.

Table 2.3.1.1: The number of families / households raising children in Hungary and the number of children by parents' migration status

	Families	Children aged		
		0–6 years	0–14 years	0–18 years
Both parents live with the family	811,017	559,977	1,137,743	1,393,252
One-parent family, parent lives in the household	231,991	93,845	256,365	347,818
Two-parent family, the father lives temporarily abroad	10,002	6,164	13,321	16,556
Two-parent family, the mother lives temporarily abroad	413	147	435	611
Both parents live temporarily abroad	185	67	152	245
One-parent family, father only, who lives temporarily abroad	124	48	96	165
One-parent family, mother only, who lives temporarily abroad	340	82	268	452
Two-parent family, father lives permanently abroad	2,391	1,128	2,942	3,641
Two-parent family, mother lives permanently abroad	211	61	197	296
Two-parent family, both parents live permanently abroad*	345	na.	na.	424
Total	1,057,019**	661,519	1,411,519	1,763,460

* Households living with children under the age of 18, without parents, in which at least two individuals from the home are residing abroad.
** Dwellings and households included.
Source: 2011 Census.

Families opting for parental migration are not evenly distributed across the country (*Figure K2.3.1.1*). Compared to the national average, the proportion of two-parent families choosing to work abroad (for one or both parents) is considerably higher in Tolna county (1.6 per cent), but it is also relatively high in Borsod-Abaúj-Zemplén, Veszprém and Baranya. Considering the number of cases, the highest figure can also be found in Borsod (the poorest county in Hungary), where more than 1,600 families live geographically separated by migration. The lowest rates were observed in Pest county and Győr-Moson-

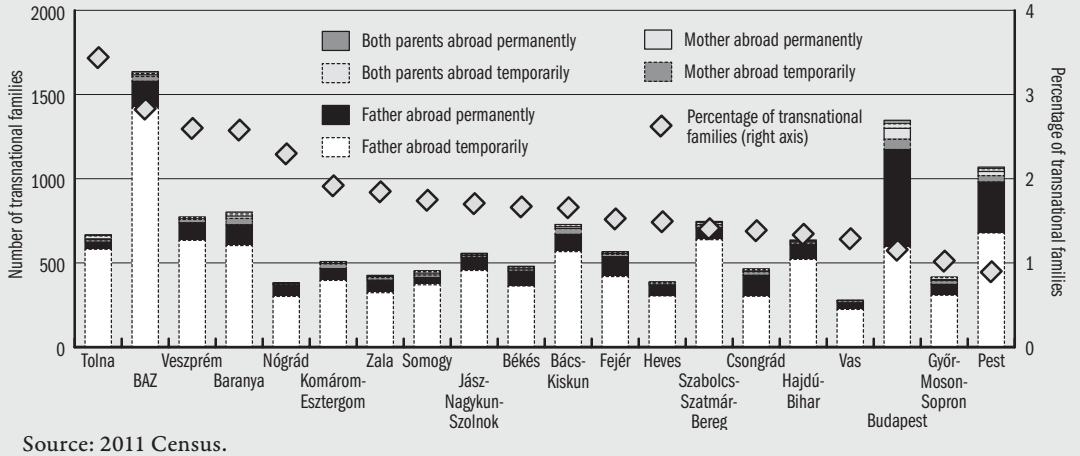
3 We concluded that the number of parents who were temporarily abroad was significantly higher than the number of those permanently abroad. This could be a sign that the parents do not accept work that would mean leaving their children behind for over a year. However it is also possible that because the "temporarily abroad" census category is somewhat vaguely defined, those who are drawn to choosing it might be those who want to see their family as a unit despite one parent being away. Although in general the census does not reliably "capture" those permanently abroad, in our case is not a real issue as the analysis here focuses on families and households having strong bonds with Hungary.

Sopron – both among the economically most developed counties in the country. Interestingly, only Budapest had essentially the same number of fathers being temporarily and permanently absent.[4]

Data on individual characteristics is only available for the temporarily absents. Our results confirm earlier findings from the literature: migration that leaves a family behind is almost without exception motivated by employment. The employment rate of fathers from two-parent families in our sample is 99 per cent, while the same figure for mothers is 87 per cent. It is noteworthy that a large majority of fathers – almost two thirds (64 per cent) – have vocational training.

4 Information on one-parent families is not presented here due to limitations of space.

Figure 2.3.1.1: The number of different types of transnational two-parent families broken down by county, in order of decreasing proportion



Source: 2011 Census.

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2.4 CHANGES IN THE EMIGRATION RATES OF MEDICAL DOCTORS BETWEEN 2003 AND 2011

JÚLIA VARGA

In most countries there are difficulties in the measurement of the flows of out-migration of medical doctors primarily because of the lack of reliable data, especially time-series data of emigration Outflows are usually estimated by the number of applications for the recognition of medical diplomas in foreign countries. Nevertheless, these data have limited reliability regarding the international mobility trends of doctors because not everyone applying for such licenses or those who are planning to leave their home country will actually leave. Also, individuals may apply more than once, and this may cause overestimates of actual flows. Furthermore, not all countries systematically request these certificates, and many of those who work abroad do so on a part-time basis while also being employed in their countries of origin (*Wismar,* 2011). Types of mobility and employment of immigrant doctors have become more diverse over recent decades, including short-term contracts, part-time work and weekend medical services and this makes the measurement of physicians' migration even more challenging (*Glinos,* 2014). Most of the earlier research on the emigration of Hungarian medical doctors used the number of applications for certificates of recognition of diplomas to estimate changes in the out numbers. (*Eke et al.* 2009*, Eke et al.,* 2011*, Balázs,* 2012). Some other studies used survey data to analyze the intention of out-migration of doctors (*Girasek–Eke–Szócska,* 2009).

The research presented in this chapter employed a large-scale, merged, individual-level panel dataset to investigate how the probability of emigration of Hungarian medical doctors changed between 2003 and 2011. The sample is drawn from a large, longitudinal dataset covering 50 percent of Hungary's population aged 5–73 in 2003. The data collects information from registers of the Pension Directorate, the Tax Office, the Health Insurance Fund, the Office of Education, and the Public Employment Service. The dataset makes it possible to follow out-migration, attrition and other employment status changes of Hungarian medical doctors month by month at the individual level between 2003 and 2011. Each person in the sample is followed from January 2003 until December 2011 or until his/her exit from the social security system (for reasons of death or permanent emigration). Our data contains information on demographics (age, gender), educational attainment (for those with at least one unemployment spell), employment status, occupation code, wages for the occupation codes, and transfer receipt. We also have data on the region of residence of the individual and their sector of employment.

Out of the source sample a medical doctors' subsample was created. All individuals were included in the medical doctors' subsample whose occupation code was "medical doctor, general practitioner", "medical doctor, specialist doctor" or "medical doctor, dentist" according to the Hungarian Occupational Classification system for at least one month between January 2003 and December 2011. We have data for 18,654 individuals.[1]

With the help of the detailed information on labour market status and other data concerning the individuals, five status groups could be distinguished: (1) those working as a physician or dentist in Hungary, (2) out-migrated, (3) exited the profession (attrition), (4) exited employment (related to inactivity, unemployment), or (5) died.

Those Hungarian citizens who register abroad have an obligation to notify the Hungarian authorities that they have left the country (deregister), but many emigrants omit this duty. First, we classified to the group of 'out-migrated' those who reported their move abroad in Hungary. We also wanted to identify those who had not deregistered. So, in addition, in the out-migrated group were placed all individuals who for at least four successive months were neither registered as employed in the database of the Pensions Directorate, nor were labelled in the database of the Health Insurance Fund as being in receipt of inpatient care sickness benefit, and who during that period had neither received any other kind of benefits (unemployment assistance, childcare pension, old age pension or other kind of pensions) nor had been registered as studying in full time education, or had died during this period.

In other words, the classification covered those individuals who 'disappeared' from the system. The other possible reason for the disappearance, which is becoming unregistered unemployed is practically non-existent among medical doctors in Hungary. So, it is very likely that using the presented method we were able to identify the non-deregistered emigrants with a good degree of accuracy.

Further restrictions were placed on the process of determining the non-deregistered emigrants. Only those medical doctors were signed as out-migrated who had worked as a physician or dentist in at least three successive months before the 'disappearance'. Also, we did not categorise those medical doctors as emigrants whose 'disappearance' lasted exactly from the beginning of January until the end of December in a given year and who had worked in the same workplace in the months preceding the disappearance as after the return. In such cases we assumed that the employer failed to report the individual for the given year to the Pensions Directorate. In the case of some of the omitted observations it is possible that the individuals have in fact entered employment abroad on a yearly fixed-term contract. Due to these restrictions, we give a lower bound estimate on emigration. As a consequence, in the first and last three months of the observation period the number of out-migrated

1 Detailed description of the sample see in *Varga* (2015).

is likely to be an underestimate, as only the notified out-migrated could be identified in these months.

To analyse the changes in the out-migration of medical doctors we used time-to-event analysis. The time-to-event analysis is a set of statistical methods for analysing longitudinal data where the outcome variable is the time passed until the occurrence of an event of interest. The event is defined as the transition from one state to another as, in our case, the quitting of the Hungarian health workforce for different reasons. Because those who leave the health workforce may do it for various mutually exclusive reasons, (out-migration, attrition, exit from employment or death) we used competing risk models (*Fine and Gray,* 1999). A competing risk is defined as an event whose occurrence precludes or alters the probability of occurrence of the main event under examination. (In our case, the individual either emigrates, or goes on to a job outside the health sector, becomes inactive or unemployed or dies.) The Fine and Gray model defines separate sub-hazard functions for each event. The subdistribution hazard is the immediate risk of leaving the profession on account of a particular cause, given that the subject has not left the job before as a result of the given cause.

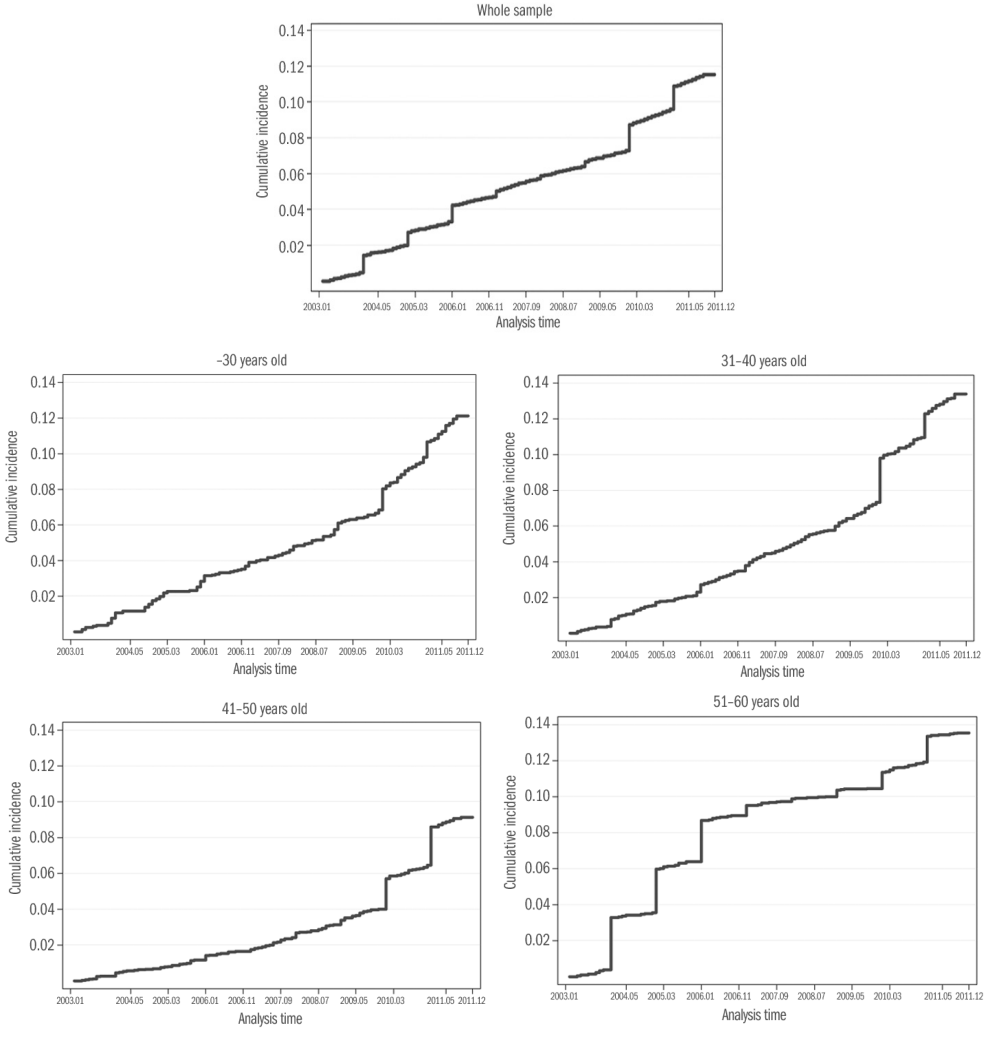
The independent variables in our models were: gender, age, region of residence (according to the 2003 year classification), a dummy variable indicating whether the individual was a general practitioner or a specialist doctor versus a dentist, and the relative labour income of the individual – that is the average labour income of the person in the preceding months as a ratio of the average national labour income during the same period (calculated from the source sample). The income from employment of medical doctors also contains any informal payments the individual doctor listed in their tax statement. It might be that some tax statements include only a part of the real amount of such payments. We could not address the problem of such possible hidden income in this study.

As the different observable characteristics might have a different effect on the probability of emigration at various points of the life-cycle we conducted the analysis for the whole sample and also for subsamples of five age groups: younger than 31 years old, 31–40 years old, 41–50 years old, 51–60 years old and 61–70 years old. Medical doctors older than 70 years were included in the whole sample, but we did not conduct a separate analysis for them.

The competing risk analysis was performed for all the competing events.[2] In the following we present the results only for emigration. *Figure 2.4.1* shows the cumulative incidence functions of out-migration for the whole sample and the different age groups as predicted by the competing risk models. The cause-specific cumulative incidence function gives the proportion of doctors at time *t* who have left the profession for a given cause (in that case because of out-migration), accounting for the fact that the job can also be left for other reasons (attrition, exiting employment, or death).

2 For detailed result see *Varga* (2015).

Figure 2.4.1: Cumulative incidence functions – emigration



For the entire sample the following can be observed in the changes of emigration of medical doctors. Between January 2003 and March 2010, 7 percent of practising physicians left the country. Until March 2010, there was a steady outflow which speeded up after March 2010 and was followed by a further acceleration after May 2011. Between March 2010 and April 2011, another 5 percent of Hungarian medical doctors left the country. The increase in May 2011 shows the effect of the end of the transitional period of restrictions on the free movement of labour from EU8 countries to Austria and Germany. The reasons for the speed-up after March 2010 need further investigation.

The changes of the probability of out-migration for the different age groups show the following: between January 2003 and December 2011 the 31–40 year old group of medical doctors moved abroad in the largest proportion. By the end of the period discussed, 14 percent of them had found a job abroad. Nearly the same ratio of 51–60 year old medical doctors had moved abroad, but the dynamics of outflow were different in the two groups. Just after the EU accession the 51–60 year old doctors had left the country at the fastest pace: between May 2004 and January 2007 10 percent of them had left the country. It was probable that they could take advantage of their previous professional contacts to find suitable jobs. After this period the outflow of the 51–60 year old group stopped until March 2010. The pace of their out-migration increased again with a further increase after the 101. month, which marks the end of the transitional period of restrictions on the free movement of labour from the EU8 countries to Austria and Germany. Between March 2010 and December 2011 an additional 4 percent of the 51–60 year old medical doctors found a job abroad.

The outflow of the 31–40 year old group on the other hand was steady until the end of March 2010. Until that time 7 percent of this group went abroad. After March 2010 the outflow speeded up and the end of the transitional period of restrictions also increased the probability of out-migration in this age-group. Between March 2010 and December 2011 a further 7 percent of the 31–40 year old medical doctors found a job abroad.

The dynamics of the outflow among the youngest medical doctors – younger than 31 years old – was very similar to that of the 31–40 years old group. Until March 2010 there was a steady outflow and 7 percent of the most inexperienced doctors went abroad, after which the outflow accelerated followed by a further increase after the end of the transitional period of restrictions on the free movement of labour in this age-group as well. Between March 2010 and December 2011 a further 5 percent of the youngest doctors went abroad.

The 41–50 year old medical doctors left the country in the lowest proportion. Until March 2010, only 4 percent of them had left the country, but their rate of emigration also increased first after March 2010 with a further increase after May 2011. 6 percent of them left the country between March 2010 and December 2011.

Table 2.4.1 summarises the results of the separate competing risk models for out-migration, the subhazard rates for the whole sample and the age-group specific subsamples. A subhazard rate greater than 1 implies an increased probability of out-migration while a rate less than 1 implies a decreased probability. For instance, in the model for the whole sample, the subhazard rate is 1.29 indicating that the likelihood of emigration of men is 29 per cent higher than for women. Similarly, a one-year increase in the age of the medical doctor will decrease the probability of emigration by 2 per cent (the subhazard rate is 0.98).

Table 2.4.1: Competing risk models (subhazard rates) – out-migration (Competing risks: attrition/exit from employment/death)

	Subhazard rates				
Variable	Whole sample	–30 years old	31–40 years old	41–50 years old	51–60 years old
Gender (Male = 1)	1.29*	1.56*	1.79*	ns	0.80**
Age	0.98*	–	–	–	–
Relative labour income	0.88*	0.47*	0.61*	0.88*	1.09**
Region					
Western Transdanubia	ns	ns	0.64**	ns	ns
Other Regions: Central Transdanubia/ Southern Transdanubia/Northern Hungary/Northern Hungary/Northern Great Plain/Southern Great Plan	ns	ns	ns	ns	ns
General Practitioner or Specialist doctor	ns	ns	2.37*	ns	0.68*

Reference category: female, dentist, Region: Central Hungary.
Significant at **5 per cent, *10 per cent, ns: not significant.

The results show that for the whole sample men out-migrate with a higher probability than women. In the entire sample, there is no significant difference in the likelihood of out-migration of physicians and dentists. There are no regional differences either. Relative labour income has a significant effect on the emigration decisions of medical doctors: those whose labour income is lower compared to the national average emigrate with a higher probability than those whose relative employment income is greater. The results of the competing risk models for the different age-groups show that among young doctors (younger than 31 years old and 31–40 years old), men out-migrate with a higher probability than women. In the age-group of the 41–50 year old, there is no significant difference in the likelihood of out-migration between males and females. Among the 51–60 year old medical doctors women out-migrate with a higher probability than men. As for the effect of the relative labour income the following can be observed: those young physicians and dentists (younger than 31 years old and 31–40 years old) whose relative employment income is lower, emigrate with a higher probability, suggesting that in their decisions to out-migrate income situation plays a decisive role. The size of the effect decreases as we move on towards the older age-groups meaning that the influence of other factors is greater for the oldest. Those 51–60 year old medical doctors go abroad with a larger probability whose relative labour income is greater than that of the other doctors of the same age and with similar other observed characteristics. It does not mean that income does not have a role in the out-migration decisions but rather suggests that the more successful older medical doctors go abroad with a larger probability. There are significant differences in the likelihood of out-migration in some of the age groups between physicians and dentists. The 31–40 year old

physicians move abroad with a probability twice as high as that of the dentists. Among the 51–60 year old group physicians out-migrate with a 32 percent smaller chance than physicians.

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2.5 FACTORS AFFECTING THE INTERNATIONAL LABOUR MIGRATION OF MEDICAL DOCTORS IN HUNGARY*

ÁGNES HÁRS & DÁVID SIMON

The strong increase in the demand for medical doctors has accelerated doctor migration over recent decades. Medical professionals from Eastern Europe have gradually joined this global process and the migration of Eastern European doctors to Western Europe intensified after EU accession (*Kaczmarczyk,* 2006, *Dumont–Zurn,* 2007, *Glinos et al.*, 2014, *Merçay et al.*, 2015). Statistics and data sources suitable to describe doctor migration are slowly catching up with the interest surrounding this issue (*Buchan et al.*, 2014, *Dumont–Zurn,* 2007, *Merçay et al.*, 2015). This is also characteristic of the study of doctor migration in Hungary and estimates are used to make up for the absence of data. There is no reliable register of the number of doctors in Hungary.[1] The uncertainty means that the number of doctors is potentially over- or underestimated, and it is assumed that doctors who are no longer in the register have emigrated.[2] Research on migration potential and studies using the number of applications for official certifications generally do not measure actual outmigration (*flow*) either, but only the intention to migrate (*Balázs,* 2012, *Csernus et al.*, 2013, *Eke et al.*, 2009, 2011). Obviously, both methods overestimate the actual outmigration of doctors and disregard the possibility of return migration. The number of migrant doctors (*stock*) can be estimated on the basis of mirror statistics on the number of Hungarian doctors registered abroad. This also allows us to quantify the extent of outmigration of doctors from Hungary: in 2012 approximately 3,250 doctors, 9–11 percent of the total number of doctors in Hungary, lived abroad.[3] The total number of doctors in Hungary can be estimated at around 30,000 on the basis of data from the National Institute for Quality- and Organisational Development in Healthcare and Medicines[4] on the number of publicly employed doctors, CSO data on general practitioners, and expert estimates on the number of doctors working exclusively in the private health sector. Based on mirror statistics, information is available on the stock of Hungarian migrant doctors in Germany, the United Kingdom, and Sweden (*OECD*, 2015); the number of licenses issued in these three countries constitute up to 60 percent of the total number of licenses issued (*Katona*, 2015) and the number of Hungarian doctors working abroad was estimated on the basis of this.

Methods of analysis, data

Unlike previous estimation-based studies, this research was based on a direct survey of medical practitioners working abroad in order to investigate the

* This chapter is based on the study *Migration in the health care sector* (project ID: 101067) funded by OTKA.

1 The number of registered doctors also includes those that are not practising, while the survey on doctors in state hospitals does not include private doctors (general practitioners, dentists, doctors only working at private clinics) who are not registered separately.

2 *Varga's* (2015) estimate confirms that career attrition is higher than international labour migration.

3 *Varga's* estimate in Chapter 2.4 uses a different dataset and a narrower comparison group (rather than the total population of doctors), and by disregarding the possibility of return migration, the estimated migration rate is higher.

4 In Hungarian: Gyógyszerészeti és Egészségügyi Minőség- és Szervezetfejlesztési Intézet.

factors that explain the migration of doctors. Data collection was conducted from the spring of 2014 to the winter of 2015. The study examined the period between 2000 and 2015. The analysis looked at two groups of participants: doctors affected by migration, namely those who worked abroad for at least one week at any time during the period of 2000–2015, and – as a control group – those who have never worked abroad. To recruit *doctors currently working abroad* the method of network sampling was used and members of social networking sites dedicated to doctors working abroad made up the initial sample. On the social networking site a sample was selected using the method of *reweighted random walk* (*Gjoka et al.* 2010), a form of respondent-driven sampling (*Salganik*, 2006). The size of the obtained sample does not differ substantially from that in commonly-used multi-stage sampling (the effect of sampling design – the differing selection probabilities – can be estimated at around 2%), where it might be even smaller due to the relative size of the sample to population (approximately 7% in this segment). *Doctors in Hungary* who have never worked abroad were surveyed using a random sample stratified on region and type of employment, and the data was weighted on these as well as age group. In the case of doctors currently working in Hungary who also worked abroad previously, the above sampling method was used to screen participants and those who met the inclusion criteria (i.e. worked abroad between 2000–2015) were invited to respond to the survey. The survey was administered as an online questionnaire for all participants. The unweighted composition of the sample is as follows: 736 doctors who have worked only in Hungary, 154 doctors who are currently working in Hungary but worked abroad previously, and 196 doctors currently working abroad.

Motivations for working abroad

The motivating factor considered most important for migration, wage gain, was examined using multiple questions in this study. To measure expected wage gain for those working in Hungary, the actual net earnings in Hungary and the expected earnings abroad for those with comparable experience were used. For those working abroad we used the actual earnings abroad and the expected earnings in Hungary for someone with comparable experience; and the real value of earnings abroad was operationalised as the ratio of living expenses abroad and in Hungary. To ensure that previous employment abroad does not bias the results, only data for people currently working abroad and those who have never worked outside Hungary were analysed. The mean values of factors determining net wage gain are shown in *Table 2.5.1.*

Doctors working exclusively in Hungary consider monthly net pay higher in their profession than doctors working abroad. (This difference is probably also explained by the fact that doctors working abroad are younger.) The two groups perceive the difference in pay between Hungary and abroad similarly.

Doctors working abroad earn approximately six times the estimated pay in their profession in Hungary. The actual average pay of doctors in Hungary exceeds the estimated average. The difference in living expenses between Hungary and abroad is somewhat overestimated by doctors in Hungary. Overall, the computed real wage gain is estimated to be slightly higher by doctors in Hungary, however the difference is not significant.

Table 2.5.1: Mean values of factors determining real wage gain

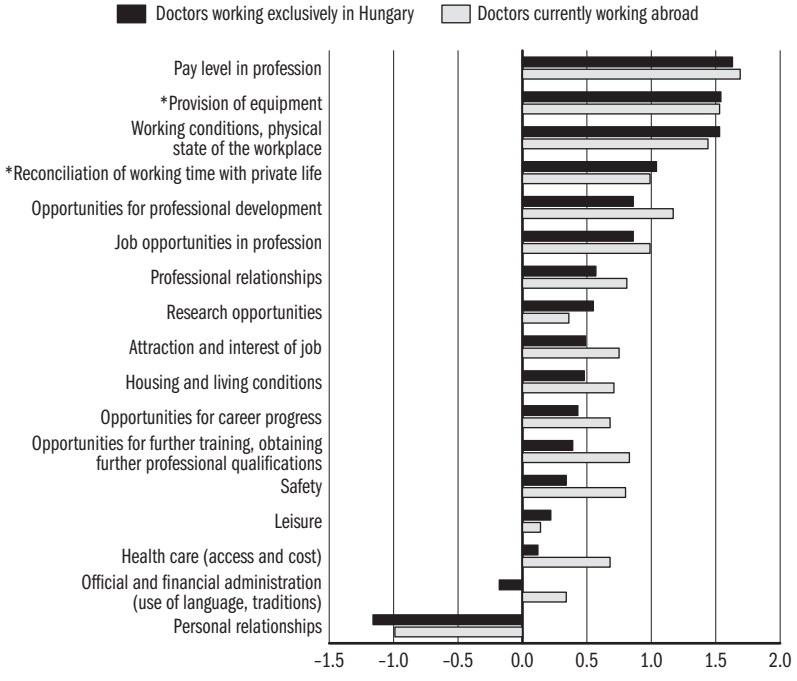
	Doctors working exclusively in Hungary		Doctors currently working abroad		Test statistics	
Factor	Mean	Standard error	Mean	Standard error	*t*	Significance
Monthly net pay in their profession for someone with comparable experience in Hungary according to respondent (thousand forints)	299.5	10.7	219.1	6.89	6.32	0.000
Total current income of respondent (thousand forint)	326.8	7.38	1389.7	67.3	–15.7	0.000
Ratio of foreign and Hungarian pay estimated by respondent	6.44	0.09	6.52	0.17	–0.40	0.685
Ratio of foreign and Hungarian living expenses estimated by respondent	2.99	0.05	2.58	0.09	4.07	0.000
Computed real wage gain (thousand forints)	407.8	23.31	374.9	22.34	1.01	0.309

Note: The value of 1000 HUF is around Euro 3.01.

In addition to wage gain, other important factors can also influence the migration of doctors. Out of these, working and living conditions are considered here. The following factors were examined: (1) opportunities for professional development, (2) opportunities for career progress, (3) research opportunities, (4) attraction and interest of the job, (5) further training, (6) opportunities to obtain further professional qualifications, (7) professional relationships (relationship with manager, team work), (8) job opportunities in the profession, (9) personal relationships (relatives, friends), health care (access, costs), (10) official and financial administration (use of language, traditions), (11) safety, (12). housing and living conditions (13) leisure, (14) pay level in profession, (15) provision of equipment, (16) working conditions and physical state of the workplace, (17) reconciliation of working time with private life.

For each factor respondents were asked whether they considered Hungary or the preferred foreign country as more favourable. The perceived importance of each area was also measured and used to weigh each factor. *Figure 2.5.1* compares the views of doctors working exclusively in Hungary and doctors working exclusively abroad.

Figure 2.5.1: Perception of factors affecting employment (in order of increasing mean values)



Note: The mean values of factors weighted by individual importance, five-point scale where –2 means that it is much better in Hungary and +2 means that it is much better in the preferred foreign country.
The asterisk indicates factors where the difference is not significant (in all other cases it is significant).

There were no major differences between the two groups. The only significant differences between doctors working exclusively in Hungary or abroad were found for factors that were perceived similarly in Hungary and abroad. In 12 out of the 17 factors considered here, doctors working abroad perceived the situation abroad more favourably than doctors in Hungary, and only three factors were perceived as significantly worse, namely: 1. working conditions and the physical state of the workplace, 2. research opportunities and 3. leisure.

Reasons for working abroad and its impact

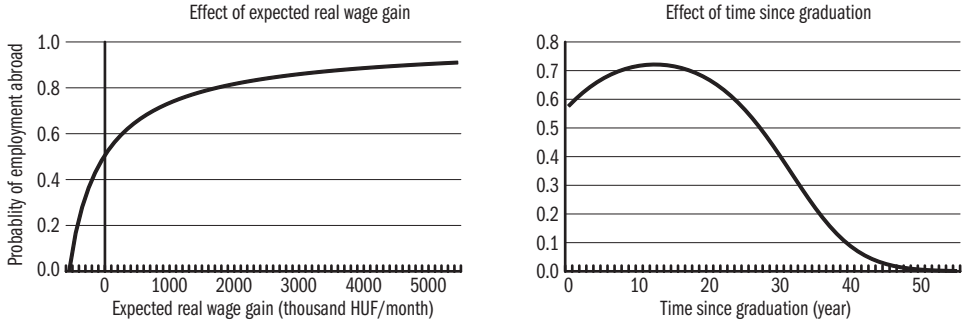
Logistic regression models were used to examine the effect of individual factors on the probability of working abroad. The outcome variable was employment abroad versus employment in Hungary and the estimated marginal probabilities are presented here. The model applies for those currently working abroad and doctors who have never worked outside Hungary. An estimated 12 per cent of Hungarian doctors are working abroad.[5]

5 Previously the percentage of doctors working abroad was estimated at 12% of doctors in Hungary for 2014. If the percentage of doctors currently working abroad differs from this estimate, it might change the position of estimated distributions but it has no effect on their shape or the extent and direction of differences between values.

The basic model examined the effect of expected real wage gain on the probability of working abroad. For a better fit, the model uses the logarithm of the real wage gain. The basic model was controlled for sex, profession (doctor or dentist), time since graduation (and its square), the status of specialist qualification, and preferred destination country.[6] The model showed a good fit and had adequate explanatory power (Hosmer & Lemeshow test: $p = 0.351$; Nagelkerke's pseudo $R^2 = 0.291$).

According to the model, doctors would be willing to take up employment abroad even without a wage gain. Any additional wage gain increases the probability of working abroad at a diminishing rate, which finally converges to 90% from the very high 3.5 million forints per month. All control variables were significant. Time since graduation initially slightly increases the probability of working abroad, then 10 years after graduation it starts to reduce it, and its effect returns to around zero toward the end of one's career (*Figure 2.5.2*).

Figure 2.5.2: Effect of real wage-gain expectations and time since graduation on the probability of working abroad



Men, those without specialist qualification, and doctors were more likely to take up employment abroad than women, those with a specialist qualification, and dentists. Those indicating Germany as a preferred destination country are most likely to work abroad, while among those who indicate a preference for the United Kingdom or Scandinavian countries, all other conditions being equal, the probability of working abroad is 14–17 percentage points lower (*Table 2.5.2*).

The model was expanded in two directions: on the one hand additional factors related to working abroad were considered, as well as factors relevant from the perspective of the Hungarian labour market.

The main results of the expanded model (see the 17 factors listed previously) are presented in *Figure 2.5.3*.

Of the indices for working and living conditions, five factors are significant. In terms of further education opportunities as well as official and financial

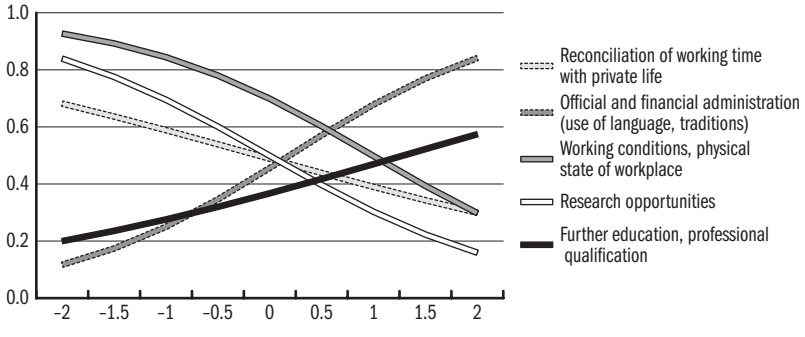
6 In all cases the reference group for marginal probabilities was newly graduated male doctors without a specialist qualification, aiming to work in Germany, with average wage gain expectations.

administration, a more favourable perception of the preferred country is associated with a higher probability of employment abroad. In terms of the other three factors, the relationship is negative.

Table 2.5.2: The effect of some control variables on the probability of working abroad

Factors	Wald-statistic	Significance	Probability of working abroad
Sex	6.27	0.012	
Male			0.58
Female			0.42
Profession	4.77	0.029	
Doctor			0.58
Dentist			0.33
Specialist qualification	15.54	0.000	
No			0.58
Yes			0.17
Destination (preferred) country	22.68	0.000	
Germany			0.58
United Kingdom			0.44
Scandinavia			0.41
Other countries			0.25

Figure 2.5.3: Marginal effect of the perception of working and living conditions on employment abroad

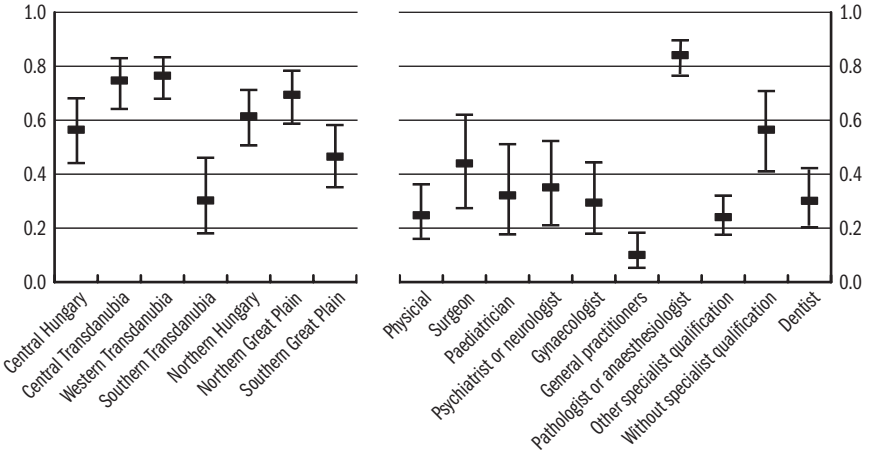


The effect of wage gain is smaller in this model. Doctors would rather prefer to work abroad than in Hungary when the wage gain is 630 thousand forints or more. As wage gain increases so does the probability of employment abroad. This difference suggests that the effect of wage gain is not independent from the expected living conditions (however, this could not be tested here due to the small sample size). The effect of time since graduation is also somewhat different: the probability of working abroad peaks approximately seven years after graduation and then starts to fall sharply (by year 20 it drops to a third of the maximum).

The negative effect of the perception of working conditions and research opportunities can be explained by the fact that doctors working abroad *ceteris paribus* consider these as more unfavourable than doctors working in Hungary.[7] In other words, doctors working in Hungary have a more idealised picture of the situation abroad. The situation is probably similar in the case of the reconciliation of working and private life as well; however the size of the sample did not allow the identification of significant differences.

The last model attempts to estimate the effects of a further two factors in addition to the basic model: the region of residence in Hungary and specialist qualification (*Figure 2.5.4*).

Figure 2.5.4: The effect of region and specialist qualification on employment abroad



Note: The lines indicate the standard error of estimation.

There are considerable differences between regions. The probability of working abroad from Southern Transdanubia is smaller, while from Central and Western Transdanubia as well as the Northern Great Plain it is higher than the general tendency (*Hárs–Simon,* 2015). The probability of migration is high in particular among pathologists and anaesthesiologists, and those without a specialist qualification. It is well-known that the low income of pathologists and anaesthesiologists from 'parasolvency' might explain their higher migration propensity. By contrast, among general practitioners the probability of employment abroad is below average. (The model has adequate fit and good explanatory power: Hosmer & Lemeshow-test: $p = 0.420$; Nagelkerke's pseudo $R^2 = 0.379$.)

Conclusions

The pay advantage of working abroad is seen as considerable by doctors: respondents estimated a more than six-fold wage gain. However, the computed

7 This was demonstrated with a separate regression model that cannot be presented here in detail due to limitations of space.

net real-wage gain was just over two-fold. As regards working and living conditions, there are few potential motivations for doctors to return to Hungary; in most areas doctors working abroad perceived the situation in Hungary as less favourable than their counterparts working in Hungary. However, our model suggests that even a modest pay increase could reduce the probability of labour migration. This is particularly important for those at the beginning of their career prior to professional qualification, because the probability of labour migration falls sharply later on. It is also important to improve the quality of training and further education because the model estimates suggest this would also reduce the probability of migration. Apart from professional considerations, making official and financial administration easier could potentially encourage people to stay in Hungary, suggesting difficulties with general bureaucracy in Hungary.

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2.6 REMITTANCES TO HUNGARY AND HOW TO MEASURE THEM

LÁSZLÓ KAJDI

In parallel with the gradually growing number of emigrants leaving Hungary, it has become increasingly important to analyse the extent to which the remittances of emigrants contribute to the livelihood of Hungarian households and the growth of the domestic economy. In the case of countries with a large emigrant population it is common that these money flows are considered to be important sources; thus these countries strive to utilize these remittances to the largest possible extent and channel them to development funds. In Hungary it is only recently that a significant increase in remittances has emerged and this now makes it worthwhile to examine the best avenues for their use, despite the paucity of available relevant data.

The *World Bank* (2015) publishes data based on macroeconomic estimations, which can serve as a basis for the analysis of the volume of these flows. Due to their aggregate level however, they do not facilitate a detailed examination of the topic. Among others there is no information on the number and socio-economic status of the receiving households, how these money flows are transferred to Hungary and in which ways they are utilized. This subchapter introduces the information at our disposal regarding remittances to Hungary, and also the various measurement techniques available together with their strengths and weaknesses.

Measurement problems of remittances

Since the phenomenon of remittances is rather complex from the socio-economic point of view, its measurement also requires a comprehensive approach. From the measurement's point of view one of the main factors is whether the money is sent home via an electronic payment method, which is easier to track, or if it is remitted by means of a barely detectable private cash transfer. The cost of electronic transfers and the development level of the financial infrastructure in the countries affected can have a great influence on this. In some cases (not so much in Europe) the identification of the actual receiving country is hindered by the fact that remittances are sent to a neighbouring country due to the low level of security or the lack of a proper financial infrastructure, and transferred in cash to the actual receiving destination (*Sander–Maimbo*, 2005). Another problem is that it is quite difficult to identify the actual remittance transactions among the otherwise easier recordable electronic transfers. In other words, it is not clear how to define the proper transaction

value limit and how other types of transactions, such as business or touristic transfers can be filtered out.

In line with *IMF* (2009) recommendations to reduce measurement errors it is worthwhile to use several data sources when measuring remittances. The parallel application of different data compilation methods facilitates the compilation of the most reliable datasets and the reduction of disadvantages of using one single particular data source.

To reduce the costs of measurement, regular data on cross-border electronic money transfers can be obtained with the help of administrative data sets and the data collected by central banks or national statistical offices from payment service providers (e.g. banks). The drawback of this method is that it is not capable of measuring informal personal cash transfers and the distinction between remittances and money transfers for other (e.g. business) purposes is also problematic. Defining a transaction value limit can partly solve this problem; however, the proper definition of the limit can be a difficult task and heavily influences the results.

Another possible solution is the use of household sample surveys, which provide direct information on receiving households. Thus more detailed data can be collected on the amount, the transferring method and the frequency of remittances, as well as on the characteristics of the receiving households. Nonetheless the execution of such surveys is significantly more resource demanding than the collection of administrative data, furthermore the non-response rate can be considerably high due to the sensitivity of the topic. Since the regional distribution of receiving households is often uneven in the population, the inclusion of the appropriate number of households in the survey can require special sampling techniques.

The two main techniques mentioned can be completed using estimation procedures, which support the low resource demand calculation of relatively reliable results from data with an inappropriate quality level. The other advantage of estimations is that they can be flexibly fitted to the specific features of the country or the statistical data sources. However, the validation of these results and the criteria used for the calculation can be difficult, since they are usually based on the opinion and presumptions of experts in the field.

Remittances to Hungary

The World Bank publishes the most complete dataset on the volume of remittances, which is based on the compensation of employees and the personal transfer categories of the current account of affected countries. These current account data are amended using estimation procedures in order to identify money flows between sending and receiving countries (*Ratha–Shaw,* 2007). According to the published data, the amount of remittances sharply increased globally after the millennium; the amount of USD (583 billion) sent in 2014

(*World Bank,* 2015) shows a more than four-and-a-half-times growth compared to the level in the year 2000. The World Bank (*Maimbo–Ratha,* 2005) and additionally the IMF (*IMF,* 2009) draw attention to the fact that remittances show much lower volatility compared to Foreign Direct Investments, and their volume does not depend on the economic situation of the receiving country, thus these money flows can serve also as a reliable resource in times of economic recessions.

Several research studies examined worldwide the factors which influence the amount of the money transferred. Among these there are country-specific factors (e.g. how close is the relationship between the family members and how it influences remittances), but general features can also be identified. For instance, the time period spent abroad by the emigrant heavily influences the amount of money transfers according to *IMF* (2009) analyses. In the case of short-term migration, the amount of remittances is usually higher compared to that of those who utilize their income in order to establish a new life in their new country. Other research studies (*Chimhowu–Piesse–Pinder,* 2005) proved that women support their families in home countries more reliably than men. Nonetheless the economic situation in the country where the emigrant works is less important, since these countries normally have developed welfare systems, where the social transfers compensate for the decrease in incomes (*Ratha,* 2005).

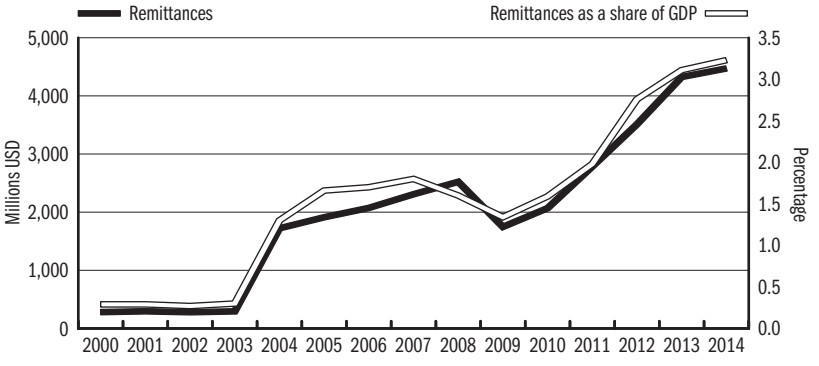
Considering remittances to Hungary over the last 15 years (*World Bank*, 2015) it appears that after a remarkable increase in 2004 presumably in connection with accession to the EU, since 2009 a new ascending period has commenced. This is in line with the significantly growing number of emigrants from Hungary during this period (*Figure 2.6.1*). In terms of absolute numbers this means that the USD 280 million sent to Hungary in the year 2000 has become sixteen-times higher after 15 years and in 2014 was almost USD 4,500 million (4,473 million).

In remittances as a share of GDP the same trend appears. In the first couple of years after joining the EU remittances constituted 1.5–2 percent of the GDP, but due to the sharp rise which commenced in 2010, the latest data from 2014 shows a figure of more than 3 percent.

For the originating countries of transfers the main target countries of emigrant Hungarians can be considered the most important areas also from the remittances point of view (*Figure 2.6.2*). Among these Germany is the biggest source country, from where more money was sent in 2014 (USD 952,2 million) than from the United Kingdom (USD 396,3 million) and Austria (USD 365,1 million) together. The United States and Canada are also major sending countries, which is even more important from the aspect that emigration to these countries was not within the focus of recent studies. Other main source countries of remittances are Australia, Switzerland, Sweden and Slovakia.[1]

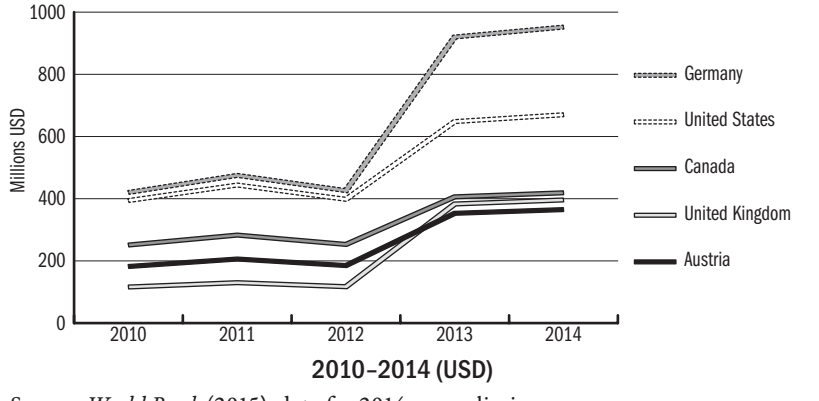
1 Remittances from Hungary are around USD 1–1.5 billion since 2006, which is approximately one quarter of the received money transfers. Contrary to remittance inflows, no significant growth appeared in the amount of money sent from Hungary, and after the economic crisis in 2008 it even decreased. These transfers are mainly not connected to the current, especially economically motivated migration, but rather to the continuous support of Hungarian national relatives abroad, which might explain the relatively stable value of these money flows.

Figure 2.6.1: Remittances to Hungary and their share of the GDP, 2000–2014 (million USD)



Source: *World Bank* (2015), *KSH* (2015), data for 2014 are preliminary.

Figure 2.6.2: Remittances to Hungary by the main sending countries,



2010–2014 (USD)

Source: *World Bank* (2015), data for 2014 are preliminary.

In addition to using current account data, the household sample survey of the SEEMIG project, which examined the migration processes of the South-eastern European countries, represented another approach. The survey (see *Blaskó–Jamalia,* 2014) was based on the regularly undertaken (quarterly) Labour Force Survey, which had the main goal of achieving representative results using special sampling techniques on the characteristics of the emigrant Hungarian population. In the framework of the survey remittances were also analysed, which showed that one quarter of emigrant Hungarians send money transfers to a Hungarian household.

Conclusion

The issue of remittances is a complex phenomenon with several social, economic, and demographic aspects, thus the examination of these money transfers and the obtaining of reliable results imply several difficulties. According to

the published data of the World Bank, in the case of Hungary a major growth occurred both in the amount of remittances and in their share of GDP. In 2014 the USD 4.5 billion amount of remittances constituted 3.2 per cent of the GDP, which is significant in the Hungarian current account as well. This stresses the importance of further analyses. In order to achieve this a special household survey with a large sample size dedicated to the topic would be extremely useful. Data from a sample survey would be important to get a clear picture on the socio-demographic features of the receiving households, but this data can serve as a basis for the more reliable application of administrative data sources and estimation procedures with lower costs.

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2.7 RETURNING MIGRANTS*

ÁGNES HORVÁTH

Migration is not necessarily a one-way movement. According to empirical data, a substantial proportion of economic migrants (20–50 per cent) spend less than five years in the destination country – they either return to the sending country, or migrate further. Thus, the scale of return migration is significant; therefore it is important whether its effects on the sending (and receiving) countries are positive or negative.

The monitoring of return migrants is only possible with a considerable delay and has a limited scope to capture their exact magnitude; therefore the impact on receiving and sending countries is difficult to quantify. The share of return migrants can be estimated on the basis of flow data; however data are not harmonised across receiving countries and do not provide detailed information on the main characteristics of migrants. Therefore, knowledge on return migration mainly comes from targeted research.

Generally, returners can make positive contributions to the economy of their origin by sharing their experience and/or savings accumulated abroad. Both emigration and return migration are selective (this is referred to as double selection), therefore much more detailed information would be necessary on migration flows in both directions in order to assess the impact of return migration (i.e. the net impact of emigration). The sending country can benefit most from return migration if there is a positive selection of returners among emigrants. A further condition for potential beneficial effects is that returners find employment or start a business at home matching their experiences gained abroad, and spend their savings on increasing either human or physical capital.

Who returns and why?

According to the *OECD's* estimate (2008) the rate of return or onwards migration is between 20–75 per cent annually, and it is highest within the first five years after emigration. However, there is a considerable variation in the rate of remigration across countries. The development gap between the sending and receiving countries is negatively associated with the rate of remigration. Furthermore, economic cycles also have an important effect: recessions tend to affect migrants more; they are more likely to return or migrate further during economic downturns (*Bijwaard–Wahba*, 2014). *Papademetriou–Terrazas* (2009) however, argue that the economic and social structure of the sending country have a larger effect on the decision to return than the cyclical position of the receiving country.

* I am grateful to Katalin Bodnár for her constructive criticism and valuable contribution.

The motivations of return migration are diverse, and – as in the case of emigration – can change over time and multiple causes can be present at the same time. They can also be classified into "push" (related to the receiving country) and "pull" (related to the sending country) factors. The main push factors in the receiving country are job-finding probability, the probability of finding a job utilising the migrant`s qualifications, the earnings and available savings, as well as the success and degree of integration (for example whether the individual has a spouse, where they live, whether they own a property). The pull factors include the economic and political circumstances, job opportunities in the sending country, the potential "gain" from the accumulated experiences after return, as well as personal preferences (*OECD,* 2008, *Dustman et al.,* 2011). Nevertheless, there can be many other motives for return migration, for example returning after retirement is also common.

The importance of individual factors that determine the magnitude of return migration is also shaped by the motives of emigration. According to Roy's standard model of international migration (*Roy,* 1951) return migrants tend to be negatively selected from positively-selected migrants (i.e. the worst from the best) and positively selected from negatively-selected migrants (i.e. the best of the worst) (*Borjas*, 2014). If the purpose of emigration is long-term settlement in a country with higher income levels, then return migration is caused by the failure of the original intention and returners will be negatively selected: those would return who are unemployed or on low income in the destination country, or are less integrated in the receiving country and more integrated in the sending country (*Constant–Massey,* 2002). However, if migration is planned to be temporary from the outset, then those employed and on a higher income or with savings are the ones likely to return, thus the returners will be positively selected from the emigrants.

The two types of migration are present concurrently, which might explain the U-shaped relationship between income, age, education and the probability of return migration demonstrated by empirical studies (*OECD,* 2008, *Bijwaard–Wahba,* 2014). However, according to *Pungas et al.* (2012), overeducation, rather than education, plays a role in the propensity to return (for example in the case of Estonians working in Finland). Alongside the experiences and savings accumulated by returnees, their capacity to innovate and become actors of change also determines whether return migration can foster development in the sending country (*Cassarino,* 2004). Nevertheless, there is a lack of empirical data on this.

Return migration to Central and Eastern Europe

Following the accession of Central and Eastern European (CEE) countries to the European Union in 2004, the intensification of migration meant that an increasing number of people acquired experiences abroad before the finan-

cial crisis. Then migration was predominantly temporary: for the majority of migrants the planned and actual duration of stay abroad was less than one to two years (*Randveer–Room,* 2009, *Blanchflower–Shadforth,* 2009). Before the economic downturn, the majority of migrants took up employment in low-skilled jobs, which might explain the temporary character of migration (*Zaiceva–Zimmermann,* 2013).

After 2008, many expected a decrease in emigration and an increase in return migration due to the economic downturn in the old Member States (*Martin–Radu,* 2012). Although there were sending countries where this happened temporarily (e.g. Poland, Slovakia), there are also examples of the opposite (i.e. Latvia). Overall, East-West migration continued to increase and it was further intensified by Germany and Austria fully opening up their labour markets in 2011.

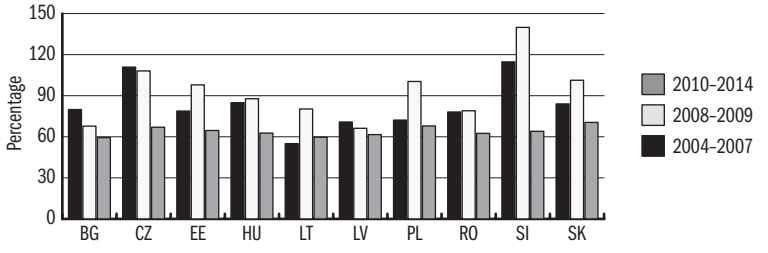
Available data on CEE countries and empirical studies confirm that the extent of return migration is substantial. *Martin–Radu* (2012) estimated that the proportion of those who had spent at least six months working abroad ranged from 2.6 to 9.1 per cent in CEE countries in 2006–2008. The authors analysed data from the *European Labour Force Survey* (*EU–LFS*) from 2002 to 2007 in five countries: the Czech Republic, Poland, Lithuania, Hungary and Romania and found that the majority of returnees were male, and that singles as well as those with secondary education and graduates were over-represented among them compared to the non-migrant population. In most CEE countries returnees were positively selected compared to both emigrants and those staying abroad. Controlling for individual characteristics, the results show that returnees were more likely to become inactive or start a business than non-migrants.

Zaiceva–Zimmermann (2013) examined return migrants after 2008 and they also found that returnees are usually positively selected, namely they are more educated than the non-migrant or the non-returning migrant population. This is also supported by the fact that the majority of migrants returning to Central and Eastern Europe at the beginning of the crisis were actually employed 12 months earlier in the receiving country. However, the authors highlight that return can also be temporary and returnees might leave again when the economy takes an upturn again in the receiving countries. Individual country analyses also tend to show that the labour market integration of returnees is by-and-large successful – with the exception of Poland, where the unemployment rate is higher among return migrants than in the non-migrant population (*OECD,* 2013, *Kahanec–Kureková,* 2014).

The rate of return migrants from Germany to CEE Member States (EU–8 + 2) declined around 2010, primarily due to the increase in the number of migrants from EU–8 + 2 (*Figure 2.7.1*). According to data from the German Immigration Office, the rate of migrants from Germany to Central and Eastern Europe relative to migrants from CEE to Germany was relatively stable

by sending country prior to 2008; it then increased in some countries. Since 2010 the share of returnees, as well as the differences between the EU–8 + 2 countries, declined substantially, primarily due to the increase in the number of migrants to Germany. Despite the lower return rate, the share of those with experience abroad increased within the EU–8 + 2 populations, because the size of the potential pool (i.e. those migrating to Germany) also increased.

Figure 2.7.1: Migration from Germany to EU–8 + 2 Member States relative to migration from those countries to Germany (percentage)



Country abbreviations: BG: Bulgaria, CZ: Czech Republic, EE: Estonia, HU: Hungary, LT: Lithuania, LV: Latvia, PL: Poland, RO: Romania, SI: Slovenia, SK: Slovakia.
Note: The figure shows migrants by country of origin and destination. Migrants from countries of origin to Germany or from Germany to destination countries might not be citizens of either the country of origin or the destination country.
Source: *BMF* (2016) pp. 220–224.

Return migration to Hungary

Hungary became a net receiving country during the early years of the post-communist regime change: the combined number of Hungarians who returned from emigration, the immigration of ethnic Hungarians from neighbouring countries together with the ethnic groups from the former Yugoslavia exceeded the number of those leaving the country during the 1990s to a substantial extent. In this period there was also a net immigration of Hungarian citizens due to low emigration coupled with high return migration (primarily of the retired). Table 2 of *Ambrosini et al.* (2015) shows that the rate of return migration relative to gross migration was the highest in Hungary (1.34) out of the nine East-Central European countries[1] included in the analysis, in the period between 1990 and 2000 according to UN data.

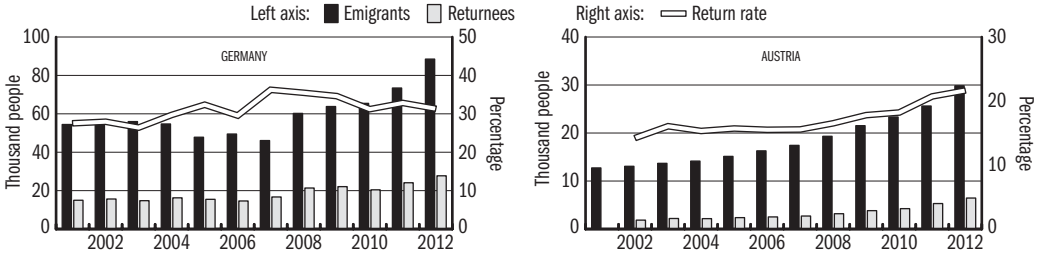
The net migration of Hungarian nationals turned into negative in the early 2000s temporarily and then again during the 2008 crisis. Moreover, from 2002 to 2007 the return rate was already well below the average of the CEE countries according to the European Social Survey (ESS) database (*Martin–Radu,* 2012). The number of emigrants exceeded the number of Hungarian returnees during the financial crisis, albeit the fact that the number of Hungarian-born migrants increased both in absolute and relative terms among returnees: it more than doubled between 2005 and 2011 compared to the period before the 2000s (*KSH,* 2016).

1 Albania, Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland and Romania.

It is not possible to determine the exact rate of return migration on the basis of available data. However, on the basis of mirror statistics and official Hungarian statistics, the share of return migrants to Hungary can be estimated at 25–42 per cent of emigration in the years following the crisis. Nevertheless, it is important to emphasise that the share of returnees is difficult to measure and might change over time.

Between 2001 and 2012 each year on average over 70 per cent of Hungarian nationals working abroad chose either Germany, Austria or the United Kingdom as a destination country. The share of the three countries reached 81% in 2014 (*KSH,* 2014, Table 8.2.25), therefore the largest number of returnees can also be expected from these. Detailed national statistics are available for Germany and Austria to analyse the number of returnees. According to official data, Hungary was a net sending country in the period between 2001 and 2012 towards both countries. The number of emigrants from Hungary to both Austria and Germany became typically higher after 2008. However, while the rate of returnees from Austria has been gradually increasing since 2007, in the case of Germany it has been steadily declining since its peak in 2007 (*Figure 2.7.2*).

Figure 2.7.2: Migrants from Hungary (thousand people) and the rate of return migration in Germany and Austria



Note: Emigrants are stock, return migrants are flow data.
Source: Germany: Eurostat (2014), Destatis (2013). Austria: Statistik Austria (2013). *Gödri et al.* (2014): pp. 66–68.

Based on various comparative studies it can be concluded that the characteristics of Hungarian returnees do not significantly differ from those of their Central and Eastern European counterparts. Returning to Hungary is a deliberate choice for a large number of Hungarians working abroad. Compared to migrants from other CEE countries, Hungarians typically spent more, shorter periods abroad (*Hárs,* 2009). *Smoliner et al.* (2011) highlights that the majority of migrants from Hungary are male, and according to *Hárs* (2009) the share of males could have reached up to 75 per cent in 2008–2009, therefore males were also over-represented among return migrants. According to the most recent data, from 2014 on, there are still more male returnees than fe-

male; however their share is substantially lower, 56 per cent (*KSH,* 2014, Table 8.2.24). *Co et al.* (2000) showed that male return migrants in Hungary could not achieve a wage premium relative to their non-migrant counterparts, however female returnees, who tended to find employment in the financial sector, achieved up to 40% higher salaries than those who stayed in the country.

Martin–Radu (2012) found that Hungarian return migrants had tended to be positively selected in the period prior to the crisis (they were younger and more highly qualified than the general population), with the addition that returnees were more likely to become self-employed than employed after their return. According to the same survey, a common characteristic of self-reported returnees was that they typically either lived in a long-term relationship or were married, and were much less likely to be childless compared to those staying abroad (69% vs 44%). They got a job and worked typically full time both abroad and in Hungary following their return. Returners highlighted the opportunity for higher earnings and career development as the main motives for working abroad. The main reasons for returning among Hungarian respondents were clearly the separation from family and friends.

Conclusions

With the massive rise in the number of Hungarian migrants between 2010 and 2014, the number of Hungarian returnees has also increased. Hungarian returnees, similarly to other Central and Eastern European migrants, are typically positively selected: they are younger and more educated than the non-migrant population and it seems that their labour market integration has also been successful. The increase in the number of returnees might have also mitigated the negative impact of the "brain drain" to some extent in the period following the crisis; however, there is no information whether returnees are also positively selected relative to the population permanently settled abroad.

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2.7.1 Public policies encouraging return migration in Europe

JUDIT KÁLMÁN

Following a brief international outlook, this paper takes stock of public policy interventions that respond to mobility flows within Europe and encourage return migration. As motivations for migration and repatriation as well as the characteristics of migrants and returning migrants are diverse, the objectives and tools of goverment interventions intending to influence these processes also vary. Policy interventions concentrate mainly on the repatriation of highly qualified emigrants (*brain regain*) and aim to utilize the skills and experiences of returnees in promoting innovation-based economic development and competitiveness. Return programmes can either be focusing on the labour market only or have an integrated approach, involving multiple public policy areas. Table *2.7.1.1* summarises their main characteristics.

Table 2.7.1.1: Main types and characteristics of public policy programmes promoting return migration

	Reintegration (reactive intervention)	Promotion of return (active intervention)	Policies for retention of human capital (proactive)
Target group	Returned migrants	Potential returnees	Potential emigrants
Rationale	Minimizing social tensions and costs associated with return	Maximizing benefits of return migration (through the social-, economic-, demographic- and financial capital of the returnee)	Emigration prevention, loss minimisation
Purpose	Reintegration of returnees into society	Promotion of return migration and assistance with the process	Prevention of (skilled) worker outmigration
Place	Sending country	Receiving country	Sending country
Time	After return	Before/during return migration	Before emigration
Method	Information services, job placement, mentoring, training, entrepreneurship support, reduction of administrative burdens, recognition of qualifications acquired abroad, housing allowances and other temporary financial assistance	Training, support, consulting, practical information services (telephone, website), individual mentoring, PR-campaign, raising awareness of potential benefits of returning home	Through education and development policies, economic policy – not via administrative barriers

Source: Edited by author based on *Kovács et al.* (2014).

Beyond diaspora policies, there are many successful, complex return migration-repatriation initiatives in many countries around the world – for example in China, India and Taiwan (*UNDP*, 2007; *Jonkers,* 2008; *Mészáros,* 2010). Already in the 1960s, Taiwan and Korea tried to entice the return of its highly educated citizens who had embarked on international careers by offering excellent research opportunities, high salaries and other incentives. China has also been following this model for some time, in addition to the government's attempt to involve the diaspora community. For a long time India did not promote remittances at all, but nowadays it aims to encourage diaspora investment and return of its emigrants through the reduction of bureaucracy, business-friendly policies and by the liberalisation of exchange rates. At the same time Taiwan, concentrating on building relationships and promoting investments, created business and industrial parks, and sought to entice its researchers and engineers to return home with the lure of attractive jobs, as well as advanced infrastructure, housing, and schools (*OECD,* 2008). A number of other countries – for example, some South American and African countries – have long operated similar scholarship programmes and government programmes encouraging the return of their highly qualified citizens.

In comparison with these Asian and Latin American countries, Eastern European countries discovered the economic possibilities of return migration policies relatively late and utilised the potential of *brain regain* programmes to a lesser extent. Several migrant return initiatives have been launched in Central and Eastern Europe, including Hungary (*Table 2.7.1.2*). The majority of the programmes began 4–5 years following EU accession (*Kaczmarczyk,* 2013), even though in many of the affected countries massive outmigration had started years before.[1] This is all the more surprising as such programmes can be co-financed by the EU (European Return Fund, Cohesion Policy).[2]

1 Because they are relatively recent, but also for the absence of proper outcome indicators, it is not yet possible to measure their long-term impacts.

2 One of the reasons for this is the conflict between goals, principles and instruments at different levels of government. At the EU level, the free movement of labour is one of the main pillars of the common market, as well as a common economic interest, while at the level of Member States this mobility has a range of negative consequences presented earlier, which might also differ across Member States.

Table 2.7.1.2: Return, reintegration, and retention initiatives in Eastern Europe

Name	Country	Programme type	Main objective	Duration	Instruments/Outcomes
Guidance and Counselling for Migrants and Returnees	Transnational (6 EU Member States)	Re-employment, reintegration	Consulting, know-how and exchange of experience for returnees	2009–2011	Re-migration toolkit, online library creation, surveys. Seven meetings in the partner countries
Povroty.gov.pl Programme	Poland	Reintegration, Re-employment	Information provision, assistance with reintegration for Poles living abroad (primarily in the United Kingdom) with an intention of returning home	2008–	Website, Reintegration and re-employment of returnees, job placement, incentives for becoming entrepreneurs, tax incentives, reduction of bureaucratic restrictions. Combined withPolish Employment Service job recruitment portal since July 2011
"Masz PLan na powrót?" [Do you have a plan for return?]	Poland	reintegration	Provision of information for Poles abroad intending to return	2008–	Website, information campaign, job brokerage, promoting business start-up, tax breaks (!), elimination of bureaucratic barriers (recognition of qualifications, one-stop-shop administration, elimination of dual taxation), support for the reintegration of children – national programme, jointly coordinated by various government departments
Homing Plus Program	Poland	Encouraging return, re-employment, reintegration	Supporting the return of young Polish researchers (as well as doctoral students)	2010–	Max.80 thousand Polish zloty (cc.18500 EUR) research grant/year, 5,000 zloty (cc. 1170 EUR) monthly pay for researchers.
„Zostań w Polsce – swoim szefem!" (Be your own boss – stay in Poland!)	Poland – regional programme	Encouraging return	Supporting business start-up, self-employment of returnees	2010–	Warsaw (Mazowie region) –training, business plan preparation, 6-month financial incubation support: target group – primarily those aged over 45 years, women, and people being returned due to unemployment.
Wracajdopolski.pl [ReturntoPoland.pl]	Poland Regional	Promotion of return	Encouraging the return of highly qualified Polish migrants (mainly from the UK)	2007–2011	Polish and British Chamber of Commerce

Name	Country	Programme type	Main objective	Duration	Instruments/Outcomes
"Return support"	Estonia	Promotion of return, reintegration	Financial assistance for Estonians returning from abroad after more than 10 years	2004	Up to 2,000EUR/person, very few people qualify due to strict eligibility criteria (36–242 people/year) – criteria: more than 10 years spent abroad, retained links, official registration.
"Talents back Home"	Estonia	Promotion of return, re-employment	Information service for young Estonians (students) living abroad intending to return home	2010–2012	Job brokerage, information campaign, website – operated by the Estonian Chamber of Commerce and Industry, funded by the EU (ESF), following a successful campaign only 27 people returned home in the programme.
MEDIT	Romania	Promotion of return, re-employment	Information provision for Romanians living in Italy with the intention of returning home	2009–2011	Romanian Employment Service in partnership with the Italian counterpart, funded by the EU (ESF), information services, job brokerage
Romanian Office for Romanians Living Abroad	Romania	Diaspora policy, maintaining links	Preserving the identity of Romanians living abroad, links with the mother country	1995–	Language courses, Romanian school classes abroad, financial assistance for diaspora communities
Opening up opportunities for Returned Georgian Migrants	Czech Republic, Georgia	Reintegration, re-employment	Supporting return of Georgian migrants	2003–	Creation of an employment service and job brokerage centre in Tbilisi, assistance, information campaign in the Czech Republic
Migracia SK	Slovakia	Return, retention	Creation of policies to reduce "brain drain", awareness raising	2009–	Website, organising the "Day of Slovaks Abroad" and conference, building relationships with Slovak organisations abroad
"Slovensko Calling"	Slovakia	Return, reintegration, re-employment	Information for Slovaks living abroad, encouraging return and re-employment	2009–	Job search website, media campaign, public debates, activities abroad, publication of a Guide for returning Slovaks.
Hungarian Academy of Science Momentum (Lendület) Programme	Hungary	Return, re-employment, retention	Encouraging the return and retention of outstanding Hungarian researchers and young talent from abroad, as well as attracting young researchers from abroad	2009–	Funding for researchers and research groups, initiation of quality research infrastructure in Hungary. 100+ research projects received funding prior to 2015, increasing resources – currently 400 mn HUF (1.3 mn EUR)/year budget
SROP Albert Szent-Györgyi Repatriation Scholarship	Hungary	Return, re-employment, retention	Encouraging the return of talented Hungarian researchers in the areas of natural, technical and life sciences, as well as mathematics	2013–2014	Funding of research centres and research groups for more experienced researchers.
Markusovszky Scholarship (Károly Than scholarship)	Hungary	Retention	Preventing the emigration of doctors and pharmacists	2011–	Gradually increasing resources (840 mn HUF – 2.73 mn EUR budget in 2016), fellowships for graduated resident specialists and pharmacists, a net grant of 100 thousand HUF – 325 EUR per month, eligibility criteria apply.
"Come Home Youth"	Hungary	Return, reintegration, re-employment	Encouraging the return of young Hungarians working in the United Kingdom	2015	100 mn HUF – 0.325 mn EUR, complex programme, website, telephone hotline, information campaign, counselling, training, job brokerage, housing assistance

Source: Edited by the author on the basis of *Lados–Hegedüs* (2012), p. 517, *Kaczmarczyk* (2013), *Kaska* (2013), *OECD* (2013).

These initiatives have diverse objectives[3] and target groups but for the most part they encourage the return of researchers, doctors, i.e. generally highly skilled individuals. However, they remain to be quite fragmented, have a strong labour market focus, and are less coordinated with other public policies. Thus, comprehensive, complex and well-resourced initiatives for return migration (perhaps with the exception of the Polish 'Masz Plan na powrót' complex programme) are still missing in Central and Eastern Europe. Regarding the territorial focus of these programmes, the majority of them focus on a single country while there are relatively few projects that cover two or more states,[4] and there are hardly any EU-wide programmes (except the Marie Curie Programme). However, without the coordination of these interventions and their harmonisation with EU policies the true single European labour market cannot exist, even though that is an aim for increased EU competitiveness.

Unfortunately, information available to evaluate the effectiveness and efficiency of these programmes is rather unreliable. The raw figures on the number of returnees, which are often reported, do not reveal the effectiveness of the programmes because they lack either natural or artificial comparison (which would tell us what would have happened in the absence of the programme). We are not aware of any rigorous, scientific evaluations on return migration policies in the region – although apart from the lack of data, the rather short time since these were launched in Central and Eastern Europe must also be noted.

However, the available figures suggest that the impact of Eastern European return migration policies remains, for the time being, rather marginal; these programmes can encourage the return, or prevent the emigration of, only a very small minority of skilled young adults (*Barcevicius et al.,* 2012, *OECD,* 2013).[5] The effectiveness of these policy interventions is largely dependent on the general economic and social situation in the mother country,[6] the characteristics of migrants and the migration pattern[7] – reliable information and data on which is still very limited or missing. As member states have conflicting interests both with each other and with the European Economic Area, the EU-level coordination of these policies is imperative and should also take the perspective of the economic comptetitiveness of Europe into account. The creation of the common European Migration Policy has been overdue since the 2009 Lisbon summit, even though it would be important not only from current security policy perspectives but also to facilitate the better management of intra-EU mobility processes and their consequences.

3 Poland and Latvia launched these policies due to the labour market losses caused by massive outmigration, while Romania started trying to control the extent of emigration as a result of pressure from receiving country governments.

4 Examples for the latter are the bilateral "Opening Up Opportunities" Czech Republic – Georgia project, and the "Guidance and Counselling for Migrants and Returnees" transnational project implemented by Slovakia and the Czech Republic.

5 For example see Chapter 2.4 and *Varga* (2016) on the increase in the migration of Hungarian doctors after 2010.

6 To prevent emigration and facilitate remigration, the key issues in the sending countries would be general economic growth, social progress and the creation of a business-friendly environment. In Eastern Europe, in particular the reduction of the tax burden on employment related income,diminishing inactivity percentagesthe reduction of red tape and bureaucracy, i.e.the creation of a business- and investment-friendly environment would be important.

7 The case of Latvia illustrates that the emigration propensity of the highly skilled increases at times of economic decline and these people often do not wish to return. Therefore, it is not only difficult to encourage return migration, but also remittances as well as the extent of human capital transfer – one of the often cited positive effects of migration – are somewhat also uncertain. However, in Poland for example the return rate is relatively high, but returnees are more likely to become unemployed than those who stayed at home, which again does not constitute proper human capital transfer. Using data from Poland, Latvia, Hungary, and Romania *Barcevicius et al.* (2012) have found that foreign work experience was an advantage mainly for the highly educated following return. This highlights the importance of more detailed data on specific migration patterns (*OECD,* 2013).

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3 IMMIGRATION

3.1 THE LABOUR MARKET INTEGRATION OF IMMIGRANTS IN HUNGARY – AN ANALYSIS BASED ON POPULATION CENSUS DATA

IRÉN GÖDRI

The economic and labour market integration of immigrants is a challenge to several European countries. The labour market indicators of both foreign-born populations – especially those born outside the European Union – and their offspring born in receiving countries, the so-called second generation, are generally worse than those of the native population (with few exceptions).[1]

Although the role of immigration in the replacement of labour force and thereby in economic growth, in the reduction of old-age dependency ratio and in the sustainability of the pension system is an argument often made in favour of immigration, it must be admitted that it can only be achieved through the successful labour market integration of immigrants. However, the lower than average employment rate of immigrant populations (especially among women) may create further "dependence" in receiving countries (*Coleman,* 2004) and put additional burdens on the social welfare system of the country concerned. Although immigrants, especially from less developed third countries, are likely to be in a worse labour market situation than the native population in most European countries, there are significant differences according to country of origin (and also ethnic groups) (*Münz*, 2008, *Keeley*, 2009, *Koopmans,* 2016).

The indicators of labour market integration and the factors influencing them

Labour market integration is one of the key elements of the integration of immigrants in the receiving society, which may be an important step towards social and cultural integration. Labour market integration is most often measured by *employment rate* and *unemployment rate*, i.e. to what extent these indicators converge to those of the native population over time spent in the receiving country. These two indicators not only embody two different approaches to labour market integration but also indicate the two possible causes of segregation: low employment rate may be due to high share of immigrants not entering the labour market (i.e. not trying to find work) and in this case their *activity rate* is also low, while the high unemployment rate reveals that a lot of entrants to the labour market do not find a job.

The aforementioned indicators are the core indicators of labour market integration and are also included in the Zaragoza Declaration adopted in 2010

1 The unemployment rate of the native, 20–64 age group in the EU–28 in 2014 was 9.3 per cent, while in the same age group of the foreign-born population it was 14.4 per cent and among those born outside the EU it was 18.5 per cent (*Eurostat,* 2015). The opposite – the lower unemployment rate of the foreign-born population – is only true for Cyprus, Lithuania and Hungary.

(*EC,* 2011, p. 10.). However, successful integration does not only involve access to jobs but also the adequate utilisation of the human capital of immigrants, employment in the primary segment of the labour market as well as rights and opportunities on the labour market equal to those of the receiving population (*Eurofound* 2008). Accordingly, there are further important indicators of integration in the case of those employed: *overqualification* (the proportion of employees with qualifications higher than those required for their position) and *wage levels* (compared to the wages of similar occupational groups in the receiving population). Attention should also be paid as to what extent immigrants are present on the *secondary labour market* characterised by low wages, bad working conditions, a high degree of uncertainty and the lack of mobility prospects, or choose employment provided by *ethnic businesses* (or *self-employment*). In the case of the unemployed and other inactive groups, important indicators of labour market exclusion include the extent of *long-term unemployment* (the proportion of job seekers who have been out of work for at least one year) and *involuntary inactivity*, which is the proportion of those among the inactive population who are available for work but have given up active job search (and thus are not included among the unemployed) (*OECD/European Union,* 2015).

The labour market integration of immigrants varies according to receiving countries and the immigrant cohorts arriving at different times (*Keeley*, 2009, *Borjas,* 2015). The success of integration is influenced by several factors: on the one hand, the institutional conditions of the destination country (migration and labour market regulations), general economic, labour market and social conditions as well as the integration policy or lack thereof; on the other hand, the composition of the immigrant population, the causes and circumstances of migration as well as the presence and position of the immigrant (ethnic) population in the receiving country.[2] The composition of immigrants in terms of educational attainment and qualification is especially important for labour market integration.[3] However, a survey conducted in 2010 found that the demographic characteristics and human capital of various immigrant groups only partly explain their disadvantageous labour market position, while certain socio-cultural factors play a more significant role: speaking the language of the host country, media consumption in this language, social contacts with natives or attitudes concerning gender roles (*Koopmans,* 2016). The time spent in the receiving country is also decisive: over time, labour market indicators usually improve, which is linked to acquiring the so-called country specific skills and the improvement of language skills.

2 The latter mainly has significance for ethnic businesses.

3 The successful integration of immigrants and the positive impact of immigration on the labour market and economy are mainly expected if the composition of the immigrant population in terms of qualifications meets the labour needs of the receiving country.

Research questions, data source

The study aims at analysing the labour market situation of immigrants in Hungary compared to the Hungarian population. The descriptive analysis

examines the major indicators of labour market integration (activity rate, employment rate, unemployment rate) in the working age (15–64) population, highlighting differences according to gender, age group and educational attainment on the one hand, and differences between the various ethnic groups on the other. In addition, it briefly discusses the prevalence of self-employment (ethnic businesses) and the issue of over-qualification. The multivariable analysis investigates factors influencing the probability of being employed, especially the role of foreign place of birth and foreign citizenship as well as the role of country of origin, length of residence, citizenship, nationality and the Hungarian language skills among the foreign-born population.[4]

The analysis is based on data from the 2011 Population Census. The census is the most comprehensive data source on immigrants: it constitutes a comprehensive cross-sectional database of both *foreign-born* population and *foreign citizens* staying for over 12 months in the country, which provides unique opportunities for detailed analysis.[5] At the same time, it enables the comparison of the integration indicators of immigrants with the corresponding indicators of the native population surveyed at the same time and in the same way. Nevertheless, it has a disadvantage: it takes place every ten years, thus it is only able to reveal large scale changes.

4 The impact of composition in terms of gender, age and educational attainment as well as the impact of geographical location (region and type of settlement) are controlled in both cases.

5 The labour market indicators of immigrants are published by the Eurostat on the basis of the harmonised Labour Force Surveys of the countries involved. These data, although suitable for presenting trends over time and by international comparison, in the case of the Hungarian sample – due to the low share of immigrants – do not permit a more detailed analysis.

6 In Hungary this also includes those who were born in former times as Hungarian citizens but outside the current borders of the country and then relocated to the present area of the country by way of internal migration or population exchange. The latter is a very old group, while the second generation included among foreign citizens is a very young group and thus neither are represented in the 15–64 age group relevant for analysing labour market integration. Furthermore, their birthplace identifies also the new immigrants who arrived as Hungarian citizens, mainly from neighbouring countries, after a simplified naturalisation process was introduced in 2011. However, the 2011 census does not yet include this group in great numbers.

Definition of the immigrant population

Identifying immigrants on the basis of their citizenship or birthplace results in two populations differing in size and composition. *Foreign citizens* living in the country constitute only part of the immigrant population and mainly represent those who arrived in recent years. In Hungary, where the rate of naturalisation is high, the immigrant population is significantly underestimated if based on the number of foreign citizens. Furthermore, the population of foreign citizens also includes the children of foreign citizens born in Hungary who have not yet obtained Hungarian citizenship (i.e. the so-called second generation) and the Hungarian-born who emigrated and after obtaining foreign citizenship returned to Hungary (they typically have dual citizenship). The *foreign-born population* is a wider group of immigrants including also immigrants who arrived earlier and obtained citizenship.[6] The 2011 census counted 143,197 persons with foreign citizenship and 383,236 persons born abroad; 78.4 of the former and 69.5 per cent of the latter was aged between 15 and 64. In the following, general labour market indicators are presented for both foreign citizens and the foreign-born population, while the more detailed analysis is only provided for the latter.

The labour market situation of immigrants

According to both earlier research and the most recent data, Hungary is among the few European countries where the labour market indicators of immi-

grants in the 15–64 age group are on the whole better than those of the native population (*Hárs*, 2010, *Gödri,* 2011, *Eurostat*, 2015).[7] This peculiarity is also observed in the 2011 census data (*Table 3.1.1*).

Table 3.1.1: The labour market indicators of foreign citizens, the foreign-born and the total population aged 15–64 (per cent)

Population	Economic activity					Activity rate	Unemployment rate
	employed	unemployed	inactive	dependent	total		
Foreign citizens							
EU-27 citizen	62.9	4.8	14.6	17.6	100.0	67.7	7.1
Third-country citizen	61.7	3.6	11.8	23.0	100.0	65.2	5.5
Total	62.4	4.3	13.4	19.9	100.0	66.7	6.5
Foreign-born							
In EU-27 member states	66.7	6.5	14.4	12.3	100.0	73.2	8.9
In third-countries	63.0	5.6	12.5	18.9	100.0	68.6	8.1
Total	65.5	6.2	13.8	14.5	100.0	71.7	8.7
Total population	57.0	8.3	19.7	15.0	100.0	65.3	12.7

Note: The group of the foreign citizens contains those with only a foreign citizenship but not those with dual (foreign and Hungarian) citizenship.
Source: Census 2011, author's calculations.

Both the employment rate and the activity rate are higher in the foreign population, especially among those born abroad, than in the total population, while the unemployment rate is significantly lower (6.5 per cent and 8.7 cent as opposed to 12.7 per cent). The employment rate of immigrants from EU member states (in both immigrant groups) exceeds that of third-country immigrants but the unemployment rate is lower in the case of the latter. It is because the share of dependents, who do not even enter the labour market, is high among third-country immigrants (especially among foreign citizens: it is 23 per cent).

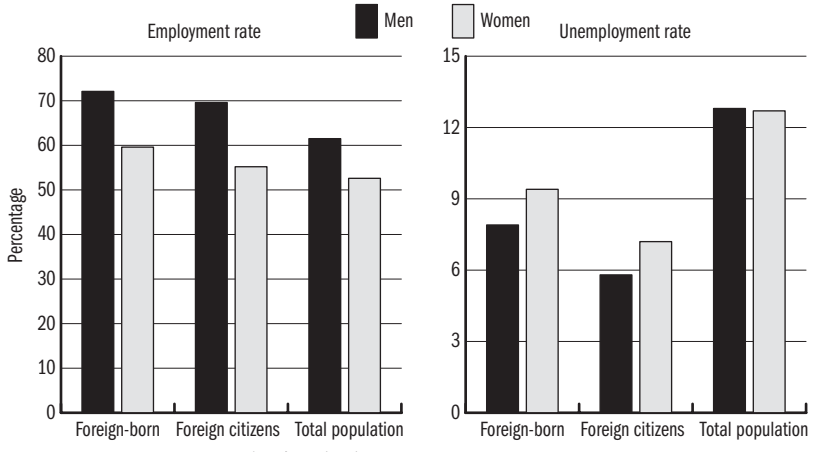
Gender is an important differentiating factor.[8] *Figure 3.1.1* reveals that the difference in employment between genders is more marked in the case of immigrants – especially among foreign citizens – than in the total population. The unemployment rate, which does not differ according to gender in the total population, is also higher in the case of women in both immigrant groups. At the same time, the activity rate of women with foreign citizenship is lower than that of women in the native population, which is due to the high rate of dependents.

The labour market indicators of immigrants – similarly to the native population – also differ as regards *age groups*. The highest employment rate is seen among men aged 30–49 and women aged 40–54 but it is also above average among men aged 25–29 and 50–54 as well as women aged 25–39 (*Figure 3.1.2*).

7 The better labour market indicators of immigrants are primarily explained by their composition: the majority – especially prior to 2008 – arrived from neighbouring countries and were of Hungarian ethnicity. In this way they had no linguistic or cultural obstacles to labour market integration. Their demographic composition was also different from the native population: they were younger and more highly qualified on average.

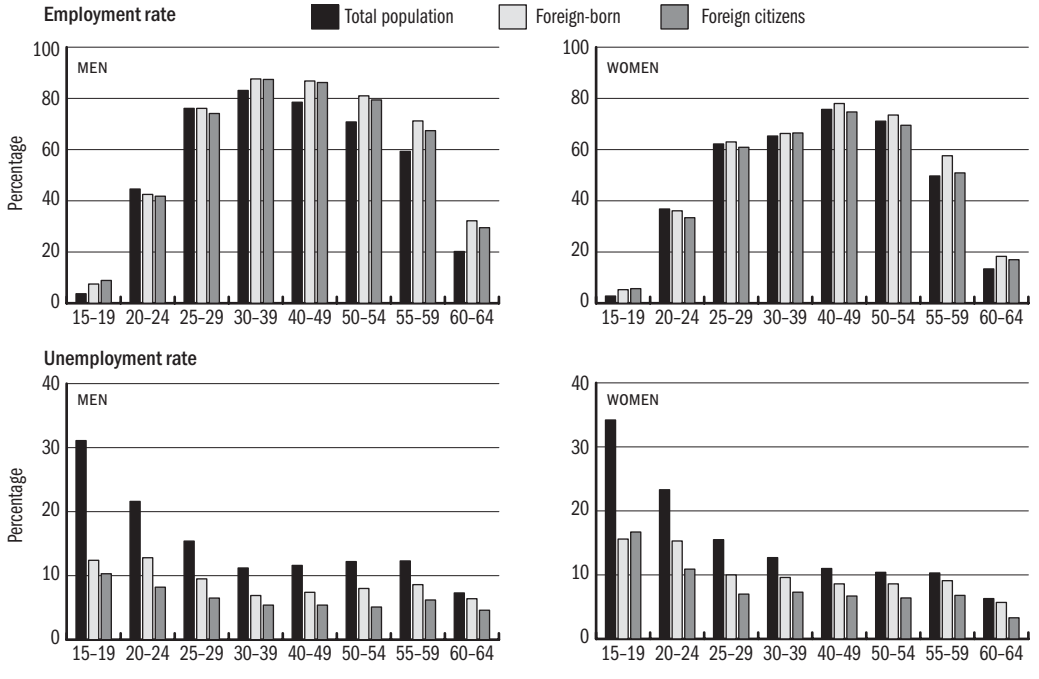
8 The difference in labour market situation by gender among immigrants is confirmed by analysis of earlier census data too (see *Gödri*, 2011).

Figure 3.1.1: Labour market indicators of foreign citizens, the foreign-born and the total population aged 15–64 by gender



Source: Census 2011, author's calculations.

Figure 3.1.2: Labour market indicators of foreign citizens, the foreign-born and the total population aged 15–64 by age group and gender



Source: Census 2011, author's calculations.

Compared to the native population, it is conspicuous that the employment rate of both foreign-born and foreign citizen males is higher in all age groups over 30, and the difference increases over age 50. As for women, the employ-

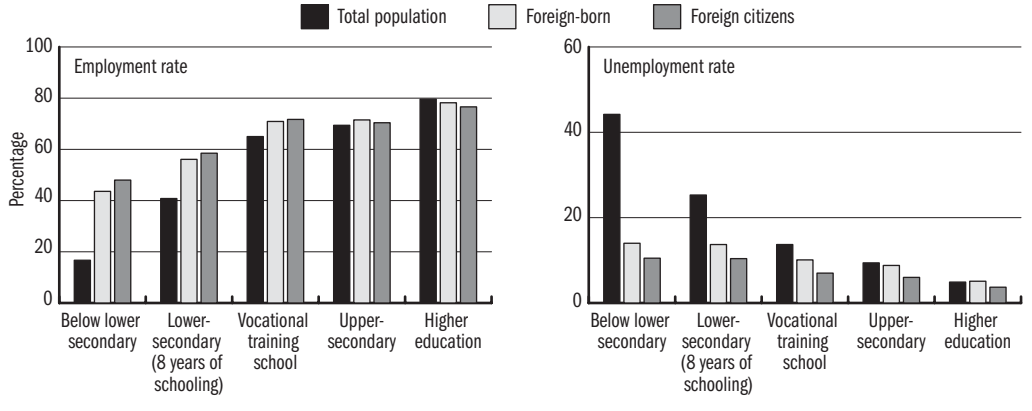
ment rate is higher only in age groups over 40 and among foreign-born persons (except for the age group 60–64, where also among foreign citizens), however, the differences are smaller than among men.

Unemployment mainly concerns young persons below age 25 and is especially high among women aged 15–19. The unemployment rate is lower for both genders and all age groups of immigrants – particularly among foreign citizens – than in the total population and the differences are larger among men.

Comparison of the share of the economically active population also reveals an important difference: while the activity rate among foreign citizen males lags behind the total population only in the 20–29 age group (mainly as a result of migration for study purposes), the activity rate of foreign citizen females is lower even in the 30–59 age group than that of women in the receiving population.

Educational attainment greatly determines labour market prospects. In the immigrant population – similarly to the total population – indicators for economic activity improve with higher educational attainment: the employment rate increases and the unemployment rate declines (*Figure 3.1.3*). Significant differences between the foreign and native populations are only seen at lower educational attainment levels – clearly in favour of immigrants: the employment rate of immigrants with vocational training is slightly higher, while that of those with a lower educational attainment is significantly higher than the relevant indicators of the total population, while their unemployment rate is lower.

Figure 3.1.3: Labour market indicators of foreign citizens, the foreign-born and the total population aged 25–64 by educational attainment



Source: Census 2011, author's calculations.

For immigrants, there is a higher risk of devaluation of qualifications. The return on qualifications obtained abroad is usually lower and labour market

inequalities between the foreign-born and native populations increase with educational attainment (*OECD/European Union,* 2015). In Hungary the employment rate of immigrants with higher education degree is hardly lower than that of the total population and their unemployment rate is also identical (in the case of foreign citizens even slightly lower – *Figure 3.1.3*). However, *over-qualification* – the share of highly educated employees employed in jobs that require low or medium-level qualifications – is higher among immigrants: while it is 12.4 per cent in the 25–64 age group of the total population, it is 14.9 per cent in the foreign-born population and 18.4 per cent among foreign citizens (in the latter group it is 19.7 per cent among women). Overqualification is dependent on age (and age-related earlier experience), country of origin and the type of higher education qualification and there is a good chance it decreases with time spent in the receiving country.

Differences in labour market indicators according to country of origin

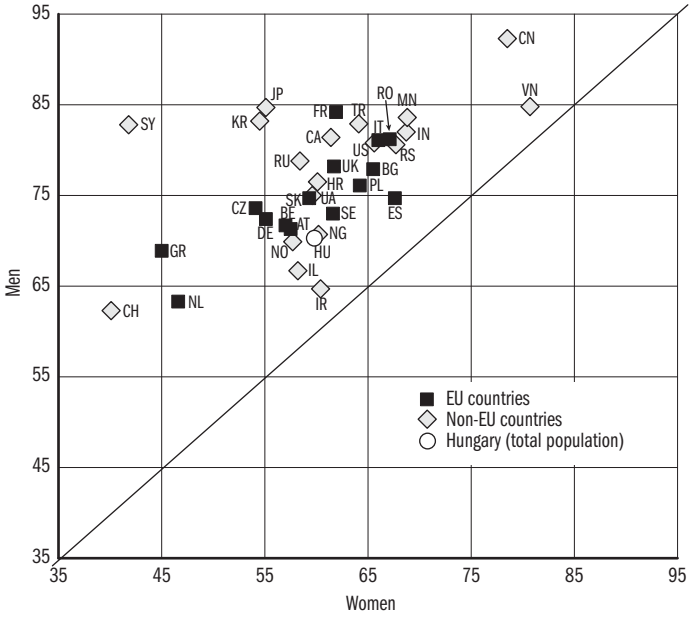
Behind the overall better labour market situation of foreign-citizens and foreign-born population living in Hungary, as compared to the native population, there are considerable differences according to the country of origin. This has already been revealed by the findings of the 2001 census (*Gödri,* 2011) and earlier research conducted among different migrant groups (see *Kováts,* 2013).

After the EU accession of Hungary, there has been diversification according to countries of origin: since 2009, more than half of immigrants have not come from neighbouring countries. As a result, the foreign-born population registered in the 2011 census contains 32 groups according to country of birth with at least one-thousand members each – as opposed to the 17 such groups in 2001. These 32 countries of origin account for 95 per cent of the entire foreign-born population. These groups are remarkably heterogeneous not only in terms of social and demographic composition but also as regards Hungarian language skills, date of arrival, obtaining Hungarian citizenship and place of residence within the country. Accordingly, the labour market situation of immigrants is also characterised by "remarkable differences", "diversity" and "strong disparities" (*Kováts,* 2013, *Hárs* 2015).

While the employment rate in the total foreign-born population aged 15–64 is 65.5 per cent, in the case of various countries of origin it ranges from 40.5 per cent (Greece) to 79.5 per cent (China). The activity rate also varies to a large extent (between 41 per cent and 81 per cent). The variation of these indicators across countries in the more economically active 25–64 age group is also substantial. Employment rates by gender (*Figure 3.1.4.a*) reveal the higher employment rate of men in the case of all groups by countries of origin. However, while in certain foreign-born groups (e.g. the Chinese and

Vietnamese) women also have a high employment rate, in other groups the high employment rate of men is accompanied by very low employment rate of women (e.g. the Syrians), or the employment rates of both men and women are lower than in the native population (e.g. the Swiss and Dutch).

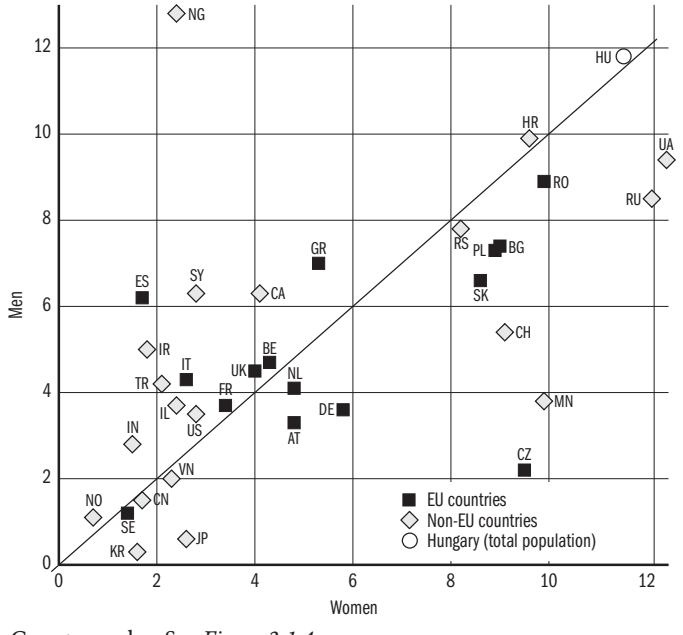
Figure 3.1.4.a: Labour market indicators of the foreign-born population aged 25–64 by country of birth and gender (employment rate)



Country codes: AT: Austria, BE: Belgium, BG: Bulgaria, CA: Canada, CH: Switzerland, CN: China, CZ: the Czech Republic, DE: Germany, ES: Spain, FR: France, GR: Greece, HR: Croatia, HU: Hungary, IL: Israel, IN: India, IR: Iran, IT: Italy, JP: Japan, KR: South-Korea, MN: Mongolia, NG: Nigeria, NL: the Netherlands, NO: Norway, PL: Poland, RO: Romania, RS: Serbia, RU: Russia, SE: Sweden, SK: Slovakia, SY: Syria, TR: Turkey, UA: Ukraine, UK: the United Kingdom, US: the United States, VN: Vietnam.

The variance of unemployment rates is even more striking (*Figure 3.1.4.b*); however, in most ethnic groups (with the exception of Russian and Ukrainian women and Nigerian men) the unemployment rate of both genders is lower – and in the majority of cases significantly lower – than the rate of the total population. Nevertheless, the low employment rate of women is not accompanied by a high unemployment rate in all groups, which implies that many of them do not even enter the labour market. It is also confirmed by the large share of dependents in various groups of women (e.g. Syrian, Norwegian, South-Korean, Japanese, Iranian, Israeli and Turkish women), which may be partly due to traditional female roles and partly other causes related to motivations and the circumstances of migration.

Figure 3.1.4.b: Labour market indicators of the foreign-born population aged 25–64 by country of birth and gender (unemployment rate)



Country codes: See *Figure 3.1.4.a.*

The above figures also indicate that although the employment indicators of immigrants from EU member states are on the whole better than those of immigrants from third countries, there are considerable differences even among countries within the two groups.

Another important indicator of the labour market integration of immigrants is the share of *self-employed and entrepreneurs*, which shows to what extent and in which migrant groups setting up (ethnic) businesses is widespread instead of entering the primary labour market. In the establishment of migrant businesses – and the formation of ethnic enclaves – cultural factors and ethnic networks also play a role, in addition to the constraints due to the lack of language skills, difficulties in getting one's qualifications acknowledged or difficulties in finding employment because of discrimination.

Based on the census, in 2011 the proportion of self-employed and entrepreneurs in the 25–64 age group of the foreign-born population was somewhat higher (10 per cent) than in the total population (8 per cent), however, in certain ethnic groups it was outstandingly high: among the Vietnamese (34 per cent), the Chinese and the Syrian (27 per cent) as well as the Turkish (18 per cent). In these groups the share of those working as *members of a company* were also high in addition to self-employed entrepreneurs, thus,

on the whole, 35–60 per cent of those employed presumably worked in the so-called *ethnic economy* and in this way their integration does not imply entering the primary labour market of the receiving country. Other studies reveal that these enterprises typically conduct trade, and not manufacturing, activities (*Várhalmi,* 2013).

Factors explaining the probability of being employed

In the following we provide a multivariable analysis on:

1. How employment prospects in the active age group[9] of the total population are influenced by a *foreign birthplace* and *foreign citizenship*, after controlling for socio-demographic composition (gender, age, educational attainment) and place of residence (region, type of settlement).

2. How employment prospects in the active age group of the foreign-born population are influenced by *country of origin*, the *length of time since arrival*, *holding Hungarian citizenship*, *ethnicity* (Hungarian vs non-Hungarian) and *Hungarian language skills*, also after controlling for socio-demographic composition and place of residence. The aim is to examine to what extent the differing probability of being employed of various ethnic groups are explained by their composition in terms of the above characteristics or whether these country-specific peculiarities exist regardless of the above characteristics.

The factors determining the probability of employment have been analysed using logistic regression. The value of the dependent variable is 1 if the interviewee was in employment and 0 if he/she was either unemployed or dependent (but not in education). The aim of this definition was to also include hidden (passive) unemployment, which in the case of immigrants – especially immigrant women – is often masked by the dependent status.

The findings indicate that within the 25–64 age group of total population – after controlling for socio-demographic composition and place of residence – both foreign citizenship and foreign birthplace have a modest (though significant) impact on the probability of employment: the former slightly increases, while the latter decreases this (*Table 3.1.2*).

It seems that the better labour market indicators (higher employment rate) of the foreign citizens and foreign-born population are in fact due to their composition – mainly their higher educational attainment. However, when examining the impact of the two factors in the gender-based models, it becomes clear that both foreign citizenship and foreign birthplace improves the employment prospects of men but reduces the employment prospects of women. This implies that immigrant women (regardless of their socio-demographic composition and place of residence) are more likely to be excluded from the labour market than both immigrant men and native women – even though it is not reflected by their unemployment rate. In addition to gender inequalities, in the case of some ethnic groups it may result from cultural and

9 The analysis is restricted to the more economically active 25–64 age group (who are likely to have completed their studies).

social norms as well as traditional gender roles which limit the labour market opportunities and strategies of women.

Table 3.1.2: The effect of foreign citizenship and foreign birthplace on the probability of being employed in the population aged 25–64 (the odds ratios of logistic regression models)

Explanatory variables and categories	Model 1	Model 2	Model 3		Model 4	
			men	women	men	women
Gender (reference category: men)						
women	0.763***	0.763***				
Age group (reference category: 25–29)						
30–39	1.449***	1.449***	1.503***	1.404***	1.502 ***	1.405***
40–49	1.620***	1.620***	1.493***	1.781***	1.490***	1.786***
50–54	1.691***	1.690***	1.397***	2.031***	1.394***	2.034***
55–59	1.581***	1.580***	1.341***	1.867***	1.339***	1.868***
60–64	1.848***	1.847***	1.726***	1.993***	1.723***	1.995***
Educational attainment (reference category: lower secondary education at most)						
Vocational training school	2.406***	2.405***	2.575***	2.307***	2.571***	2.309***
Upper secondary	3.865***	3.865***	4.165***	3.706***	4.148***	3.718***
Higher education	7.991***	7.993***	8.299***	7.946***	8.261***	7.974***
Foreign citizenship	1.079***		1.550***	.817***		
Foreign birthplace		0.975***			1.243***	0.812***
Nagelkerke R^2	0.104	0.104	0.099	0.113	0.099	0.113

Note: Controlled for the region and type of settlement of the residence.
Significant at ***0.1 per cent, **1 per cent, *5 per cent.

In the followings, the variables *length of time since arrival* and the *country of origin* (covering twelve countries) have first been added to the above model explaining the employment prospects of the foreign-born population (*Table 3.1.3*).[10] Subsequently, the variables of *citizenship*, *ethnicity* and *Hungarian language skills* were added one by one.

Since integration is usually a longer process, the length of time spent in the receiving country is an important factor, which is confirmed by the findings: with the *length of time since arrival* the probability of employment increases Compared to those who arrived two years ago, immigrants living in Hungary for 6–10 years are 60 per cent more likely to be in employment, while those living in Hungary for 20 years are twice as likely to be employed. Differences by *country of origin* are also conspicuous: compared to the Romanian-born population, the probability of employment of the Chinese-born is twice as high, that of the Vietnamese-born is 80 per cent higher and that of the Slovakian-born is 20 per cent higher. At the same time, immigrants born in Germany, Ukraine, Serbia have is slightly lower, and those born in Russia, Nigeria, Syria or Iran have significantly lower probability of employment.

10 Since the date of arrival was unknown in the case of some of the foreign-born persons, in order not to reduce the sample, the category "not known" was included in the variable. The twelve countries of origin included in analysis cover 85 per cent of the age group concerned of the foreign-born population.

Table 3.1.3: Factors influencing the probability of being employed in the 25–64 age group of the foreign born population (the odds ratios of logistic regression models)

Explanatory variables and categories	Model 5	Model 6	
		men	women
Gender (reference category: men)			
Women	0.523***		
Age group (reference category: 25–29)			
30–39	1.185***	1.402***	n. s.
40–49	1.207***	1.360***	n. s.
50–54	1.115***	1.214***	n. s.
55–59	0.937*	n. s.	0.846***
60–64	0.879**	n. s.	0.734***
Educational attainment (reference category: lower secondary education at most)			
Vocational training school	1.577***	1.618***	1.613***
Upper secondary	2.063***	2.133***	2.036***
Higher education	3.775***	4.234***	3.586***
How long has been living in Hungary (reference category: maximum 2 years)			
3–5 years	1.334***	1.274***	1.413***
6–10 years	1.608***	1.438***	1.805***
11–15 years	1.616***	1.386***	1.886***
16–20 years	1.760***	1.298***	2.254***
Over 20 years	1.961***	1.249***	2.809***
Not known	6.866***	4.758***	9.655***
Country of origin (reference category: Romania)			
Ukraine	0.690***	0.644***	0.701***
Serbia	0.862***	0.860**	0.869**
Slovakia	1.196***	n. s.	1.224***
Germany	0.618***	0.848**	0.488***
Russia	0.388***	0.592***	0.327***
China	1.991***	2.773***	1.670***
Vietnam	1.769***	1.505**	1.938***
Turkey	n. s.	1.390*	0.412***
Iran	0.530***	0.577**	0.459***
Syria	0.468***	n. s.	0.129***
Nigeria	0.408***	0.366***	0.495*
Other	0.580***	0.671***	0.491***
Nagelkerke R^2	0.110	0.078	0.117

Note: Controlled for the region and type of settlement of the place of residence.
Significant at ***0.1 per cent, **1 per cent, *5 per cent level, n.s.: not significant.

Differences by the date of arrival and country of origin did not change even when – in addition to socio-demographic composition – differences in ethnicity (Hungarian vs non-Hungarian), holding Hungarian citizenship or Hungarian language skills were taken into account. Nevertheless, these characteristics also have significant impacts: both Hungarian ethnicity and acquiring Hungarian citizenship increases (by 20 per cent and 15 per cent re-

spectively), while the lack of Hungarian language skills reduces (by 35 per cent) the probability of employment. Although acquiring the citizenship of the host country is an important step in the integration process, and in general the employment rate of naturalised immigrants is higher and they work in better jobs than foreign citizens, the causal link is not always one-directional, since successful integration may also increase the chances of obtaining citizenship. Speaking the language of the host country is also crucial for successful integration, though it does not necessarily play a role in employment in ethnic enterprises.

As for control variables, educational attainment has the greatest impact (higher education degree holders have four times as high a probability of employment than those with lower secondary education) and gender differences are also considerable: the employment probability of women is half of the employment probability of men.

Since the labour market integration of women is (also) influenced by specific factors, it is advisable to examine the effects of the above factors in separate, gender-based models. These reveal that the length of time since arrival has a more marked impact on the employment probability of women than on that of men, and differences according to countries are even more distinct here (*Table 3.1.3,* Model 6). The higher probability of employment applies to both genders in the case of Chinese-born and Vietnamese-born immigrants, although it is more marked in the case of Chinese men. However, the higher employment probability of the Slovakian-born population only applies to women. In contrast, a Turkish birthplace – although not significant on the whole – increased employment probabilities for men and reduced them for women. Similarly, the lower chance of employment of the Syrians is only significant and considerable in the case of women. All these indicate that there must be specific cultural patterns and labour market strategies behind the disadvantaged employment situation of Turkish and Syrian women (even when compared to men from the same countries), especially because the employment rate of men is considerably above the average in both groups and ethnic businesses are also widespread. Another important difference by gender is that both Hungarian ethnicity and acquiring Hungarian citizenship improved employment prospects only for women (by 30 per cent and 25 per cent respectively) and the lack of Hungarian language skills halved the probabilities of employment only in their case.

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3.1.1 Why do immigrants in Hungary have better employment figures?

RÓBERT KÁROLYI

As it is shown in the main body of the text, the employment rate of those born abroad is higher than that of those born in Hungary. The aim of this analysis is to reveal the components of the difference between the rates.

Regression analyses so far have indicated that if school attainment, age and place of residence of individuals are taken into account, the employment chances of the population born abroad do not, or do not significantly differ from those of the population born in Hungary. That is, the differences are mainly explained by the differences in the composition of the two groups. It is good practice to analyse the difference by a method that allows the observed variables to have different impacts between the groups. It is important because the difference between the employment rates may not only be due to differences in composition but also due to the dissimilar ways that certain characteristics contribute to the employment rate of the groups. The difference in average outcomes of certain groups can be decomposed into components using the Oaxaca–Blinder decomposition method (*Blinder,* 1973, *Oaxaca,* 1973). In the following analysis, the employment rates of the immigrant and native populations are compared, relying on a version of this method.

First the probability of employment is estimated by the method of least squares separately for each group. Level of education, age, family status and other individual factors are taken into account. As a result of the estimation, the difference in the employment rates of the immigrant and recipient populations may be decomposed into components as follows:

$$\Delta E = E_i - E_h = (c_i - c_h) + \\ + \sum_{z=1}^{k} \frac{\overline{x}_i^z + \overline{x}_h^z}{2} (\beta_i^z - \beta_h^z) + \\ + \sum_{z=1}^{k} \frac{\beta_i^z + \beta_h^z}{2} (\overline{x}_i^z - \overline{x}_h^z),$$

where i signifies the immigrant and h signifies the Hungarian population, c represents the constants of the estimations, $\overline{x}$ is the average of the variables, β is the estimated coefficients and k is the number of variables.

The first term of the right side of the equation is the constant effect, the second is the parameter effect and the third is the composition effect. The difference between the constants $(c_i - c_h)$ is interpreted as the effect of unobserved factors, i.e. the difference that would be seen if the groups were identical both in terms of their composition and their estimated parameters (*Galasi,* 2002). The parameter effect is the difference between the estimated coefficients. It shows how much the difference would be between the rates if the constants were the same and the composition of the two groups was identical in terms of the variables examined. The composition effect is the part of the difference which is due to the difference between the averages of the variables. It indicates the difference between the employment rates of the two groups that would be observed if the probability of their employment were influenced to the same extent by the various factors and the constant were also the same.

Two foreign-born groups are identified: one contains individuals born in Romania, Slovakia, Serbia or Ukraine (indicated as 'From neighbouring countries' in the Table), while the other category contains all others born outside Hungary. Our analysis mainly regards the latter as immigrant population. This differentiation is important since the migration to Hungary from neighbouring countries has special characteristics.[1] *Table 3.1.1.1* presents the employment rates of the groups in the 25–64 age group.

The employment rate of immigrant men is 11–12 per cent higher and the employment rate of immigrant women is higher by 5–8 per cent than that of the local population. In the group arriving from neighbouring countries, the rates are higher (although not much higher among men) than the rates of other immigrants.

1 See e.g. *Gödri* (2010), (2011). Dissimilar motivations and migratory patterns justify differentiating this group from other immigrant groups.

Table 3.1.1.1: Employment rates according to place of birth (percentage)

	Hun. born in HU	From neighbouring countries	Other foreigners
	employment rate		
Women	55.7	63.8	60.9
Men	67.1	79.3	78.7

Note: 25–64 age group. The complete samples do not contain individuals whose birthplace is unknown and pupils in full-time education.
Source: Author's calculations based on the census in 2011.

Table 3.1.1.2 shows the parameter and composition effects calculated on the basis of the estimated models. At the top of the table, the total parameter and composition effects are shown and then aggregated by variable groups. It is remarkable that – although most of the difference may be explained by differences in composition in each case – the values of parameter and constant effects imply that it is not necessarily the differences in composition that play the most important role in the advantage of immigrants.

When interpreting the *constant and parameter effects*, please note that the constant equals to the estimated employment probability of unmarried individuals aged 25–29, with a lower secondary qualification (8 years of schooling), living in a city in Central Hungary. The differences in this group are extreme. With these characteristics, immigrants from neighbouring countries have a nearly 15 percentage point higher and immigrants from third countries a 16–22 percentage point higher probability of employment. It offers the first important conclusion: there must be a considerable difference between the immigrant and recipient populations in the unobserved variables or their effects. Significant differences between the constants are coupled by strong negative parameter effects. The most significant in each case is the role of educational attainment. It is apparent that the composition of immigrants as regards educational attainment is more advantageous (especially of women) but the increase in their educational attainment does not increase the probability of employment as much as in the Hungarian-born population. This results in a parameter effect relevant for the analysis: a 10 and 6 percentage point negative parameter effect for the advantage of women and men from non-neighbouring countries respectively.

Table 3.1.1.2: Results of the Oaxaca–Blinder decomposition (effects in percentage points)

	Other foreigners		From neighbouring countires	
	women	men	women	men
Aggregated				
ΔE	5.23	11.51	8.12	12.11
Composition	3.69	7.77	5.80	6.78
Parameter	-20.21	-12.36	-12.59	-9.39
Difference in constants	21.80	16.10	14.90	14.70
Highest level of education				
Composition	3.00	2.65	2.16	1.77
Parameter	-10.08	-6.00	-7.99	-6.64
Age				
Composition	1.52	2.81	3.39	3.15
Parameter	-3.66	3.45	-1.04	2.86
Married/with a cohabiting partner				
Composition	-0.76	0.60	0.17	1.10
Parameter	-4.59	-4.17	-2.24	-3.61
Number of children				
Composition	-0.78	-0.18	-0.60	-0.03
Parameter	3.66	0.08	0.34	0.06
Region and type of settlement				
Composition	1.58	1.79	0.62	0.59
Parameter	-3.27	-3.16	-1.64	-1.38
English or German language skills				
Composition	-0.86	0.09	0.05	0.21
Parameter	-2.27	-2.56	0.00	-0.69

The *age composition* of each group is also more favourable than that of the Hungarian population. Women from neighbouring countries have a 3.39 percentage point higher employment rate than the local ones solely due to their younger age. However, there are negative parameter effects to be observed among women. This is caused by the fact that the employment of immigrant women increases less and then decreases more as they grow older compared to the recipient population. However; there are positive

parameter effects for immigrant men: their employment probability decreases to a lesser extent than that of Hungarian-born men as they become older.

In the variable group *married or with a cohabiting partner* the educational attainment and economic activity of the spouse/partner are also controlled for. The composition of the groups shows no significant differences in marital status. However, among immigrants, the presence of a spouse/cohabiting partner does not increase the probability of employment as much as in the case of Hungarians and also the partner`s higher educational attainment does not necessarily increase the probability of employment. This causes a slightly higher than 4 percentage point negative parameter effect for immigrants from non-neighbouring countries.

The employment probability of immigrant women decreases to a lesser extent *with the number of children* than that of Hungarian-born women. Moreover, among immigrant women, the probability of employment increases with the number of children aged 3–6. Altogether they have a 3.66 percentage point advantage because their labour market participation is less sensitive to the number of children of various ages in the household.

Variables concerning the *place of residence* have negative parameter- and positive composition effects. A larger share of immigrants live in Budapest or Central Hungary, where employment chances are better: this results in a moderate but positive composition effect. Nevertheless, when immigrants leave Central Hungary, their employment probability decreases more than it does for Hungarians which causes a negative parameter effect over 3 percentage points.

The decomposition of the difference between the employment rates raises the following important questions: why are unskilled immigrants significantly more likely to be employed than the unskilled Hungarians and why does *educational attainment* have less *significance* in the employment prospects of immigrants? These questions are probably explained by self-selection. On the one hand, even among the lower-qualified it is probably the more talented that decides to move to Hungary. On the other hand, a Hungarian-born lower-qualified person is more likely to have a more extensive network and more stable environment, is more familiar with the system of social welfare and other benefits than an immigrant and therefore the alternative costs of undertaking employment may also be higher for those born in Hungary. However, these factors are less important for higher-qualified immigrants. They are more likely to have savings and do not have so strong incentives as an often more vulnerable low-qualified immigrant.

Overall, the analysis leads to the conclusion that the differences in composition do not fully explain the apparent employment gap between immigrants and Hungarian-born populations. The constant effect indicates that unobserved variables also have significant positive effects on the employment advantage of immigrants; nevertheless, it should be noted that the difference in constants depends on the reference groups. The composition in terms of the observed characteristics also has a positive effect on the employment advantage of immigrants but differences in the effects of these characteristics reduce this advantage, almost completely neutralising the huge difference from reference groups.

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3.1.2 The role of immigration in the European "employment miracles"

JÁNOS KÖLLŐ

In the decade preceding the financial and economic crisis, level of employment significantly expanded in several European countries. According to the European Labour Force Survey (EU–LFS), the largest increase was experienced in Spain, Ireland, Italy, the Netherlands and Finland. *Table 3.1.2.1* indicates the rates of increase based on the longest available comparable time series of the decade prior to the crisis. For better comparison, the relevant data of Hungary are also included.

Table 3.1.2.1: Employment in the fastest growing European labour markets and in Hungary

		Employment in thousand persons		Change	
Country	Period	start of period	end of period	thousand persons	percentage
Finland	1999–2008	2,331	2,531	200	8.5
Netherlands	1999–2008	7,384	8,499	1,114	15.1
Ireland	1999–2008	1,555	2,082	527	33.8
Italy	1998–2008	20,101	23,353	3,252	16.1
Spain	1998–2008	13,806	20,243	6,437	58.1
Hungary	1998–2008	3,641	3,879	239	6.5

Source: Author's calculations based on the microdata of the EU–LFS.

In the followings, we examine what role the changes in the numbers and employment rate of immigrants played in the overall growth. The increase in aggregate employment is broken down to two factors, and we differentiate between six groups (groups of young adults, the elderly and the middle-aged according to qualification levels, immigrants). For more details on the procedure see *Köllő* (2013).

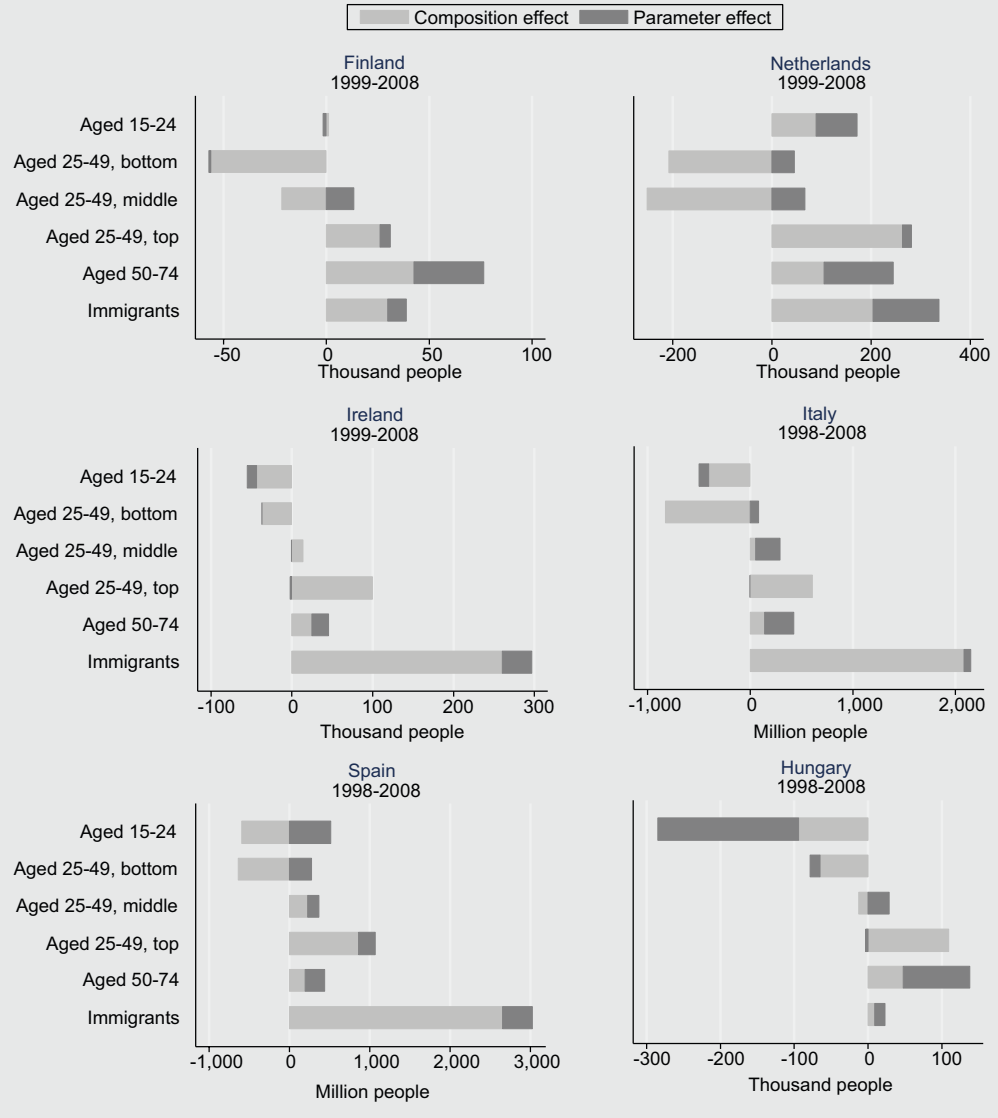
The *composition effect* measures by how many persons total employment would have increased due to changes in the *headcounts* of a certain group if the employment rate of the group had remained at the level it held at the middle of the reference period both during the base period and the reference period. *Parameter change* measures by how many persons total employment would have increased due to changes in the *employment rate* of a group, if the headcounts of the group had remained at the level it held at the middle of the reference period both during the base period and the reference period.

The data refers to a population aged 15–74 living locally, i.e. persons who stay or wish to stay in the country concerned for more than a year. Long-term immigrants of the countries concerned are defined on the basis of their countries of birth and the time they spent in the recipient country. In several countries and at several points in time only one of the two variables is available. In the case of Finland, Ireland, the Netherlands and Hungary, persons born in another country are considered immigrants, while in Spain and Italy persons not staying in the country since their birth are considered to be immigrants. An employee is defined as someone working at least one hour paid work during the week before the week of the survey or did not working any hours but was temporarily away from their existing job. Three qualification levels and 12 age groups are distinguished within the population aged 15–74. The EU–LFS relies on so-called grossing-up weights: considering the dimensions of sampling, it assigns a weight to each individual, which indicates how many other similar persons that individual represents. The sum of the weights equals the total population. All aggregates defined in terms of persons are measured with the appropriate sum of weight.

Figure 3.1.2.1 shows the results of breaking down the increase to factors. It is conspicuous that *the increasing number of immigrants played* a significant role in Finland and the Netherlands and a *decisive role* in the other three countries – and also that the increasing employment rate of immigrants contributed to the growth in aggregate employment.

Table 3.1.2.2 compares *employment rates* at the end of the reference period – the start of the crisis. The employment rate of immigrants in the Netherlands is lower than that of the local population for both men and women – and the lag is even more significant if their age and educational attainment are also taken into account.

Figure 3.1.2.1: Components of the change in employment in the decade before the crisis (persons)



Note: The variables indicating the level of educational attainment: bottom: ISCED 0-2, middle: ISCED 3-4, top: ISCED 5-6. ISCED is the abbreviation for International Standard Classification of Education.
Source: Author's calculations based on the microdata of the EU–LFS.

In the other countries immigrants have the same or higher employment rate than the local population and it is true for both genders (except for the Finnish female population). However, it is also revealed that the majority or, if Italy and Spain are not taken into account, the whole of the difference is explained by the younger age and somewhat higher qualification level of immigrants. In the case of identical gender,

qualification level and age, the employment rate of immigrants is lower than the average in three of the five EU–15 countries included in the survey and is only slightly higher than the average in Italy and Spain. The Hungarian data have a pattern similar to the southern European one.[1]

Table 3.1.2.2: The employment rate of immigrants compared to the native population in 2008 (population aged 15–74, estimated difference in percentage point)

	Men		Women		Men and women	
Controls:	no	yes	no	yes	no	yes
Finland	3.3	-3.4*	-6.2***	-12.2***	-1.6	-8.3***
Netherlands	-9.1***	-13.6***	-9.3***	-14.1***	-9.2***	-13.7***
Ireland	7.0***	-5.5***	7.0***	-6.4***	7.0***	-5.9***
Italy	19.2***	-6.0***	12.8***	1.3*	15.8***	3.8**
Spain	8.3***	-0.1**	15.1***	6.1**	11.7***	2.6***
Hungary	4.1***	1.1***	3.8***	-0.1	3.9***	0.0

Note: Differences are estimated using probabilistic regression. The uncontrolled equation only contains one binary variable: *immigrant* (yes–no). The controlled equations also contain 11 *age groups*, 2 *qualification levels*, and the equation concerning both genders contains one binary variable (*man*).: The cases have been weighted by analytical weights.
The estimated differences are significant at ***1 per cent, **5 per cent, *10 per cent level.
Source: Author's calculations based on the microdata of the EU–LFS for 2008. For the definitions see Köllő (2013).

*

In conclusion, immigration played a key role in the fastest growing European labour markets during the decade prior to the crisis. The increasing number of immigrants contributed to the growth in aggregated employment more than any other factors in the Netherlands, Ireland, Italy and Spain – while the employment rate of the immigrant population also increased. In Finland this had just a slightly less significant (positive) impact than the increase in old-age activity. The employment rate of immigrants was below average in 2008 only in the Netherlands; in other countries it reached (Finland) or significantly exceeded that. This advantage, however, was almost entirely caused by composition effects: the share of those in the best working age is higher in the immigrant population, the majority of them are men and except for the Netherlands, they have higher qualification levels.

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1 The figures do not contradict data which reveal the employment disadvantage of immigrants in nearly all European countries in the 15–64 and especially in the 25–54 age group. See the *Eurostat* (2011) publication, which only indicates higher employment rate than in the native population in Estonia, Latvia, Hungary, Slovakia Portugal and Malta in the 25–54 age group (p 49.).

3.2 THE IMPACT OF IMMIGRATION ON THE LABOUR MARKET SITUATION OF THE EMPLOYEES OF RECIPIENT COUNTRIES IN EUROPE – SUMMARY OF EMPIRICAL FINDINGS*

KATALIN BÖRDŐS, MÁRTON CSILLAG & ANNA OROSZ

This Sub-chapter examines the impact of immigration on the labour market situation of the employees of recipient countries in Europe, relying on empirical economic studies published in the past fifteen years.

According to the simplest theoretic model of the labour market, a wave of immigration increases the labour supply of recipient countries, which reduces wage levels and expands employment *in the short run*. This model assumes that the labour force is homogeneous, i.e. immigrants are perfect substitutes for the employees of the recipient country. However, according to economic theory, migration does not lead to reduction in average wages *in the long run*: it may result in the expansion of employment, since the utilisation of cheaper production factors (employees) reduces the production costs and increases the profit of businesses, which in turn encourages more investment, increases the employment rate and wages.[1] Our summary asks the question: does empirical research shed light on whether immigration reduces the wages or employment rate of employees in the recipient country?

The short-term impact of immigration

Bratsberg et al. (2014) examined, using a skills-group approach,[2] how immigration influenced the wages of local male employees between 1993 and 2006 in *Norway*. The authors estimated the effects of the country of origin of immigrants. Their study concludes that if the share of immigrants increases in a "quasi" labour market defined by educational attainment and age, the wages and employment rate of recipient country employees fall. This is primarily due to migrants from other Scandinavian countries, who probably compete directly with Norwegian employees. Immigrants from other developed countries have a smaller effect, while immigrants from developing countries have no negative effect on wages. The authors found that a one per cent increase in the number of immigrants from other Scandinavian countries reduces the wages of Norwegian men by 0.35 per cent within a year.

Empirical studies on *Germany* point out the peculiarities of the German labour market in the 1980s and 1990s: due to central wage negotiations and strong trade unions, wages in the German economy changed slowly and relatively inflexibly. Thus the labour market primarily adapted to shocks through changes in the employment rate.

* We are thankful to *Ádám Török* and *Balázs Váradi* for providing useful comments on earlier versions of the manuscript; although any errors are our own.

1 For more details on the theoretical background see e.g. *Borjas* (1999).

2 *Skills-group approach* defines the labour market, where employees compete with one another, by the dimensions of skills relevant for the labour market. For more details on the methodology see *Borjas* (2003).

Bonin (2005) examines the impact of immigration on the labour market situation of men from the mid-1970s to 1997, applying a skills-group approach. He defines immigrants as non-German citizens, that is, German nationality individuals arriving from Eastern Europe in the 1990s in great numbers are included among the native population. *Glitz* (2012), on the other hand, investigates the influx of German nationality immigrants from Eastern Europe, combining both a regional[3] and a skills-group approach.

Bonin (2005) did not observe adverse impacts on the level of employment, although when only the period from 1990 to 1997 is considered, there is a slight but significant crowding out effect: a 10 per cent rise in the share of immigrants increased the probability of unemployment among the Germans by 1.5 per cent on average. The negative wage effect was also small: a 10 per cent increase in the share of immigrants reduced the wages of the native population by less than 1 per cent on average. The findings of *Glitz* (2012) indicate that the influx of German nationality immigrants did not influence wages but had an adverse impact on the employment rate of the local population: among men, the entry of every 10 immigrants caused the job loss of 3.1 local employees on average, which mainly affected young and older workers.

Ortega–Verdugo (2014) used a skills-group approach to study the impact of (mostly unskilled) immigrants in *France* between 1968 and 1999 on the wages of French male employees. The findings showed that immigration has a *positive correlation with* wages and employment rates. However, this was due to significant changes in the wage structure in the period under study – irrespective of immigration –, which meant that differences between the wages of the low-qualified and highly qualified decreased considerably. The authors also point out that due to increasing immigration, French and immigrant employees of similar age and educational attainment shifted to dissimilar professions and French employees worked increasingly in high-skill positions.

Based on individual longitudinal data, *Ortega–Verdugo* (2015) examined the impact of unskilled migration during the period from 1976 to 2007 on the labour market situation of male French manual workers. The authors observe that in the micro-regions and occupations where the share of immigrants grew, the wages of French workers decreased, notably in the service and especially in the construction sector. Accordingly, if the share of immigrants within manual workers increased by 10 percentage point in a micro-region, the (median) wage of French employees fell by 1.3 per cent in the service sector and by 3.6 per cent in the construction sector, while the decrease was not significant in the processing industry. However, this negative effect was mitigated by two tendencies. Firstly, high ability French workers (especially in the processing industry) moved to other positions. Secondly, less competent French workers moved from micro-regions with a high influx of immigrants.

3 The *area-based approach* is based on comparing the labour market of regions of a country characterised by a high influx of immigrants with regions with low immigration levels. The method can only be applied if the influx is not dependent on the labour market prospects of the regions concerned. If this prerequisite is not fulfilled, researchers usually use the methods of the 'difference in differences' or instrumental variables. For more details on the methodology see *Grossman* (1982).

In *Spain*, the number of African and South American immigrants, typically lower qualified than the Spanish workforce, increased to nearly 11-fold between 1991 and 2005. *Carrasco et al.* (2008) used a skills-group approach to estimate the impact of immigration on the wages and employment rate of the native population between 1991 and 2011. The analysis only revealed a negligible significant effect on wages: a ten per cent increase in the number of immigrants resulted in a 0.2 per cent fall in the wage levels of the native population.

In the 1990s, more than three million immigrants arrived in *Israel*, which increased the population of the country by 12 per cent in a decade (*Friedberg,* 2001). More than one-third of immigrants arrived from former Soviet Union Republics. Applying a skills-group approach, both *Friedberg* (2001) and *Cohen-Goldner–Paserman* (2006) reached the conclusion that immigration did not have a negative impact on the labour market situation of the Israeli population.

According to *Friedberg* (2001), immigration had a positive impact on Israeli wages: a 10 per cent rise in the share of immigrants in a given profession raised the wages of the local employees by 7.4 per cent on average. *Cohen-Goldner–Paserman* (2006) found that the increased share of immigrants had no or negligible impact on the probability of losing jobs among men (a 10 per cent increase only raised the probability by 0.49 per cent maximum), while in the case of women – especially in the public sector – it lead to decrease in the likelihood of job-loss. Both studies point out the phenomenon that immigrants typically obtained lower-wage and/or higher-turnover jobs despite possessing higher qualifications and several years of work experience in their country of origin. Consequently, not even immigrants and locals with a similar educational attainment and work experience are close substitutes – they rather complement one another.

Turkey is the country most affected by the present wave of refugees. Immigration is uneven among Turkish regions: the majority of Syrian refugees are concentrated in regions near the Turkish-Syrian border. The impacts of the wave of refugees are investigated by several studies, all of them relying on the *regional approach*. As for their educational attainment, Syrian refugees do not differ much from the population of the southern, typically underdeveloped, Turkish regions, therefore it is possible to start from the simplifying assumption that Syrian refugees may become direct competitors of Turkish employees (*Ceritoglu et al.,* 2015).

Del Carpio–Wagner (2015) reports that the *crowding out effect* of Syrian workers is significant: the entry of ten Syrian refugees to the local labour market causes the job loss of about three Turkish workers, which affects primarily the employment of women and low-qualified employees as well as of non-registered workers. However, this strong crowding out effect is tempered by

a significant internal out-migration effect. Average wages remained unchanged but, because of changes in the composition of employees, wages decreased in some segments (e.g. informal sector, low-qualified, women). The findings of the study are consistent with the conclusions of *Akgündüz et al.* (2015) and *Ceritoglu et al.* (2015).

The medium- and long-term impact of immigration

Cattaneo et al. (2013) analysed what happens to local employees in two to four years following the point when the proportion of immigrants in their profession increases substantially, based on individual longitudinal data from the period of 1995–2001 from 11 countries of the European Union. The authors conclude that neither domestic migration nor the loss of jobs of local employees increased as a result of immigration. Moreover, the (monthly) wages of local employees slightly (though statistically not significantly) improved with immigration. What is the cause of this favourable tendency? According to the authors' findings, if the proportion of immigrant employees rises by ten percentage point in a profession, the probability of local employees being promoted grows by 16 per cent within two years and by 20 per cent within four years. Although the probability of promotion also increased in manual and simple non-manual professions, the impact was more pronounced in (non-management) professions requiring higher education qualifications.

A similar conclusion has been reached by *D'Amuri–Peri* (2014), by analysing data from 15 Western European countries relating to the period from 1996 to 2010, using a skills-group approach. The authors examined the job quality of local employees and quantified whether they have monotonous/manual or complex/intellectual tasks. The findings indicate that the employees of the 15 countries are not driven out from work by immigrants; on the contrary, they are promoted to positions with more complex tasks. According to the authors, this confirms that immigrants – since they are not proficient in the language of the recipient country – can mainly take up monotonous/manual jobs and in this way labour supply expands in these occupations. This raises the value of complex/intellectual occupations which are complementary to manual jobs, and local employees shift to those. The authors also checked whether labour market institutions (e.g. the stringency of labour regulations) influences the extent to which local employees are promoted to higher positions as a result of immigration. It seems that stringent legal frameworks slowed down this adaptation process. Such an institutional system especially reduced the promotion prospects of low-skilled employees and it primarily had adverse effects in the years of the recent economic crisis.

Foged–Peri (2013) examined the impact of the influx of refugees that intensified in the 1990s in *Denmark* – the country with one of the most flexible labour markets of Europe – following the outcomes of local employees

until 2008. Since the educational attainment of refugees was low, only the career of local employees with a maximum of an upper secondary school leaving qualification was mapped. The findings clearly showed that the influx of refugees had a positive impact, which spread gradually and fully materialized some five-six years after the settlement of the refugees. In micro-regions with a high proportion of refugees, a larger share of native employees were promoted, their wages increased and their employment rates did not fall even when compared local employees with a similar background living in micro-regions with a small share of refugees. The influx of refugees particularly favourably affected the career of younger employees and those with a versatile skill-set. In practice, in five years following the influx of refugees, the wages of young workers were four per cent higher in micro-regions where the share of refugees increased by one per cent.

Ruist (2013) focused on the effect of the influx of refugees from regions hit by (civil) war, using data from the period from 1998 to 2007 and an area-based approach, in Sweden. The findings suggest that the influx of refugees did not have an impact on the employment rates of the Swedes or earlier immigrants from high-income countries; however, it significantly increased the probabilities of job loss for earlier immigrants from medium- and low-income countries: every ten new refugees forced eight earlier immigrants out of the labour market.

The number of immigrants grew significantly in the *United Kingdom* between 1975 and 2005; however, as opposed to many European countries, a large proportion of immigrants were relatively highly qualified, especially in the period from 1995 to 2005. Two studies found that immigration had no significant impact on the *average wage* of local employees; it only influenced the distribution of wages (*Manacorda et al.,* 2012 and *Dustmann et al.,* 2013). Both papers point out that immigrants of similar age and educational attainment are not close substitutes of local employees – but rather complement them, which is supported by the fact that they work in different industries and positions. *Manacorda et al.* (2012) show that the newly arriving immigrants only had a negative impact on the wages of earlier immigrants but their influx increased the wages of native employees. *Dustmann et al.* (2013) estimated directly how immigration affected the distribution of wages in the regions of the United Kingdom between 1997 and 2005. Their results revealed that only the wages of low-wage earners decreased as a result of immigration, that of mid- and high-earners increased. Thus a one per cent rise in the share of immigrants increased the average wage of local employees by 0.2 per cent.

The study of *Ortega–Verdugo* (2014) on *Spanish* immigration offers a possible explanation for why many papers find only negligible wage effects even in the case of large-scale immigration. The study applies the area-based approach and examines the period 2000–2006. The findings reveal that total employ-

ment grew considerably in the regions concerned. The authors found that neither the employment rate nor the wages of Spanish employees decreased as a result of immigration. The reason for this is that businesses utilise the abundant production factor (unskilled labour) more intensively: 45–75 per cent of the surplus workforce became employed through this channel. The study also describes another form of adaptation: a 10 per cent increase in the number of female immigrants increased the employment rate of Spanish women with higher education qualifications by 2.2 percentage points, that is, female immigrants typically replaced local female workers in the field of household services. Due to the increased employment of highly qualified women, demand for workforce in household services grew and in this way the pressure on the wages of the low-qualified eased.

Table 3.2.1. below summarises the empirical findings reviewed. It is clear that while the short-term effects of immigration on the labour market situation of the native population are mixed, there are typically positive effects in the long run.

Table 3.2.1.: Summary of empirical findings

	Employment effect		Wage effect	
Country	negative	neutral or positive	negative	neutral or positive
Short-term effects				
Germany	*Bonin* (2005) – only men			
Spain		*Carrasco et al.* (2008)	*Carrasco et al.* (2008)	
France	*Ortega–Verdugo* (2015) only men*	*Ortega–Verdugo* (2014)	*Ortega–Verdugo* (2015) – only men*	*Ortega–Verdugo* (2014)
Israel	*Cohen-Goldner–Paserman* (2006) men	*Cohen-Goldner–Paserman* (2006) women		*Friedberg* (2001)
Norway			*Bratsberg et al.* (2014) men	
Turkey	*Wagner et al.* (2015), *Ceritoglu et al.* (2015) *Akgündüz et al.* (2015)		*Wagner et al.* (2015)	
Mid- and long-term effects				
Denmark		*Foged–Peri* (2013)**		*Foged–Peri* (2013)**men
Spain		*González–Ortega* (2014)		*González–Ortega* (2014)
Sweden	*Ruist* (2013)			
United Kingdom				*Manacorda et al.* (2012) men, *Dustmann et al.* I (2013)
EU		*Cattaneo et al.* (2013)		*Cattaneo et al.* (2013)

* The findings of *Ortega–Verdugo* (2015) only apply to male employees having an upper secondary school leaving qualification at most.

** The findings of *Foged–Peri* (2013) only apply to male employees having an upper secondary school leaving qualification at most

Conclusion

According to the literature we reviewed, immigration has a negligible short-term impact on the labour market situation of local employees. How and to what extent it impacts various groups depends on the competences of immigrants: their school attainment and foreign language skills. In the past 25 years, immigrants to Europe usually did not substitute native employees because of their relatively low level of these competences – and this is especially true for refugees. In this respect, researchers *generally* found a significant negative impact only in contexts where immigrants arrived from groups that are culturally similar to local employees. Immigration significantly affected industries and professions adversely in the short run which are characterised by simple manual work (such as construction or agriculture).

Immigration in the medium term already exerts positive or no effects on the labour market situation of local employees. This is due to two tendencies. On the one hand, businesses dynamically adapt to the increased supply caused by immigration and switch to technologies relying to a larger extent on unskilled labour. On the other hand, the relative value of complex/intellectual professions – which are in a complementary relationship with the relatively simple manual work undertaken by immigrants – increases and local employees shift to them. Consequently, immigration leads to a more efficient division of labour; local employees transfer to higher grade positions and thus their earnings increase. The extent of the latter tendency and how fast the positive effect of immigration is exerted greatly depends on the institutional framework and the flexibility of the labour market.

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3.3 DETERMINANTS OF THE CULTURAL INTEGRATION OF IMMIGRANTS

DÁNIEL HORN & ISTVÁN KÓNYA

Introduction

The cultural integration (assimilation) of immigrants is crucial for the evaluation of the economic and social effects of immigration. *Economic assimilation* is the phenomenon where immigrants fit into the labor market of the host country and find jobs that suit their skills and qualifications. This is usually the end of a process, whose speed and completion has been examined in many studies.[1]

Parallel and closely related to labor market integration is the *cultural assimilation* of immigrants. This includes the learning of the language and acquiring the norms of the host country, which helps immigrants not only to get ahead more easily on the labor market but also in their social interactions. Cultural assimilation is an important factor in the labor market and economic integration of immigrants (*Borjas*, 2013, and *Chiswick–Miller*, 2015), but it can also have significant welfare consequences for both immigrants (*Angelini et al.*, 2015) and natives (*Lazear*, 1999 and *Kónya*, 2007) on its own.

Imagined or real differences in values, cultural frictions and actual costs of integration that originate from language differences have a significant impact on how immigrants are perceived, and are ultimately important determinants of immigration policy. Studying cultural assimilation is harder and more complex than analyzing economic assimilation. Because of the various aspects, there is room for both methods based on qualitative information, interviews, case studies, and also statistical methods using standardized databases.

In this section, we examine the individual and group level determinants of language learning, which is perhaps the most important element of cultural assimilation. As a starting point, we can mention *Kónya* (2007), which analyzed assimilation in a theoretical model, and documented empirical results – using English knowledge as a measure of assimilation – for the United States. The model in *Kónya* (2007) – which derives results for integration – weighs the costs and benefits of cultural assimilation. The model's main mechanism is that since cultural interaction has increasing returns to scale, larger immigrant groups assimilate less.

On the other hand, the immigrant composition of the host country depends on the attributes of the sending and receiving countries, such as geographical distance, relative development or common history. Therefore, cultural assimilation can indirectly – through group size – be explained by country characteristics. Besides these, individual attributes are also important, like education, age or time spent in the host country. In this study, we empirically examine the impact of individual and group characteristics on cultural integration.

1 *Duleep* (2015) gives a general overview of economic assimilation. Two classic articles in the United States are *Chiswick* (1978) and *Borjas* (1987). *Eckstein–Weiss* (2004) studies the integration of immigrants from the Soviet Union into the Israeli labor market. *Lemos* (2013) looks at the question in the United Kingdom.

Similar to *Kónya* (2007), we analyze a somewhat narrow, but well-documented measure of cultural assimilation, which is the language skill of immigrants. How well an immigrant speaks the language of the host country is perhaps the most important indicator of integration. It is also likely that language learning is highly correlated with other indicators of cultural assimilation. A great advantage of the measure is that it is relatively easy to observe, and can be found one way or another in many international databases.

Among the available databases, we use the OECD Programme for International Assessment of Adult Competencies (PIAAC) survey, which was conducted between 2008 and 2013. The PIAAC database contains representative samples for the age group 16–65 in the 23 participating countries, where the sample size is between 5 and 8 thousand individuals. Out of the full sample of 152 thousand, we use those 5–6 thousand persons who are first generation immigrants in Europe and came from an origin country where the official language is different from that of the host country. The data has information on language skills, and we also know the immigrants' country of origin, the time of arrival and many other individual characteristics. To measure language skills, we use a measure that asks immigrants for the language they use at home. We consider immigrants "strongly assimilated" if they – as non-native speakers – switched to the language of the host country. Given our measure, we concentrate on the immigrant group whose native tongue is different from the official language of the host country so that acquiring the latter is the result of a conscious assimilation decision.

An issue with our definition of strong assimilation is that in the control group there are immigrants who use their native tongue at home, but not in their social interactions. These people should also be considered as assimilated, but unfortunately, we cannot identify them in our data because the PIAAC does not ask direct questions about language proficiency. Due to the heterogeneity of the control group we are likely to underestimate the impact of language learning. In 2017, we will have access to the ad-hoc immigrant module of the European Labor Force Survey (EU-LFS), which was recorded in 2014 and asks directly about language proficiency. It is important to emphasize, however, that because our estimates are lower bounds, whenever we find a significant effect these can be considered quite robust.

Our study is closely related to two recent publications that document various aspects on the cultural assimilation of immigrants. The *OECD/EU* (2015) book presents detailed information on immigrants into OECD and EU countries. Besides measures on the labor market, family, religion and political issues, there is also information on language skills and reading competencies. *Algan et al.* (2012) is another detailed study of the assimilation of European immigrants. The chapters summarize the experience of individual countries, using mostly data from the EU-LFS. In addition, the last chapter of the books con-

tains cross-country comparisons using the *European Social Survey*. Compared to the descriptive statistics found in these two books, our multi-variable analysis tries to systematically identify the main determinants behind assimilation.

Basic statistics of immigrants

As a first step, we present some basic statistics from our database. Although PIAAC contains a few advanced, non-European host countries, we concentrate our analysis on Europe. The reasons for this are partly missing data (United States, Canada), and the small number of immigrants (Japan, South Korea). Also, readers of this volume are likely to be more interested in European results. Overall, we use data from 16 countries,[2] these are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Ireland, Italy, Netherlands, Norway, Poland, Slovakia, Spain, Sweden, United Kingdom.

Figure 3.3.1 shows the population share and main categories of European immigrants by the host country. Based on the country of origin, we separate within European migration ("EU") from immigration from outside Europe ("non-EU"). This classification should correspond to the cultural distance between countries/regions. Since in the subsequent analysis we measure cultural assimilation with acquired language proficiency, it is also important to know the fraction of immigrants whose native tongue is different from the official language of the host country.[3] Therefore, the figure differentiates "native" and "non-native" immigrants. In our subsequent analysis, we naturally concentrate on the latter but show their weight among immigrants here.

Overall, we see the following on *Figure 3.3.1*.

1. There are huge differences among European countries in population share of immigrants. In Western European countries migrants typically make up 10–15% of the population, while in Eastern Europe the share is much lower.[4]

2. The majority of immigrants in European countries come from within the continent. Only France and Spain, with large former colonies, are significant exceptions.

3. The share of non-native immigrants is significant primarily in Western Europe. Roughly half of first-generation immigrants in our sample are non-native migrants. Based on the numbers, in Eastern Europe linguistic – and presumably cultural – assimilation is not an important problem.[5]

Table 3.3.1 shows summary statistics about non-native immigrants, native immigrants, and non-immigrants. In most attributes there are no major differences between native and non-native immigrants. The former arrived earlier into the host country and have marginally more education. Compared to non-immigrants, immigrants are somewhat younger, and their other attributes are practically the same as those born in the host country, although there are somewhat more immigrants with either uneducated or highly educated parents.

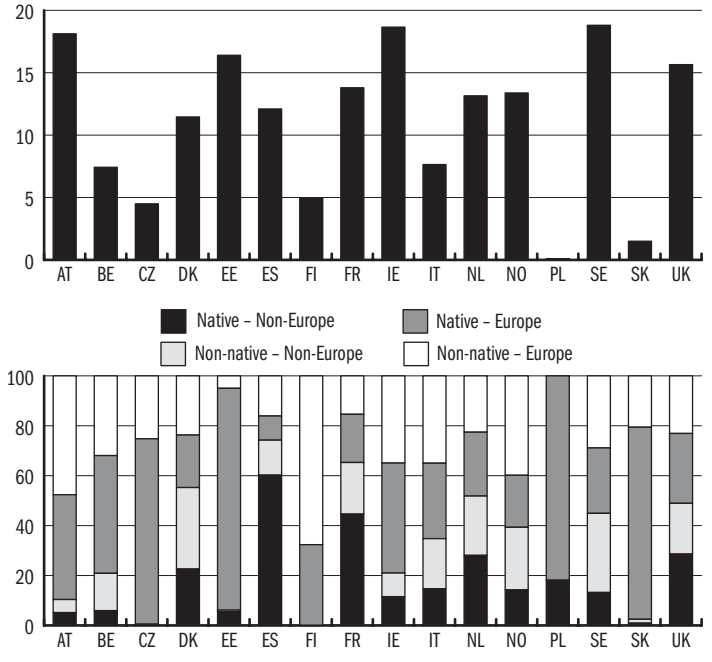
2 Unfortunately Hungary did not participate in the survey. For Germany the country of origin of immigrants is not available, so we cannot use German data either.

3 We define native immigrants as those whose mother tongue is the same as the language of the PIAAC competence survey, which is always the same as (an) official language of the host country. Therefore, whoever speaks an official but minority language is also a native immigrant. Such a group is, for example, the Russian language minority in Estonia.

4 In Estonia we see a large immigrant share because of the earlier inflow of the Russian speaking part of the population.

5 Although Hungary is not included in the PIAAC sample, we can find language information in the EU-LFS 2014 migration survey. Based on this, 79.5% of first generation immigrants in Hungary are native Hungarian speakers, and another 10.4% speaks the language fluently. *Source*: Eurostat, LFS, 2014 ad hoc module on immigration.

Figure 3.3.1: Share of first generation immigrants from and outside the EU in a given country by mother tongue



AT: Austria, BE: Belgium, CZ: Czech Republic, DK: Denmark, EE: Estonia, ES: Spain, FI: Finland, FR: France, IE: Ireland, IT: Italy, NL: Netherlands, NO: Norway, PL: Poland, SE: Sweden, SK: Slovakia, UK: United Kingdom.
Note: Europe = European and North-American countries.

Table 3.3.1: Stylized facts

	Non-native immigrant		Native	Immigrant	Non-immigrant	
Variable	mean	s.d.	mean	s.d.	mean	s.d.
Education (year)	11.5	3.8	12.0	3.3	11.9	3.3
Time since immigration	14.1	12.0	19.7	16.0	0.0	0.0
Both parents uneducated (%)	48	50	44	50	40	49
At least one parent with secondary education (%)	27	44	34	47	40	49
At least one parent with tertiary education (%)	25	43	22	42	20	40
Age	38.7	11.9	38.4	13.4	41.0	14.1
Speaks language of host country at home (%)	44	50	86	35	98	12
NEET (not in educ., emp. or training) (%)	22	41	18	39	20	40
Paid work in last 12 months (%)	70	46	73	44	73	45

Linguistic assimilation

As we have stressed already, we study the individual and group level determinants of strong assimilation, where a non-native immigrant fully switches to

the language of the host country. Based on the economics literature (for example *Kónya*, 2007) we assume that linguistic assimilation is – at least partially – the result of a rational decision. Since language learning is an investment, the immigrant weighs its costs and benefits. Costs presumably decline with general skills and human capital, and they increase with age. Benefits are expected to rise with time spent in the host country, and with general skills.

Based on *Kónya* (2007) we also expect that larger immigrant groups assimilate less. *Kónya* (2007) traces group size to the cost-benefit analysis of immigration: the bigger wealth differences between two countries, the easier to move, and the smaller cultural differences between the countries, the larger groups from the same sending country will be in the host country. *Kónya* (2007) verifies these hypotheses in the 5% sample of the United States Census.

Since our database containing European countries is relatively small and heterogeneous – with respect to not only the sending but also the host countries –, we cannot study country characteristics in detail. We examine two specifications that are less data intensive than what can be found in *Kónya* (2007). In the first specification, we study how the size of the immigrant group influences linguistic assimilation, besides individual characteristics. In the second specification we group countries of origin into regions, and see if there are differences in linguistic assimilation based on the sending region. In both cases, we control for individual characteristics and carry out the estimation with or without host country fixed effects.

Table 3.3.2 shows the results. Columns (1) and (2) use only *individual characteristics*. It is clear that immigrants who are more educated and who have been longer in the host country have a higher probability to switch to the language of the country. Older immigrants are less likely to assimilate, but point estimates are typically not significant, so we omit these from the table. The likelihood to assimilate is significantly higher for women, the difference being 8–9 percentage points. This could be due to mixed marriages, but we think of these also as strong assimilation. Our results are therefore consistent with economic intuition: the linguistic assimilation of immigrants is influenced by its costs and benefits.

From group level variables we first look at the *effect of group size*. Columns (3) and (4) indicate that larger groups are less likely to assimilate. Both the raw effect and the effect filtered from individual controls are negative and significant. The point estimate means that when the size of an immigrant group grows from 0 to 7.5 percent (the upper limit of the size of groups in the sample), linguistic assimilation falls by 3.75 percentage points. It is interesting, however, that after including a host country fixed effect, group size is no longer significant, and changes signs [column (5)]. This indicates a large degree of heterogeneity among European countries along this dimension. Unfortunately, we cannot carry out a more detailed analysis, due to our small sample.

Table 3.3.2: Determinants of linguistic assimilation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable	speak the language of the host country at home							
Education (years)	0.0123***	0.0131***		0.0133***	0.0131***		0.0118***	0.0123***
	(0.00262)	(0.00230)		(0.00229)	(0.00228)		(0.00249)	(0.00232)
Years since immigration: 6–10	0.0890***	0.0803***		0.0854***	0.0799***		0.0910***	0.0784***
	(0.0261)	(0.0255)		(0.0263)	(0.0256)		(0.0262)	(0.0249)
Years since immigration: 11–15	0.179***	0.171***		0.168***	0.171***		0.171***	0.163***
	(0.0241)	(0.0248)		(0.0256)	(0.0247)		(0.0207)	(0.0203)
Years since immigration: 15+	0.351***	0.351***		0.341***	0.350***		0.366***	0.359***
	(0.0298)	(0.0285)		(0.0289)	(0.0282)		(0.0318)	(0.0306)
Parents' education: at least one secondary	0.0256	0.0353*		0.0254	0.0354*		0.0346	0.0326
	(0.0210)	(0.0194)		(0.0206)	(0.0193)		(0.0249)	(0.0212)
Parents' education: at least one tertiary	0.0200	0.0340*		0.0232	0.0353*		0.0190	0.0283
	(0.0231)	(0.0185)		(0.0218)	(0.0183)		(0.0252)	(0.0194)
Woman	0.0870***	0.0850***		0.0860***	0.0850***		0.0869***	0.0820***
	(0.0198)	(0.0185)		(0.0197)	(0.0185)		(0.0193)	(0.0185)
Size of immigrant group (% of population)			−0.00503**	−0.00443***	0.0276			
			(0.00209)	(0.00149)	(0.0219)			
Arabic countries						−0.166**	−0.101	−0.125**
						(0.0733)	(0.0716)	(0.0601)
South and West Asia						−0.221***	−0.173***	−0.200***
						(0.0364)	(0.0299)	(0.0287)
Latin-America and the Caribbean						−0.0704	−0.00986	−0.0252
						(0.0744)	(0.0685)	(0.0575)
Sub-Saharan Africa						−0.0414	0.0583	0.0294
						(0.0487)	(0.0428)	(0.0370)
East Asia and Oceania (poor countries)						−0.0582	0.00555	−0.00839
						(0.0546)	(0.0469)	(0.0441)
Central Asia						−0.182**	−0.105	−0.133
						(0.0814)	(0.0811)	(0.0949)
East Asia and Oceania (rich countries)						0.157**	0.152**	0.128**
						(0.0772)	(0.0589)	(0.0598)
East-Central Europe						−0.193***	−0.154***	−0.190***
						(0.0475)	(0.0391)	(0.0313)
Constant	0.00686	−0.00187	0.438***	0.0294	−0.177	0.522***	0.0926*	0.123**
	(0.0387)	(0.0333)	(0.0212)	(0.0453)	(0.137)	(0.0341)	(0.0554)	(0.0502)
Sample size	5,627	5,627	6,495	5,627	5,627	5,825	5,473	5,473
R^2	0.092	0.119	0.004	0.095	0.121	0.031	0.122	0.152
Binary age group variable	yes	yes	no	yes	yes	no	yes	yes
Host country fixed effect	no	yes	no	no	yes	no	no	yes

Note: Robust standard errors clustered at the immigrant group level in parentheses; weights correcting for sampling differences that are normalized to add up to one within countries are used.

***1 percent, **5 percent, *10 percent level significance.

The other group level variable is the *region of origin*. Columns (6)–(8) show effects with or without individual controls, and when host country fixed effects are taken into account. The omitted region is Western Europe and North America; coefficients should be interpreted relative to migrants from this region. Our results show that immigrants from other regions are less likely to speak the language of the host country. The exception is developed East Asia, but we have a very small sample size. Most of Asia and Eastern Europe are strongly negative and significant. On the other hand, Sub-Saharan Africa and Latin America are less negative and not significant.

These results basically confirm that immigrants from less distant regions, who come more easily and in larger numbers, assimilate less. The effects are large: the probability of strong assimilation is 10–15 percent lower for an immigrant from Eastern Europe than for an immigrant from Western Europe. Unfortunately, a more detailed analysis is not possible here either, but we think it is worthwhile to study individual and group level determinants of cultural assimilation further.

Labor market outcomes

As we discussed in the Introduction, the literature considers linguistic assimilation to be an important determinant of the labor market integration of immigrants. We look at this channel in *Table 3.3.3*. In two specifications each, we examine how individual characteristics and language proficiency influence (1) labor market and school participation,[6] and (2) whether the interviewee had a paid job in the previous 12 months.

The regressions confirm the importance of both individual characteristics and language proficiency on the labor market. The likelihood of labor market/school participation and employment increases with education, and with years since immigration. The latter result is economic assimilation, according to which it takes time for immigrants to get ahead on the labor market of the host country. Interestingly, parental education strongly influences labor market/school participation, but not the likelihood of paid employment. This may be caused by the fact that children of more educated parents are likelier to be in school, which increases the school participation of the young in this social stratus.

The effect of language proficiency is positive, both on participation and on employment. The value of the parameter is somewhat above 4 percent, if we control for host country fixed effects; this is how likelier strongly assimilated immigrants are to participate in the labor market/school or to be employed.

6 We therefore look at those who either got a job, or were at school – in contrast to those who were either unemployed or inactive. This is the opposite of the NEET indicator used in statistics (*not in education, employment or training*).

Table 3.3.3: Determinants of labor market integration

	(1)	(2)	(3)	(4)
Variable	Labor market participation		Paid work last year	
Speak host country language at home	0.0339**	0.0434***	0.0348***	0.0415***
	(0.0136)	(0.0128)	(0.0135)	(0.0134)
Education (years)	0.0148***	0.0157***	0.0242***	0.0265***
	(0.00217)	(0.00185)	(0.00336)	(0.00289)
Years since immigration: 6–10	0.00702	0.0187	0.0567**	0.0569**
	(0.0119)	(0.0123)	(0.0268)	(0.0284)
Years since immigration: 11–15	–0.0107	–0.0116	0.0535*	0.0482
	(0.0202)	(0.0218)	(0.0292)	(0.0341)
Years since immigration: 15+	–0.0225	–0.0351**	0.111***	0.0990***
	(0.0163)	(0.0150)	(0.0216)	(0.0276)
Parents' education: at least one secondary	0.0495***	0.0417***	0.0215	0.00923
	(0.0125)	(0.0121)	(0.0157)	(0.0147)
Parents' education: at least one tertiary	0.0989***	0.0778***	0.0310**	0.0196*
	(0.0141)	(0.0120)	(0.0132)	(0.0116)
Age: 20–24	0.0370	0.0410	0.0515	0.0524
	(0.0308)	(0.0310)	(0.0357)	(0.0365)
Age: 25–29	–0.0286*	–0.0213	0.0676***	0.0703***
	(0.0173)	(0.0172)	(0.0187)	(0.0197)
Age: 30–34	–0.0469***	–0.0418***	0.0802***	0.0804***
	(0.0147)	(0.0153)	(0.0174)	(0.0175)
Age: 35–39	–0.0408**	–0.0380**	0.0796***	0.0787***
	(0.0167)	(0.0176)	(0.0260)	(0.0258)
Age: 45–49	–0.0379	–0.0345	0.0683**	0.0719***
	(0.0272)	(0.0289)	(0.0267)	(0.0265)
Age: 50–54	–0.0624***	–0.0655***	0.0340	0.0289
	(0.0204)	(0.0201)	(0.0261)	(0.0257)
Age: 55–59	–0.178***	–0.172***	–0.0949***	–0.0892***
	(0.0304)	(0.0291)	(0.0331)	(0.0330)
Age: 60–64	–0.390***	–0.390***	–0.283***	–0.282***
	(0.0375)	(0.0358)	(0.0450)	(0.0446)
Woman	–0.104***	–0.102***	–0.153***	–0.152***
	(0.0111)	(0.0108)	(0.0179)	(0.0183)
Constant	0.697***	0.690***	0.389***	0.370***
	(0.0298)	(0.0308)	(0.0551)	(0.0570)
Sample size	5,623	5,623	5,627	5,627
R^2	0.138	0.156	0.118	0.129
Host country fixed effect	no	yes	no	yes

Note: Robust standard errors clustered at the immigrant group level in parentheses; weights correcting for sampling differences that are normalized to add up to one within countries are used.

***1 percent, **5 percent, *10 percent level significance.

Summary

Our study measured the impact of individual and group level characteristics on linguistic assimilation. We also showed how language proficiency influences the labor market status of immigrants. Although there are many other aspects of cultural assimilation, we think that language proficiency is a fundamental ingredient. Our analysis supports earlier findings in the literature, which argue that cultural assimilation can be the result of rational decisions. An indication for this is that the size of an immigrant group is related to the extent of language learning, or cultural assimilation: larger groups are less likely to assimilate. We also showed that cultural assimilation strongly influences economic assimilation. Those non-native immigrants who speak the language of the host country at home are 3–4 percent more likely to participate in the labor market or education, or to have found paid employment in the 12 months preceding the survey.

Because of the limitations of the database, we used a particularly strong indicator of cultural assimilation, the language used at home. Once the migration module of the EU-LFS becomes available, we would like to repeat the analysis using a question on the knowledge of the language of the host country. We expect that this further study will confirm our current findings, and will highlight even more the importance of cultural (linguistic) assimilation.

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4. TERMINOLOGY IN MIGRATION

TÓTH JUDIT

Terms used in studies of labour migration across borders require some explanation based on the consensus of experts and/or national, European as well as international regulation. For this reason a comprehensible summary of each relevant term is given with an indication of its legal grounds.

ALIEN POLICING ▪ As a separate branch of public administration this has its own body with specific procedural rules. The OIN, police and the security agencies have competence on entry, residence, limitation on free movement, authorisation and preparatory work in the nationality procedure of EEA nationals, third country nationals and their family members.

ASYLUM SEEKER ▪ Third country national or stateless person applying for international protection pending the final decision regarding asylum and shall be furnished with a residence permit issued on the basis of a humanitarian reason. The applicant is entitled to be employed inside the refugee camp or in any other place as determined by the public employer for a maximum of nine months following the submission of the application. After this period the individual would need a labour permit issued through a standard authority procedure should they wish to be employed for a longer period.

EEA NATIONAL ▪ Citizens of party states in the EEA and EU together with nationals of other stipulated states with the EC/EU, (hereinafter together: EEA national), are entitled to enjoy the freedom of movement and residence as well as employment. This may not however generate a disproportionate burden for the national social system Moreover, the health insurance and self-subsistence of the EEA national shall be provided during his/her residence in another party state. (The material resources of welfare are proper if the monthly personal income exceeds the lawful minimum old age pension level in the family or if the EEA national has received social aid for no longer than three months.)

The EEA national shall notify his residence and address in Hungary to the next regional office of OIN if they intend to stay more than 90 days. The EEA national obtains a registration document that is valid for an undefined period (together with a valid travelling document or identity card).

On ceasing employment the EEA national can retain the right to residence if they are undergoing medical treatment and incapable to work due to an accident or occupational disease, or if they are registered as a job seeker, or attending professional training as a precondition of their occupation or remunerated work in practice. If the remunerated work were to be in excess of one year the individual retains the right to residence for an undefined period. When a shorter employment period ends, the maximum allowable stay in Hungary means the length of granted job seeking benefit but no more than six months.

The EEA national and their family members acquire the right to permanent residence (permanent residence card) if they have resided lawfully and continuously for at least five years, or their child was born here. It provides a stable employment relationship. The family member of a Hungarian national acquires permanent residence if they have been living in a joint household for at least one year or in marriage living under the same roof for at least two years. In absence of the preconditions for staying or employment, the EEA national obtains permanent residence if they are entitled to receive an old age pension or if they become incapable of work due to an accident or occupational disease. If the EEA national employee dies before they can acquire the right to permanent residence, a family member having resided continuously for at least two years is eligible to the right to permanent residence here. The same applies if the breadwinner's death is caused by an accident or occupational disease.

EMIGRANT ▪ Hungarian national and lawfully residing foreigner has a fundamental right to leave Hungary. The Hungarian national must notify his leaving the country for a period longer than three months to the municipal clerk and returning their address card unless they wish to continuously pay the contribution to the health care fund. The emigrating person can avoid the double payment of the contribution if they can prove that they are paying the contribution in another Member State of the EEA. However, their payment of tax is contrary to the national regulation in the absence of the notification and return of the address card to the responsible Hungarian authority

EMPLOYED MIGRANT WITH SIMPLIFIED LABOUR CONTRACT ▪ A third country national can be employed in seasonal agricultural work on the basis of a simplified, standard labour contract while a migrant with an immigration permit (long-term migrant) can also be employed in tourism and occasional work. The 'seasonal work' covers plant cultivation, afforestation, stockbreeding, fishing and hunting, the logistics and packaging of agricultural production; employment at professional tourism service and transport providers that does not exceed 120 days within one calendar year between the same parties is also covered. The occasional work (for instance being an 'extra' in the production of a film) denotes employment for a defined period that is no longer than 5 consecutive days, 15 days in a month or 90 days within one calendar year. If a migrant worker is eligible for the social insurance in another state (due to international, bilateral social or labour agreement or if they are covered by the social coordination between EEA states) and it is properly documented, the public revenues shall not be paid by the employer; in this event the employee is excluded from the pension, accident health care and job-seeking benefits in Hungary.

EU BLUE CARD ▪ The card holder as a third country national is authorized to be employed in a qualified work role and reside in Hungary or in another Member State of the EU. If the applicant meets the professional qualification

requirement and the monthly wage is not below 120–150 percent of the officially published gross monthly wage level in the given occupational branch in the country in the penultimate year (as an example, according to the Central Statistical Office data from 2014 the national average gross wage per month for an obstetrician or physician would be at least 285,240 HUF or 356,550 HUF), the Card may be issued.

Furthermore the applicant has to be registered in the social insurance system and register their place of residence in Hungary. If the applicant is a holder of an EC residence permit issued by another Member State or a seasonal labour visa, the application for a Card shall be denied. The Card is valid up to the fourth month from the end of the person's employment but must at least be valid for a minimum of one year and a maximum of four years which may be extended on occasion to four years. The card holder cannot be employed in any other occupation authorized on the grounds of the national labour market test for the first two years. The card holder is eligible for family unification.

FAMILY MEMBER ▪ During the existing family relationship a family member can enter, reside and work in Hungary. The foreign family member may joint the breadwinner (sponsor) thereby acquiring a family unification visa, residence permit or registration card. The immigration of family members means a limited labour force due to the restrictive conditions of unification that are controlled by the OIN (for instance, evidence is required regarding a valid family tie established before their departure and that the marriage is not for convenience. Subsistence and accommodation for the whole family is ensured in Hungary or for a dependent family member in need of personal assistance).

The circle of family members and conditions of their entry and residence are different as determined by the legal position of the sponsor living in Hungary. They would be a recognised refugee, a settled/long term migrant, a lawfully employed third country national, a Hungarian national or a person with the right to free movement. For instance, a recognized refugee's spouse, a minor (including an adopted and/or a foster child) or his parent or responsible guardian (if the recognized refugee is a minor) may request the same legal status if they arrive together in Hungary and their family relationship has been established prior to arrival.

FOREIGN STUDENT IN WORK ▪ A regular student does not need labour authorisation for a part-time job if that student is employed in a labour practice that is organised by an international student association for a third country national being enrolled with a home country tertiary education institute, or lawfully attending a vocational, grammar or artistic school or a tertiary education institute that is seated in Hungary. This permit exemption is applicable only during the student relationship. Moreover a student of elementary, secondary or tertiary education in the ambit of bilateral exchange programs can be employed freely if they have an attestation from the responsible min-

ister of the sending and admitting states. Third country national students participating in the labour/vocational practice in the frame of the Comenius, Erasmus, Leonardo da Vinci or Grundtvig Programs can also work without labour authorisation. The labour market test in the authorisation procedure is not required for a third country national apprentice if the vocational training period in Hungary does not exceed three months in a calendar year.

FOREIGN VOLUNTEER ▪ If an adult third country national intends to work in Hungary without remuneration, they can obtain a residence permit issued for voluntary work provided they hold a reception contract with a Hungarian organisation in accordance with the legal rules on public voluntary work. This contract has to define the accommodation, nutrition, liability insurance, health care and proper instructions that are provided by the receiving organisation for the volunteer. The maximum period of validity of the contract determines the length of the residence permission but can not exceed a period of two years. The residence permit issued is not extendable. If a Hungarian national works as a posted volunteer of a Hungarian civil organisation abroad, they also need a finalised contract in order to access certain reimbursements of their individual expenses.

ILLEGALLY EMPLOYED MIGRANT ▪ This covers a foreign person performing remunerated work employed without registration, a third country national employed in a different position or under different conditions than those determined in labour authorisation or without a valid residence permit – all can be considered as illegal work. It is a grave violation of law if the individual is employed under severe exploitation – including racial or gender discrimination – derogating the guarantees for lawful employment, in particular in the context of the dignity, the physical or the health security requirements of workers. Upon proposal of the court a residence permit on the grounds of humanitarian reasons shall be given for such a third country national even in the absence of preconditions of staying if they were being employed under grossly exploitative conditions, or without a valid residence authorisation in the country or if it is a minor being employed. Victims of exploitation and illegal work have the right to claim for the payment of a proportional wage at the court. The employer of an illegally employed migrant shall be subjected to the criminal procedure (with reference to the violation of Art.209 and 256 in the Penal Code).

INTEGRATION OF MIGRANTS ▪ Recognised refugees and subsidiary protected migrants may enjoy certain services for social integration (such as a language course, accommodation, job-seeking service and self-subsistence benefits), while other migrants are not eligible to access these supports. They can conclude a social integration contract including services with the OIN for a maximum of two years and this is implemented with the assistance of a local municipal family care unit or a civil organisation. The benefits based on the integration contract are provided for a family in need and is controlled

by the OIN. Should the contract be seriously breached all supports and benefits may be withdrawn by the OIN.

JOBSEEKER MIGRANT ▪ National treatment shall be ensured for a third country national with a residence permit that is issued in a combined procedure as determined in the Act on entry and stay of third country nationals in Hungary (2007) in the area of job seeking registration and accession to the unemployment benefit if they were employed for at least six months here. Similarly, any other lawfully employed migrant becoming unemployed is eligible for accession to the job seeking benefit – if the prior working period meets the requirement in Hungary – and that of the labour services. If the employment period of an EEA national exceeds one year, their right to residence is undefined but in the case of a shorter prior working period they can stay in the country until the end of the period of applied job seeking benefit but for at least for six months. A job seeking migrant can receive unemployment benefit, support before the pension and cost contributions of seeking work if they meet the labour law requirements (for instance, fulfilled social insurance period, cooperation with labour authority).

KEY PERSONNEL ▪ This covers the employee of a foreign invested company in Hungary that is not a responsible leader of the company according to the Civil Code but directs or supervises the entire firm (including entitlements of the employer) or at least some units of the company that are under the direct governance or supervision of the owner, highest authority or responsible leader, as well as an employee with a high level qualification (specific occupation, technical or outstanding knowledge) that is necessary for the basic profile of the service, technology or administration in the company. The employee can benefit from the exception in the labour authorisation process if they have had a worker/employee position at the foreign invested company according to the national law of the seat country for at least one year prior to the application.

LAWFULLY EMPLOYED MIGRANT ▪ Recognised refugees, subsidiary protected persons and settled/long-term migrants (with an open-ended residence permit) as well as migrants with the right to free movement and residence shall be treated as nationals in employment and so can work without permission. National treatment may be limited only through act or government decree (for instance, determining certain jobs that can be filled only by nationals). Employment is free without authorisation for posted, delegated or rented/hired worker of a non-Hungarian seated company providing services transnationally or for private contractual work at a Hungarian employer. Professional athletes, directing persons and working members in the supervisory board of a partly foreign invested company as well as clergy in church related roles as determined by its internal rules also can be employed without permission.

Other migrants shall obtain a labour permit to be employed unless a governmental decree regulates otherwise. Their residence permit issued for re-

munerated work is valid up to three years which can be extended on occasion by a further three years. Permission shall be denied if foreigners are excluded from the jobs through concern due to the high unemployment rate and characteristics of local job seekers. The first step of the procedure is a preliminary agreement on the job between the employer and the potential employee that defines the scope of the activities, the working time and the remuneration of the worker. This agreement is considered a binding job offer and possessing the permit the parties have to conclude the labour contract. These two steps are mandatory for lawful employment. If the employee has a residence permit issued for family unification the agreement with the employer may be valid for up to five years, up to four years if a third country national applies for an EU Blue Card, up to 6–12 months for a migrant with a residence permit issued on humanitarian grounds, and up to two years for all other labour migrants. An application for a labour permit can be refused taking into account the conditions, such as the fine for unlawful employment that was implied the employer within one year, or if the employment of a migrant is not necessary or applicable due to the ongoing training programmes or because of staff redundancies or of strikes at the business, or if the defined wage would be below the national average wage level (not exceeding 80 percent of the average monthly wage amount).

The labour permit shall identify the data regarding the employer, the place of work, the scope of the activities, the SNOJ code of the job and the period of employment. The government office can withdraw the permission that was issued in a single (non-combined with residence authorisation) procedure if the employment breaks down, it is terminated, the working conditions are changed relating to the permission, or when the employee cannot meet lawful residence or combined permission. For instance, employment is considered unlawful if the job is taken up at a different employer than that indicated in the permit, or the location of the work or the scope of activities is not the same as defined in the permit. The permit issued in a combined procedure is valid for up to two years and renewable on occasion for a further two years.

MIGRANT ▪ This gathering term from the daily discourses does not exist in legal provisions. If you can read it in our text it means only a person in mobility but his legal status (national, long-term migrant, EEA national, third country national, refugee etc.) shall be indicated in addition.

MIGRANT WITH RIGHT TO FREE MOVEMENT ▪ The EEA national – as a Hungarian national – together with their family members joining and following them to Hungary, their relatives belonging to the wider family whose entry and residence is authorized by the OIN (including the dependent of the Hungarian national, person living in the same household with the sponsor for at least one year, or has been cared for health reasons by the sponsor, or

was living together in the household of the sponsor as a dependent or as cared person prior to departure) have the right to free movement in the Member States of the EEA and the EU.

OFFICE OF IMMIGRATION AND NATIONALITY AFFAIRS (OIN) ▪ Under the auspices of the Ministry of the Interior the OIN is a central alien policing authority with seven regional and 24 desk offices. It is entitled to decide visa, residence, asylum, expulsion, statelessness and nationality authorisation including the claims for registration of EEA nationals and their family members, employment, issuing passport of, and integration contract with, third country nationals. A judicial review of its decision may be requested to the administrative court.

PLACEMENT AND LABOUR AGENCY ▪ The Labour Authority or private entities provide various services for job seekers and workers, for instance, EURES as the job portal of the EU is introduced by coordinators. Private placement and labour agencies are entitled to transmit job offers lawfully if entrepreneurs are registered at the governmental office. The registration demands infrastructural, legal and personnel requirements (reception desk and proper communication facilities, skilled advisor, legitimized jobs according to the national law in the destination country are ensured), and a deposit from the entrepreneur shall be given if foreign job offers are transmitted. Fee, cost or charge must not be accounted for labour services to job seekers.

POSTED WORKER ▪ A worker from a company seated in a Member State of the EEA that is posted to Hungary for a contractual, service or undertaking project task does not need a labour authorisation if the work does not exceed two years. He remains inside the social security and labour law regime of that Member State as the employee posted up to two years, and similarly, a delegated worker from Hungary to another EEA state remains inside the Hungarian social and health care system for up to two years. However, his dual taxpaying shall be avoided on the basis of the place of his permanent registered residence and it is that which determines the competence of the national tax office. If his work does not finish within two years the national health care fund may extend this posted worker position.

RECOGNISED REFUGEE ▪ A third country national or stateless person can be recognised as a refugee if they are not admitted by another state but by returning to their country of origin or of habitual residence would face a well founded fear of persecution on the grounds of race, national or ethnic origin, religion or conviction, political opinion or membership of a special social group and there being no basis of exclusion for public order or security reasons. In this way a refugee can be removed exceptionally from the country but their recognition as a refugee may be withdrawn for a gross violation of law and national security tolerating their temporary presence in the country. A refugee can be employed freely with the exception of a job and position that

requires Hungarian citizenship (for instance, to become mayor, governmental official, judge or policeman). Recognised refugees shall be furnished with identity card and address card.

REGISTERED MIGRANT WORKER ▪ A migrant worker entitled to the right to free movement and residence as well as a third country national that is exempted from the labour authorisation – including the recognised refugee, subsidiary protected person, settled/long-term migrant – shall be registered at the labour authority. The employer's note shall contain the number of employed persons, their age, qualification, nationality, the SNOJ code, the employment relation, family membership of the employee, the statistical code of the employer and the date of beginning or termination of the employment. The labour authority (governmental office) approves the notice (made in time) and keeps the up-to-date list of this employment data.

REMITTANCE ▪ There is no limitation of the minimum or maximum amount of gross/net salary of people that shall be spent or utilised in Hungary differing from other states. It means that foreign migrants can use freely their own incomes but their subsistence, accommodation and standard well-being shall be provided during their lawful residence in Hungary.

REMUNERATED WORK ▪ Persons with the right to free movement and residence exceeding three months would establish their income and lawful residence in Hungary by remunerated work if they are not to become a relevant burden to the social service system contributing to the health care fund. This work may include employment or other economic activity in a hierarchical relationship that is compensated for by wage or by self-employment individually undertaking the economic activity and paying the social and health care contributions or their other activities that are managed as an owner, manager, representative or supervisory board member of a corporate, cooperative or other legal entities for honorarium. A third country national can be at remunerated work only in possession of the EU Blue Card, or a residence permit issued for the purpose of work, for humanitarian reasons, for family unification, for studies or if holding a seasonal labour visa.

RETURNEE ▪ A Hungarian national has the right to return at any time to Hungary even with an expired travelling document without sanction. This fundamental right does not depend on their registered or permanent residence in Hungary but without proper document of payment to the mandatory health care contribution – either in Hungary or in another Member State of the EU – it shall be reimbursed (dating back to the previous five years) and paid as public revenue to the Treasury up to 12th day in every month.

SEASONAL FOREIGN WORKER ▪ A migrant with a seasonal labour visa is entitled to enter on one or more occasions and to stay in Hungary exceeding 90 days within 180 days but no more than six months in employment. There is no appeal if the visa application is denied or the issued visa is withdrawn.

The ministry responsible maintains registration on seasonal labour permits issued for agricultural work, and its prolongation over six months per annum is excluded. However the seasonal worker can work this six month period in several parts. The labour market test shall be made in the authorisation process on the grounds of prior submitted labour demand (indicated vacancy) but checking whether Hungarian labour force is available is neglected if the foreign seasonal worker's claim does not exceed 60 days work.

STATELESS PERSON ▪ A stateless person is not considered as a national on the grounds of legal rules or practice in any state thus cannot gain access to the protection, authorisation or identity documents. *De facto* statelessness of a foreigner is indicated in alien police documentation but means no specific right or entitlement despite the status of settled/long-term migrant or recognized refugee. However, among *de facto* stateless persons there are many asylum-seekers and migrant workers. A small part of stateless persons may be recognised *de jure* and furnished with a humanitarian residence permit, labour authorisation and travelling document that allows leaving and return to Hungary before its expiration. The OIN makes the decision on statelessness status in some dozens of cases per annum.

SUBSIDIARY PROTECTED MIGRANT ▪ A subsidiary international protection can be granted for a third country national including stateless person if such person does not meet the requirement of refugee recognition but there is a risk of serious harm should they return to the country or origin or if protection is not available in the country of origin while exclusionary reasons for public order or security are not applicable in their case. The subsidiary protected migrant may access an identity and address card while residing in Hungary and this status may extend to a joint applicant family member.

THIRD COUNTRY NATIONAL ▪ The non-national of Hungary or Member States of the EU or EEA is a foreigner.

TOLERATED MIGRANT ▪ Upon the request of the asylum unit, the alien policing directorate of the OIN may recognise the third country national as a tolerated migrant if his expulsion is prohibited because the applicant would face torture, inhuman or degrading treatment, or capital punishment in their home country on the grounds of race, religion, national or ethnic origin, political views or membership of a specific social group, in absence of another safe state admitting him. On applying for a labour permit for employment outside the refugee camp, the claim would be supported by the OIN on humanitarian grounds and their application shall not be tested regarding the labour market supply or demand.

YEARLY QUOTA ▪ The maximum number of third country nationals for whom a labour permit would be issued in Hungary for a calendar year is determined by the minister responsible for employment policy. His decree defines not only the total number of foreign employees in the country but also

its amount in each sector and region. This quota was 59,000 to the year of 2015 based on the monthly average number of indicated vacancies in the labour offices.

Applied legal sources

Act I of 2007 on entry and residence of persons in Hungary entitled to the right to free movement, Government Decree No.113 of 2007, May 24 on executive rules of the Act;

Act II of 2007 on entry and residence of third country nationals in Hungary, Government Decree No.114 of 2007, May 24 on executive rules of the Act;

Act IV of 1991 on promotion of employment;

Government Decree No.445 of 2013, November 22 on the non-single labour authorisation of third country nationals, exemptions and expert opinion issued by the governmental offices at county level and lawful employment of third-country nationals without permission, their registration and reimbursement of their unpaid wage;

Government Decree No.355 of 2007, Dec 23 on transitional provisions implemented by the Hungarian Republic on the persons with right to free movement,

Act LXXV of 2010 on employment on the grounds of simplified labour contract;

Act LXXX of 2007 on asylum and Government Decree No.301 of 2007, Nov 9 on asylum procedure and support for refugees;

Government Decree No.181 of 2007, July 6 on accreditation of institutes admitting third-country nationals for the purpose of research and on conditions of the admission contract;

Ministerial Decree issued by the Minister of the Economy No.44 of 2011, Dec 16 on the minimum lawful monthly salary for a third country national employed with EU Blue Card;

Ministerial Decree issued by the Minister of the Economy No.19 of 2015, July 3 on the maximum number of employable third country nationals in the given calendar year in Hungary;

Resolution issued by the Central Statistical Office No.7 of 2010, Apr 23 on the Statistical Nomenclature of Occupations and Jobs (SNOJ);

2003/109/EC, Nov 25, Council Directive concerning the status of third country nationals who are long-term residents;

2003/86/EC, Sept 22, Council Directive on the right to family unification;

2004/38/EC, April 29, Directive of the European Parliament and the Council on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Reg.(EEC) No.1612/68 and repealing Dir. 64/221/EEC, 68/360/EEC, 72/148/EEC, 75/35/EEC, 90/364/EEC, 90/365/EEC and 93/96/EEC;

2014/54/EU, April 16, Directive of the European Parliament and the Council on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers;

2009/50/EC, May 25, Council Directive on the entry and residence of third-country nationals for the purposes of highly qualified employment;

2011/98/EU, Dec 13, Directive of the European Parliament and the Council on a single application procedure for a single permit for third-country nationals to reside and work in the territory of a Member State and on a common set of rights for third-country workers legally residing in a Member State;

2005/71/EC, Oct 12, Council Directive on a specific procedure for admitting third country nationals for the purpose of scientific research;

96/71/EC, Dec 16, Directive of the European Parliament and the Council concerning the posting of workers in the framework of the provision of services;

2014/36/EU, February 26, Directive of the European Parliament and the Council on the conditions of entry and stay of third-country nationals for the purpose of employment as seasonal workers (it shall be transposed to the national law up to 30 Sept 2016);

2014/66/EU, May 15, Directive of the European Parliament and the Council on the conditions of entry and residence of third-country nationals in the framework of the intra-corporate transfer (to be transposed to the national law prior to 29 Nov 2016);

987/2009/EC, Sept 16, Regulation of the European Parliament and the Council on laying down the procedure for implementing the 883/2004/EC Regulation on the coordination of social security systems;

2009/52/EC, June 18, Directive of the European Parliament and the Council providing for minimum standards on sanctions and measures against employers of illegally staying third-country nationals;

2011/98/EU, Dec 13, Directive of the European Parliament and the Council on a single application procedure for a single permit for third-country nationals to reside and work in the territory of a Member State and on a common set of rights for third-country workers legally residing in a Member State.

LABOUR MARKET POLICY TOOLS

(MAY 2015 – MARCH 2016)

ÁGOTA SCHARLE

The chapter only includes policy tools whose regulation underwent substantive changes between May 2015 and March 2016. Tools operating without changes and the legal regulations applicable to them are described in detail in earlier issues of the Labour Market Yearbook.[1]

1 INSTITUTIONAL CHANGES

1.1 The system of vocational education and training is transformed

The Ministry of National Economy merged the schools taken over from the *Klebelsberg Institution Maintenance Centre* into vocational education and training centres in July 2015.[2] The centres were granted educational and financial autonomy, while the schools operating as units of the centres were granted partial financial autonomy.[3]

According to government plans, vocational secondary schools will be turned into vocational "gymnasia", while vocational schools will become vocational secondary schools in the school year 2016/2017.[4] Vocational gymnasia will offer two vocational qualifications in addition to the secondary school leaving certificate, while vocational secondary schools will provide vocational training followed by preparation for the secondary school leaving certificate.[5] However, the share of general knowledge subjects will decrease significantly in both school types.

1.2 The National Office for Rehabilitation and Social Affairs (NORSA) is transformed

According to press reports, the government is planning to dissolve or transform several financially autonomous institutions of the sector, in order to reduce bureaucracy. These reports state that – similarly to the National Labour Office, merged into the Ministry for National Economy in 2015 – the National Office for Rehabilitation and Social Affairs will be integrated in the Ministry for Human Capacities.[6] The general and financial management of services supporting the integration of disabled job seekers in the labour market, so far managed by NORSA, is expected to be taken over not by the Ministry but by another government agency, for example the Equal Opportunities of Persons with Disabilities Non-profit Ltd. The local administrative offices of NORSA were already taken over by the metropolitan and county level government offices in April 2015.[7]

1.3 The professional autonomy of local labour offices decreases

The competence of local government offices was expanded and as a result the employer's rights over the staff of local labour offices were transferred from

1 For last years' analysis see *Cseres-Gergely–Varadovics* (2015).

2 146/2015. (VI. 12.) kormányrendelet.

3 The vocational training centres have been established. Ministry for the National Economy, 30 June 2015.

4 The government have decided on transforming vocational education and training. Ministry for the National Economy, 9 April 2015.

5 The transformation of the vocational education and training system aims at improving the quality of education. Ministry for the National Economy, 29 January 2016.

6 Government to dissolve fifty agencies. Népszava, 3 April 2016.

7 Government decree 70/2015. (III. 30.)

the heads of employment departments of county level government offices to the heads of local government offices in April 2015.[8]

2 BENEFITS

2.1 The amount of unemployment benefits

The minimum and maximum of job seeker's allowance was raised in line with the rise in the minimum wage in January 2016. The amount of the employment substitute support (a flat rate, means tested allowance) for the long-term unemployed did not change. The wage of public works participants did not increase either.[9]

2.2 Changes in disability benefits

The review of eligibility to disability benefit, launched in 2012, is progressing more slowly than originally planned. In order to accelerate the process, the NORSA was authorised in September 2015 to include experts not employed by the government in the review committees and if supplementary health or ability assessments are needed, these may be outsourced to independent service providers.[10] For the sake of further simplification, review committees may decide not to examine an individual if earlier expert opinions state that their condition is incurable. Finally, after August 2015, individuals reaching retirement age in five years may be granted exemption from the review if the regular review took place during that five-year period.[11]

3 SERVICES

3.1 New client profiling system

Following a lengthy preparation period, the new client profiling system was launched in the local labour offices in January 2016. The essence of the project financed from the EDIOP (Economic Development and Innovation Operational Programme) 5.1.1. scheme[12] is to place clients in one of three categories on the basis of questionnaires completed by them. The first includes those who are capable of finding employment on their own, the second those who need assistance in finding employment, while members of the third category are recommended for participation in a public works programme.

3.2 Reporting vacancies to the mayors

A new law effective from 13 July 2015 enables employers to register their seasonal labour demand locally, at the mayor' office, between 1 May and 31 October (provided they opt for simplified employment).[13] The aim of the measure was to encourage employers to register summer seasonal jobs and in this way to increase the number of jobs in the open labour market offered by local labour offices to the long-term unemployed (or public works participants).

8 Ministerial order 7/2015. (III. 31.) on the organisational and operational regulations of the metropolitan and county government offices.

9 Government decree 170/2011. (VIII. 24.).

10 Government decree 247/2015. (IX. 8.).

11 Act CXXXIII of 2015.

12 Preparations were financed from the SROP 1.3.1. programme.

13 Act CXII of 2015.

4 ACTIVE LABOUR MARKET TOOLS AND COMPLEX PROGRAMMES

4.1 The expansion of public works

In addition to increased budgets, the range of those eligible to participate was also expanded: since 1 August 2015, persons who submitted a claim to be recognised as a refugee, protected persons and beneficiary of subsidiary protection as well as third-country nationals who are obliged to stay at a place designated by immigration authorities may also participate in public works programmes.[14]

In accordance with the objectives of public works for 2016, the gradual expansion of the Start Programme has to be continued and the opportunity of longer term employment ensured (for the planned increase in expenses see *Table A1* in the *Annex*). In order to better target the programme, the relevant government decree specifies the list of "municipalities of high priority in respect of public works".[15]

The government allocated 27 billion HUF for the training of 50 thousand public works participants in the EDIOP 6.1.1. scheme published in August 2015.[16]

4.2 Measures supporting the integration of public works participants in the open labour market

Regulations have been amended in the summer of 2015 and then at the start of 2016 to increase the share of public works participants entering the open labour market. Pursuant to the new regulations effective from 13 July 2015,[17] participants rejecting simplified employment and those whose additional employment is terminated either by themselves as employees (or by the employer) with immediate effect may be excluded from public works.

Since January 2016, a new, positive incentive, "allowance for finding employment" has been granted for former public works participants who have found a job in the primary labour market.[18] The amount of the allowance is the same as the amount of employment substitution support payable for the period from the termination of public works participation to the date until the public works programme was supposed to last if the individual did not find employment.

In order to improve access to training and services supporting labour market integration, it has been regarded as public works participation "if the public works participant engages in training improving his/her adaptability to the labour market or (...) a maximum of three days of labour market service annually" since 13 July 2015. [19]

The Ministry in charge announced that a new programme was launched on 1 February 2016 with a budget of 3 billion HUF (cf. the total budget of 340 billion HUF of public works for 2016), which is planned to facilitate the integration of 20–25 thousand public works participants in the primary labour market.[20]

14 Act CXXVII of 2015.

15 Government resolution 1040/2016. (II. 11.).

16 Call for applications EDIOP 6.1.1-15. In euros, the amount of the budget is around 90 million (the HUF/EUR exchange rate is around 300).

17 Changes in the law relating to public works. 30 July 2015.

18 Government decree 328/2015. (XI. 10.) on the "allowance for finding employment" for public works participants.

19 Act CXI 2015.

20 New programmes to boost employment to start in the first half of 2016. Ministry for the National Economy, 5 January 2016.

4.3 A new programme for supporting the long-term unemployed to enter employment

The new EDIOP 5.1.1 scheme published in April 2015 – similarly to earlier SROP schemes – supports the training and wage subsidies of the long-term unemployed as well as providing the services and tools encouraging their self-employment.[21] The primary target groups of the scheme are young people aged 25–30 looking for their first job, job seekers with low qualifications and those looking for employment for at least six months, persons returning to the labour market after parental or filial leave, job seekers aged over 50 and those exiting public works. The total budget of the scheme for the 2015–2018 period is 102 billion HUF.

4.4 The Youth Guarantee programme

The Youth Guarantee programme announced in autumn 2014 was launched in March 2015, with the same content but financed from different sources in the convergence regions and in Central Hungary (from EDIOP 5.2.1 and the Competitive Central Hungary Operational Programme (CCHOP) 8.2.1 respectively). The local labour offices provide tailor-made mentoring and active tools for young people aged 15–25 not in education or employment. As a first step, job seekers registered for at least six months are eligible to participate in the programme.

The programme guarantees that young job seekers get a quality offer within six months (and within four months later in the future). For unqualified young adults it may involve obtaining a qualification and for the qualified it may be work experience in the private sector, which is supported by the employment service by offering 100 per cent wage subsidies for 90 days (without an obligation for the employer to retain the young worker) and by reimbursing the costs of travelling to work.[22]

Participation in public works does not qualify as a quality offer, that is, the local labour office cannot offer a public works contract for the participants of the programme; however, if the young job seeker asks for it they can enter public works. Wage subsidies can also be provided in the Youth Guarantee programme: 70 per cent of the wage and employers' contribution (social contribution tax) for a period of eight months but in this case the employer is obliged to retain the employee for a further four months. The programme supporting the self-employment of young job seekers, also related to the Youth Guarantee, was launched in January 2016.[23]

4.5 Funding for not-for-profit providers of rehabilitation was terminated

SROP 5.3.8., completed in July 2015, funded the development and operation of 61 new and 33 old service providers in order to facilitate the labour market

21 EDIOP 5.1.1. call for applications.

22 Annex to Parliamentary resolution 88/2009. (X. 29.)

23 The programme to support youth entrepreneurship was launched in the central region. Ministry for National Economy, 26 January 2016.

integration of disabled job seekers. In addition to capacity building, the programme also included methodology development: the unified methodology for providing labour market services and a service analysis system have been developed, which help to measure the performance of labour market service providers according to unified criteria.

However, the new service providers involved did not receive state funding after the end of the programme and some of them have to date discontinued offering their services. The 33 "old" service providers were granted state funding until the end of March 2016. In the coming years, the government is planning to finance not-for-profit service providers from the Human Resource Development Operational Programme (HRDOP) and CCHOP; however, these programmes have not yet commenced.

4.6 Expansion of the Job Protection Action Plan

Although it is not managed by local labour offices, the Job Protection Action Plan, operated by the National Tax and Customs Administration, basically functions as a wage subsidy programme. The programme, which started in 2013, reduced the wage costs of employers by more than 135 billion HUF in 2015 and in this way supported the employment of 326 thousand employees aged over 55, 290 thousand employees with low qualifications, employed in unskilled jobs, 160 thousand young people looking for first-time employment, 40 thousand mothers with small children and 30 thousand long-term unemployed persons.[24]

Since July 2015, the Job Protection Action Plan has also covered agricultural employees aged 25–55, involving 20 thousand employees until the end of the year.[25]

5 POLICY TOOLS AFFECTING THE LABOUR MARKET

5.1 The personal income tax rate continues to decrease

The flat rate personal income tax rate fell from 16 to 15 per cent in January 2016.

5.2 The minimum wage increases

The State Secretary of the Ministry for National Economy in charge of labour market and training, representing the government, concluded an agreement on the minimum wage with three employers' organisations and two trade union confederations. Accordingly, the minimum wage in 2016 is 111 thousand HUF gross (compared to 105 thousand HUF in the previous year), while the guaranteed minimum wage is 129 thousand HUF gross (compared to 122 thousand HUF in 2015).[26] The wage for public works has not been raised (monthly 79,155 HUF gross).

24 Employment at a record high again. Ministry for the National Economy, 5 January 2016.

25 Burdens of employers reduced by 135 billion through the Job Protection Action Plan. Ministry for the National Economy, 8 February 2016.

26 The 'guaranteed minimum wage' applies to jobs that require at least secondary education.

Annex

Table A1: Expenditures and revenues of the employment policy section of the national budget, 2011–2015 (mHUF)

	2011	2012	2013	2014	2014	2015	2016
Expenditures	actual	actual	actual	plan	actual	plan	plan
1. Active subsidies							
Employment and training subsidies	25,774.8	22,017.2	25,105.9	27,000.0	28,120.8	14,000.0	16,172.0
Co-financing of EU-funded employability (and adaptability) projects	3,970.7	6,967.0	16,279.6	17,130.0	17,130.1	11,064.6	3,808.7
Public works[a]	59,799.8	131,910.7	171,053.4	231,105.3	225,471.1	270,000.0	340,000.0
SROP 1.1. Labour market services and support	19,754.4	29,772.3	33,804.9	41,000.0	35,790.1	7,500.0	54.5
SROP 1.2. Employment stimulation normative support	9,774.8	16,250.1	14,477.3	3,200.0	1,080.1		
Reimbursement of social security contribution relief	5,147.7	4,784.1	3,277.5	5,000.0	551.5		
Pre-financing labour market programmes for 2014–2020				10,000.0	0.0	49,200.0	54,700.0
2. Vocational and adult training subsidies	27,921.1	16,516.0	18,736.2	26,400.0	24,725.9	16,000.0	13,819.0
4. Passive expenditures							
Job seekers' allowances	124,543.2	64,067.2	51,819.9	56,000.0	49,235.0	50,000.0	47,000.0
Transfer to Pension Insurance Fund	1,221.5	907.0	961.3	313.9	451.6	400.0	0.0
5. Payment of wage guarantee subsidies	5,363.0	6,606.6	5,487.8	6,000.0	4,178.5	6,150.0	4,950.0
6. Expenditures on operations	86.7	100.0	1,472.8	1,600.0	2,418.3	3,050.0	3,283.4
9. Debt management expenditures (technical)	303.6						
13. Balance keeping and risk assessment							389.5
15. Supplementary subsidies for employers		5,222.9					
16. Sectoral subsidy for minimum wage raise			7,000.0		9.1		
17. Other expenditures			22.3				
Total expenditures	283,661.3	305,121.1	349,498.9	424,749.2	389,162.1	427,364.6	484,177.1

Revenues	2011	2012	2013	2014	2014	2015	2016
	actual	actual	actual	plan	actual	plan	plan
25. Revenues of SROP measures	26,247.6	42,827.3	51,276.1	46,000.0	39,776.7	43,000.0	51,700.0
26. Other revenues							
Other revenues, regional	734.2	559.0	602.3	750.0	1,507.8	1,000.0	1,000.0
Other revenues, national	1,316.8	1,113.6	1,376.8	1,000.0	2,537.1	1,000.0	1,000.0
Other revenues from vocational and adult training	781.2	1,020.1	692.6	650.0	216.8	800.0	800.0
31. Vocational training contribution	49,415.5	80,352.5	60,398.7	57,071.1	60,910.8	63,134.0	56,996.1
33. Redemption of wage guarantee subsidies	977.8	792.0	1,046.1	1,000.0	934.5	1,000.0	1,000.0
34. Debt management revenues (technical)	303.6						
35. Part of health insurance and labour market contributions payable to the National Employment Fund	186,596.3	127,096.6	125,614.6	125,041.5	135,819.4	141,772.9	150476.4
36. Funding from the national budget	64,000.0	71,273.8	20,000.0			8,449.0	95,000.0
Part of the social contribution tax payable to the National Employment Fund		67,284.5					
Contribution related to the Job Protection Action Plan			91,542.7	95,936.7	95,936.7	100,541.7	105,769.9
Total revenues	330,373.0	392,319.4	352,549.9	327,449.3	337,639.8	360,697.6	463,742.4
Pending items[b]	202.0	270.3	–964.6				
Changes in deposits	46,913.7	87,468.6	–2,086.4	–97,300.0			
Total	330,596.9	393,040.4	351,560.1	424,749.2	389,162.1	427,364.6	484,177.1
At 2011 prices (deflated by a consumer price index)	330,596.9	371,845.2	320,117.2	380,295.4	348,432.8	383,403.9	434,807.2

[a] Contains public works expenditures in 2011, and the expenditures of the Start work programme after 2011.

[b] It contains the revenues from the European Globalisation Adjustment Fund in 2011.

Source: Acts on the budget of the relevant years (plan) and the implementation of the budget (http://kfib.hu/hu/torvenyek-zarszamadasok); in the case of 2013 the 153 779.8 is corrected with the provisions of government decrees 1507/2013. (VIII. 1.) and 1783/2013. (XI. 4.) (an extra 26 118 million funding for public works); in the case of the 2014 plan the 183 805.3 is corrected with the provisions of government decree 1361/2014. (VI. 30.) (an extra 47 300 million funding for public works).

STATISTICAL DATA

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Statistical tables on labour market trends that have been published in The Hungarian Labour Market Yearbook since 2000 can be downloaded in full from the website of the Research Centre for Economic and Regional Studies: http://adatbank.krtk.mta.hu/tukor_kereso

DATA SOURCES

CIRCA	Communication & Information Resource Centre Administrator
KSH	Table compiled from regular Central Statistical Office publications [Központi Statisztikai Hivatal]
KSH IMS	CSO institution-based labour statistics [KSH intézményi munkaügyi statisztika]
KSH MEF	CSO Labour Force Survey [KSH Munkaerő-felmérés]
KSH MEM	CSO Labour Force Account [KSH Munkaerő-mérleg]
NAV	National Tax and Customs Administration [Nemzeti Adó- és Vámhivatal]
NEFMI	Ministry of National Resources [Nemzeti Erőforrás Minisztérium]
NEFMI EMMI STAT	Ministry of National Resources, Educational Statistics [Nemzeti Erőforrás Minisztérium, Oktatásstatisztika]
NFA	National Market Fund [Nemzeti Foglalkoztatási Alap]
NFSZ	National Employment Service [Nemzeti Foglalkoztatási Szolgálat]
NFSZ BT	National Employment Service Wage Survey [NFSZ Bértarifa-felvétel]
NFSZ IR	NFSZ integrated tracking system [NFSZ Integrált (nyilvántartási) Rendszer]
NFSZ PROG	National Employment Service Short-term Labour Market Projection Survey [NFSZ Rövid Távú Munkaerőpiaci Prognózis]
NFSZ REG	National Employment Service Unemployment Register [NFSZ regisztere]
NGM	Ministry of National Economy [Nemzetgazdasági Minisztérium]
NMH	National Labour Office [Nemzeti Munkaügyi Hivatal]
NSZ	Population Census [Népszámlálás]
NYUFIG	Pension Administration [Nyugdíjfolyósító Igazgatóság]
ONYF	Central Administration of National Pension Insurance [Országos Nyugdíjbiztosítási Főigazgatóság]
TB	Social Security Records [Társadalombiztosítás]

EXPLANATION OF SYMBOLS

(–)	Non-occurrence.
(..)	Not available.
(n.a.)	Not applicable.
(...)	Data cannot be given due to data privacy restrictions.

Table 1.1: Basic economic indicators

Year	GDP[a]	Industrial production[b]	Export[c]	Import[c]	Real earnings[d]	Employment[d]	Consumer price index[d]	Unemployment rate
1990	96.5	90.7	95.9	94.8	94.3	97.2	128.9	..
1995	101.5	104.6	108.4	96.1	87.8	98.1	128.2	10.2
2000	104.2	118.1	121.7	120.8	101.5	101.0	109.8	6.4
2001	103.8	103.7	107.7	104.0	106.4	100.3	109.2	5.7
2002	104.5	103.2	105.9	105.1	113.6	100.1	105.3	5.8
2003	103.8	106.9	109.1	110.1	109.2	101.3	104.7	5.9
2004	104.9	107.8	118.4	115.2	98.9	99.4	106.8	6.1
2005	104.4	106.8	111.5	106.1	106.3	100.0	103.6	7.2
2006	103.8	109.9	118.0	114.4	103.6	100.7	103.9	7.5
2007	100.4	107.9	115.8	112.0	95.4	99.3	108.0	7.4
2008	100.8	100.0	104.2	104.3	100.8	98.6	106.1	7.8
2009	93.4	82.2	87.3	82.9	97.7	97.4	104.2	10.0
2010	100.7	110.6	116.9	115.1	101.8	99.6	104.9	11.2
2011	101.8	105.6	109.9	106.7	102.4	100.7	103.9	11.0
2012	98.3	98.2	100.7	99.9	96.6	101.8	105.7	11.0
2013	101.9	101.1	104.2	105.0	103.1	101.7	101.7	10.2
2014	103.7	107.7	106.9	108.8	103.2	105.3	99.8	7.7
2015	102.9	107.5	107.9	107.0	104.3	102.7	99.9	6.8

[a] Data adjusted for seasonality and variations in the number of workdays. After 1996 there was a change in the methodology for accounting the undivided service fee of financial intermediation. Previous year = 100. The method of measurement changed in 2014 with the adoption of ESA2010 (European System of National and Regional Accounts). See also: http://www.ksh.hu/docs/hun/xftp/idoszaki/gdpev/gdpevelo13.pdf.

[b] 1990–2000: those with more than 5 employees, 2001–: excluding water and waste management, including businesses with fewer than 5 employees. Previous year = 100.

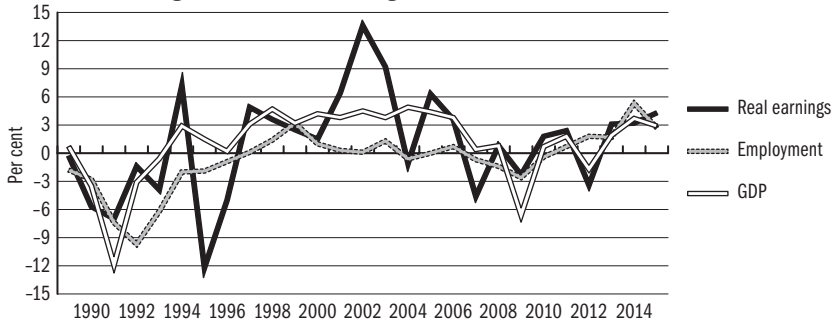
[c] Volume index. Previous year = 100.

[d] Previous year = 100.

Source: GDP: 1990–2014: *STADAT* (2016. 02. 12. version), 2015: preliminary data; Industrial production index: 2001–: *STADAT* (2016. 02. 12. version); Export and import: 2001–: *STADAT* (2016. 02. 02. version); Real earnings: 1995–: *STADAT* (2016. 02. 19. version); Employment: 1990: *KSH MEM*; 1995–: *KSH MEF*. Consumer price index: 1990–: *STADAT* (2016. 01. 14. version). Unemployment rate: 1990–: *STADAT* (2016. 02. 19. version). Other data: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent01_01

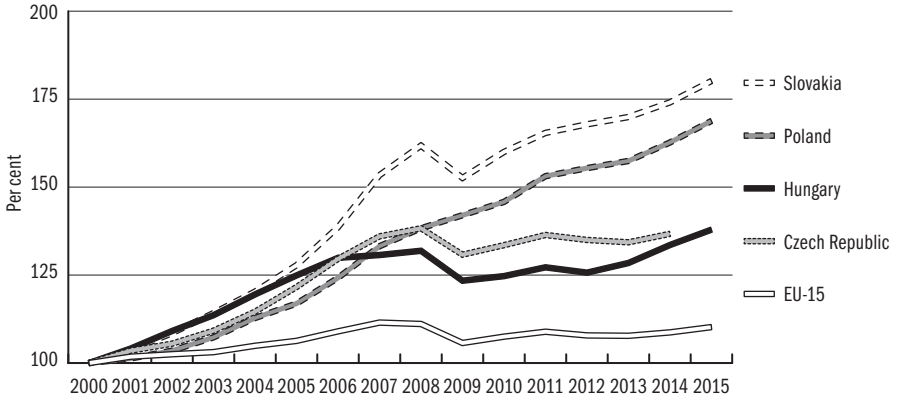
Figure 1.1: Annual changes of basic economic indicators



Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena01_01

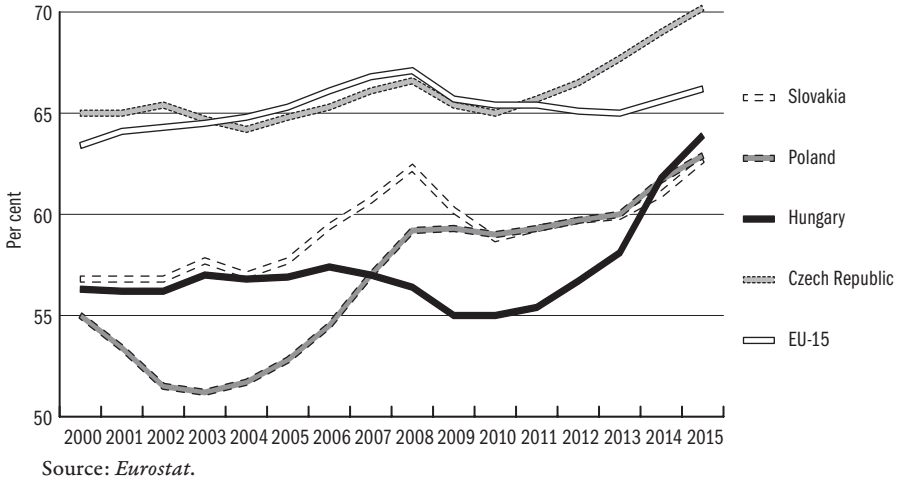
Figure 1.2: Annual GDP time series (2000 = 100%)



Source: *Eurostat*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena01_02

Figure 1.3: Employment rate of population aged 15-64



Source: *Eurostat*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena01_03

Table 2.1: Population[a]

Year	In thousands	1992 = 100	Annual changes	Population age 15-64, in thousands	Demographic dependency rate	
					Total population[b]	Old age[c]
1990	10,375	100.4	-0.2	6,870.4	0.51	0.20
2000	10,221	98.5	-0.3	6,961.3	0.47	0.21
2005	10,098	97.3	-0.2	6,940.3	0.45	0.23
2006	10,077	97.1	-0.2	6,931.8	0.45	0.23
2007	10,066	97.0	-0.1	6,932.4	0.45	0.23
2008	10,045	96.8	-0.2	6,912.7	0.45	0.24
2009	10,031	96.7	-0.1	6,898.1	0.45	0.24
2010	10,014	96.5	-0.1	6,874.0	0.46	0.24
2011	9,986	96.3	-0.2	6,857.4	0.46	0.24
2012	9,932	95.7	..	6,815.7	0.46	0.25
2013	9,909	95.5	-0.2	6,776.3	0.46	0.25
2014	9,877	95.2	-0.3	6,719.7	0.47	0.26
2015	9,856	95.0	-0.2	6,664.2	0.48	0.27

[a] January 1st. The data for 1990 is based on the census. Those for 2000–2011 are estimates based on the 2001 census and demographic data (reference date 2001.02.01.). Those for 2012–2015 are estimates based on the 2011 census (reference day 2011.10.01.) and demographic data.
[b] (population age 0–14 + 65 and above) / (population age 15–64)
[c] (population age 65 and above) / (population age 15–64)
Source: *KSH STADAT* (2015. 07. 03. version)

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent02_01

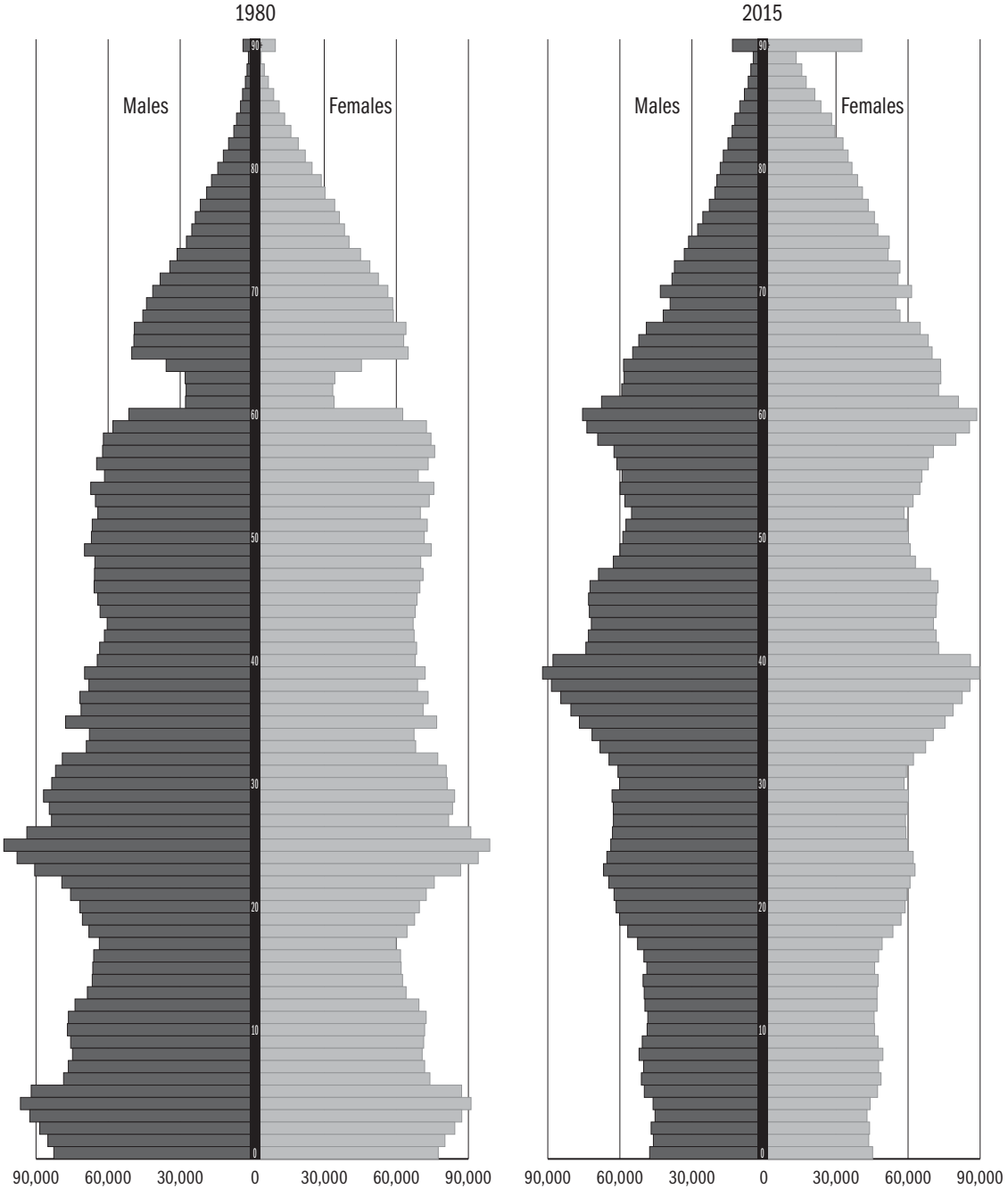
Table 2.2: Population by age groups, in thousands[a]

Year	0-14	15-24	25-54	55-64	65+	Total
			years old			
1990	2,130.5	1,445.5	4,231.4	1,193.5	1,373.9	10,374.8
2000	1,729.2	1,526.5	4,291.4	1,143.4	1,531.1	10,221.6
2005	1,579.7	1,322.0	4,409.1	1,209.2	1,577.6	10,097.6
2006	1,553.5	1,302.0	4,399.8	1,230.0	1,590.7	10,076.6
2007	1,529.7	1,285.9	4,393.9	1,251.5	1,605.1	10,066.1
2008	1,508.8	1,273.3	4,377.1	1,262.3	1,623.9	10,045.4
2009	1,492.6	1,259.9	4,346.1	1,292.0	1,640.3	10,030.9
2010	1,476.9	1,253.4	4,293.7	1,326.9	1,663.5	10,014.4
2011	1,457.2	1,231.7	4,257.7	1,367.8	1,671.3	9,985.7
2012	1,440.3	1,214.1	4,164.6	1,437.0	1,675.9	9,931.9
2013	1,430.9	1,196.4	4,144.8	1,435.0	1,701.7	9,908.8
2014	1,425.8	1,172.8	4,123.8	1,423.2	1,731.8	9,877.4
2015	1,427.2	1,147.1	4,112.6	1,404.5	1,764.2	9,855.6

[a] January 1st. The data for 1990 is based on the census. Those for 2000–2011 are estimates based on the 2001 census and demographic data (reference date 2001.02.01.). Those for 2012–2015 are estimates based on the 2011 census (reference day 2011.10.01.) and demographic data.
Source: *KSH STADAT* (2015. 07. 03. version)

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent02_02

Figure 2.1: Age structure of the Hungarian population, 1980, 2015



Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena02_01

Table 2.3: Male population by age groups, in thousands[a]

Year	0–14	15–24	25–59	60–64	65+	Total
			years old			
1990	1,090.4	740.3	2,366.9	259.9	527.5	4,984.9
2000	885.0	780.9	2,403.8	224.8	570.8	4,865.2
2005	809.5	674.6	2,480.0	252.2	576.8	4,793.1
2006	796.7	664.0	2,493.7	249.3	580.9	4,784.6
2007	784.5	655.4	2,503.7	249.4	586.1	4,779.1
2008	773.9	649.2	2,501.3	252.5	592.8	4,769.6
2009	765.8	642.7	2,497.0	258.4	599.2	4,763.1
2010	757.7	640.4	2,488.8	261.7	608.3	4,756.9
2011	747.6	629.7	2,480.4	274.7	611.5	4,743.9
2012	739.5	623.1	2,449.9	294.1	617.9	4,724.6
2013	734.7	614.4	2,439.4	297.0	630.5	4,716.0
2014	732.2	602.1	2,419.1	305.3	644.7	4,703.4
2015	732.8	589.1	2,395.1	319.1	659.7	4,695.8

[a] January 1st. The data for 1990 is based on the census. Those for 2000–2011 are estimates based on the 2001 census and demographic data (reference date 2001.02.01.). Those for 2012–2015 are estimates based on the 2011 census (reference day 2011.10.01.) and demographic data.

Source: *KSH STADAT* (2015. 07. 03. version)

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent02_03

Table 2.4: Female population by age groups, in thousands[a]

Year	0–14	15–24	25–54	55–59	60+	Total
			years old			
1990	1,040.1	705.2	2,144.4	327.6	1,172.5	5,389.9
2000	844.3	745.6	2,170.5	334.8	1,261.3	5,356.5
2005	770.2	647.4	2,221.9	341.7	1,323.1	5,304.3
2006	756.8	638.6	2,213.0	356.6	1,327.0	5,292.0
2007	745.1	630.6	2,206.8	369.6	1,335.0	5,287.1
2008	734.9	624.1	2,194.5	373.2	1,349.1	5,275.8
2009	726.8	617.2	2,176.0	381.8	1,366.1	5,267.9
2010	719.2	613.1	2,145.5	396.8	1,382.8	5,257.4
2011	709.6	601.9	2,124.0	404.4	1,401.9	5,241.8
2012	700.8	590.9	2,079.5	416.2	1,419.9	5,207.3
2013	696.2	582.0	2,066.5	411.2	1,436.9	5,192.8
2014	693.6	570.7	2,052.7	395.5	1,461.5	5,174.0
2015	694.4	558.0	2,043.2	370.2	1,494.0	5,159.8

[a] January 1st. The data for 1990 is based on the census. Those for 2000–2011 are estimates based on the 2001 census and demographic data (reference date 2001.02.01.). Those for 2012–2015 are estimates based on the 2011 census (reference day 2011.10.01.) and demographic data.

Source: *KSH STADAT* (2015. 07. 03. version)

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent02_04

Table 3.1: Labour force participation of the population over 14 years, in thousands[a]

Year	Population of male 15–59 and female 15–54								Population of males over 59 and females over 54			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	4,887.9	0.0	300.8	370.1	259.0	339.7	1,269.6	6,157.5	570.3	0.0	1,632.1	2,202.4
1990	4,534.3	62.4	284.3	548.9	249.7	297.5	1,380.4	5,977.1	345.7	0.0	1,944.9	2,290.6
1991	4,270.5	253.3	335.6	578.2	259.8	317.1	1,490.7	6,014.5	249.5	0.0	2,045.2	2,294.7
1992	3,898.4	434.9	392.7	620.0	262.1	435.9	1,710.7	6,044.0	184.3	9.8	2,101.7	2,295.8
1993	3,689.5	502.6	437.5	683.9	270.5	480.1	1,872.0	6,064.1	137.5	16.3	2,141.2	2,295.0
1994	3,633.1	437.4	476.5	708.2	280.9	540.7	2,006.3	6,076.8	118.4	11.9	2,163.8	2,294.1
1995	3,571.3	410.0	495.2	723.4	285.3	596.1	2,100.0	6,081.3	107.5	6.4	2,180.6	2,294.5
1996	3,546.1	394.0	512.7	740.0	289.2	599.4	2,141.2	6,081.3	102.1	6.1	2,184.6	2,292.8
1997	3,549.5	342.5	542.9	752.0	289.0	599.9	2,183.8	6,075.8	96.9	6.3	2,189.0	2,292.2
1998	3,608.5	305.5	588.8	697.0	295.5	565.7	2,147.0	6,061.0	89.3	7.5	2,197.6	2,294.4
1999	3,701.0	283.3	534.7	675.6	295.3	549.8	2,055.4	6,039.6	110.4	1.4	2,185.2	2,297.0
2000	3,745.9	261.4	517.9	721.7	281.4	571.4	2,092.4	6,099.7	130.3	2.3	2,268.0	2,400.6
2001	3,742.6	231.7	516.3	717.9	286.6	601.6	2,122.4	6,096.7	140.7	2.4	2,271.8	2,414.9
2002	3,719.6	235.7	507.1	738.3	286.8	593.0	2,125.2	6,080.5	164.1	3.2	2,263.9	2,431.2
2003	3,719.0	239.6	485.0	730.7	286.9	595.0	2,097.6	6,056.2	202.9	4.9	2,245.6	2,453.4
2004	3,663.1	247.2	480.5	739.8	282.4	622.4	2,125.1	6,035.4	237.3	5.7	2,236.1	2,479.1
2005	3,653.9	296.0	449.7	740.8	278.6	590.3	2,059.4	6,009.3	247.6	7.9	2,258.3	2,513.8
2006	3,680.1	309.9	416.1	811.4	261.1	524.3	2,012.9	6,002.9	248.3	8.4	2,270.2	2,526.9
2007	3,649.5	303.7	413.2	822.7	273.9	519.7	2,029.5	5,982.7	252.5	8.4	2,292.9	2,553.8
2008	3,596.3	315.5	394.7	814.3	282.2	549.0	2,040.2	5,952.0	252.0	10.9	2,323.6	2,586.5
2009	3,480.9	403.0	360.3	805.7	282.0	578.4	2,026.4	5,910.3	266.9	14.8	2,345.7	2,627.4
2010	3,435.8	450.1	336.6	805.4	275.9	558.1	1,976.0	5,861.9	298.5	19.3	2,353.3	2,671.1
2011	3,430.1	440.9	296.4	783.8	280.7	557.9	1,932.0	5,789.8	328.9	25.1	2,366.3	2,720.3
2012	3,498.6	447.0	260.1	769.6	263.2	484.3	1,777.2	5,722.8	328.6	26.1	2,407.2	2,761.9
2013	3,551.1	415.7	247.6	737.3	255.4	466.4	1,706.7	5,673.5	341.6	25.2	2,424.5	2,791.3
2014	3,720.7	317.5	222.3	701.2	237.8	412.5	1,573.8	5,612.0	380.0	25.8	2,419.0	2,824.8
2015	3,782.1	281.3	197.3	688.8	240.0	368.1	1,494.2	5,557.6	428.4	26.5	2,400.8	2,855.7

[a] Annual average figures.

Note: Up to the year 1999, weighting is based on the 1990 population census. From 2000 onwards the 2001 population census is used in its original form. After the 2011 Census the post-2000 population weights have been updated using the new census data.

Data on 'employed' includes conscripts and those working while receiving pension or child support. The data on students for 1995–97 are estimates.

'Other inactive' is a residual category calculated by deducting the sum of the figures in the indicated categories from the mid-year population, so it includes the institutional population not observed by MEF. The population weights have been corrected using the 2011 Census data.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_01

Table 3.2: Labour force participation of the population over 14 years, males, in thousands[a]

Year	Population of males 15–59								Population of males 60 and over			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	2,750.5	0.0	173.8	196.3	0.0	99.1	469.2	3,219.7	265.3	0.0	491.8	757.1
1990	2,524.3	37.9	188.4	284.2	1.2	80.3	554.1	3,116.3	123.7	0.0	665.5	789.2
1991	2,351.6	150.3	218.7	296.5	1.5	115.0	631.7	3,133.6	90.4	0.0	700.7	791.1
1992	2,153.1	263.2	252.0	302.4	1.7	174.8	730.9	3,147.2	65.1	3.2	722.1	790.4
1993	2,029.1	311.5	263.2	346.9	2.0	203.3	815.4	3,156.0	47.9	4.5	735.7	788.1
1994	2,013.4	270.0	277.6	357.1	3.7	239.6	878.0	3,161.4	41.6	3.8	740.0	785.4
1995	2,012.5	259.3	282.2	367.4	4.9	237.8	892.3	3,164.1	37.1	2.1	742.6	781.8
1996	2,007.4	242.4	291.9	372.8	3.3	248.3	916.3	3,166.1	28.9	1.3	746.3	776.5
1997	2,018.0	212.2	306.0	377.6	1.5	251.6	936.7	3,166.9	25.5	1.9	743.5	770.9
1998	2,015.5	186.5	345.4	350.4	1.0	264.2	961.0	3,163.0	26.2	2.8	737.3	766.3
1999	2,068.4	170.3	312.7	338.8	4.2	261.5	917.2	3,155.9	34.7	0.4	727.2	762.3
2000	2,086.0	158.2	315.2	358.2	4.1	261.7	939.2	3,183.4	39.8	0.7	758.8	799.3
2001	2,087.6	141.6	311.0	353.4	4.3	283.2	951.9	3,181.1	41.1	0.9	763.0	805.0
2002	2,080.4	137.3	307.5	370.3	5.0	273.4	956.2	3,173.9	45.2	0.7	764.4	810.3
2003	2,073.5	137.6	293.6	367.9	4.3	288.1	953.9	3,165.0	53.0	0.9	762.5	816.4
2004	2,052.7	136.2	293.5	371.2	4.6	300.2	969.5	3,158.4	64.6	0.6	758.8	824.0
2005	2,050.7	158.2	278.8	375.4	5.8	288.8	948.8	3,157.7	65.4	0.9	763.9	830.2
2006	2,078.4	163.4	258.9	404.1	4.0	249.6	916.6	3,158.4	60.2	1.1	771.5	832.8
2007	2,067.4	162.5	261.8	410.2	4.1	248.8	924.9	3,154.8	61.9	1.0	777.5	840.4
2008	2,033.6	172.7	261.2	408.3	4.7	264.6	938.8	3,145.1	60.0	1.0	790.4	851.4
2009	1,961.9	230.3	240.1	409.0	4.4	288.7	942.2	3,134.4	63.1	1.6	798.9	863.6
2010	1,929.5	259.5	228.7	410.3	4.6	287.1	930.7	3,119.7	63.0	2.2	812.9	878.1
2011	1,950.9	248.7	203.7	397.9	3.6	286.8	892.0	3,091.6	70.1	2.9	826.2	899.2
2012	1,979.2	257.9	187.7	395.6	4.2	238.8	826.3	3,063.4	69.6	4.1	846.1	919.8
2013	2,022.2	234.4	169.5	375.6	3.8	232.0	780.9	3,037.5	81.5	4.8	852.4	938.7
2014	2,120.3	173.1	151.3	352.5	3.0	200.9	707.7	3,001.1	100.1	8.6	855.6	964.3
2015	2,152.1	152.1	133.7	345.1	3.1	181.4	663.3	2,967.5	131.4	9.8	849.3	990.5

[a] Annual average figures.

Note: Up to the year 1999, weighting is based on the 1990 population census. From 2000 onwards the 2001 population census is used in its original form. After the 2011 Census the post-2000 population weights have been updated using the new census data.

Data on 'employed' includes conscripts and those working while receiving pension or child support. The data on students for 1995–97 are estimates.

'Other inactive' is a residual category calculated by deducting the sum of the figures in the indicated categories from the mid-year population, so it includes the institutional population not observed by MEF. The population weights have been corrected using the 2011 Census data.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_02

Table 3.3: Labour force participation of the population over 14 years, females, in thousands[a]

Year	Population of females 15–54								Population of females 55 and above			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	2,137.4	0.0	127.0	173.8	259.0	240.6	800.4	2,937.8	305.0	0.0	1,140.3	1,445.3
1990	2,010.0	24.5	95.8	264.7	248.5	217.3	826.3	2,860.8	222.0	0.0	1,279.4	1,501.4
1991	1,918.9	103.1	116.9	281.8	258.3	201.9	858.9	2,880.9	159.1	0.0	1,344.5	1,503.6
1992	1,745.3	171.7	140.8	317.6	260.4	261.1	979.9	2,896.9	119.2	6.6	1,379.6	1,505.4
1993	1,660.4	191.1	174.3	337.0	268.5	276.8	1,056.6	2,908.1	89.6	11.8	1,405.5	1,506.9
1994	1,619.7	167.4	198.9	351.1	277.2	301.1	1,128.3	2,915.4	76.8	8.1	1,423.8	1,508.7
1995	1,558.8	150.7	213.0	356.0	280.4	358.3	1,207.7	2,917.2	70.4	4.3	1,438.0	1,512.7
1996	1,538.7	151.6	220.7	367.2	285.9	351.1	1,224.9	2,915.2	73.2	4.8	1,438.3	1,516.3
1997	1,531.5	130.3	236.9	374.4	287.5	348.3	1,247.1	2,908.9	71.4	4.4	1,445.3	1,521.1
1998	1,593.0	119.0	243.4	346.6	294.5	301.5	1,186.0	2,898.0	63.1	4.7	1,460.3	1,528.1
1999	1,632.6	113.0	222.0	336.8	291.1	288.3	1,138.2	2,883.8	75.8	1.0	1,458.0	1,534.8
2000	1,659.9	103.2	202.7	363.5	277.3	309.7	1,153.2	2,916.3	90.5	1.6	1,509.2	1,601.3
2001	1,655.0	90.1	205.3	364.5	282.3	318.3	1,170.4	2,915.5	99.6	1.5	1,508.8	1,609.9
2002	1,639.2	98.4	199.6	368.0	281.8	319.6	1,169.0	2,906.6	118.9	2.5	1,499.5	1,620.9
2003	1,645.6	102.0	191.4	362.8	282.6	306.9	1,143.7	2,891.2	149.9	4.0	1,483.2	1,637.1
2004	1,610.2	111.0	186.8	368.6	277.8	322.2	1,155.4	2,876.6	172.8	5.1	1,477.3	1,655.2
2005	1,603.2	137.8	170.9	365.4	272.8	301.5	1,110.6	2,851.6	182.2	7.0	1,494.4	1,683.6
2006	1,601.7	146.5	157.2	407.3	257.1	274.7	1,096.3	2,844.5	188.1	7.3	1,498.7	1,694.1
2007	1,582.1	141.2	151.4	412.5	269.8	270.9	1,104.6	2,827.9	190.6	7.4	1,515.4	1,713.4
2008	1,562.7	142.8	133.5	406.0	277.5	284.4	1,101.4	2,806.9	192.0	9.9	1,533.2	1,735.1
2009	1,519.0	172.7	120.2	396.7	277.6	289.7	1,084.2	2,775.9	203.8	13.2	1,546.8	1,763.8
2010	1,506.3	190.6	107.9	395.1	271.3	271.0	1,045.3	2,742.2	235.5	17.1	1,540.4	1,793.0
2011	1,479.2	192.2	92.7	385.9	277.1	271.1	1,040.0	2,698.2	258.8	22.2	1,540.1	1,821.1
2012	1,519.4	189.1	72.4	374.0	259.0	245.5	950.9	2,659.4	259.0	22.0	1,561.1	1,842.1
2013	1,528.9	181.3	78.1	361.7	251.6	234.4	925.8	2,636.0	260.1	20.4	1,572.1	1,852.6
2014	1,600.4	144.4	71.0	348.7	234.8	211.6	866.1	2,610.9	279.9	17.2	1,563.4	1,860.5
2015	1,630.0	129.2	63.6	343.7	236.9	186.7	830.9	2,590.1	297.0	16.7	1,551.5	1,865.2

[a] Annual average figures.

Note: Up to the year 1999, weighting is based on the 1990 population census. From 2000 onwards the 2001 population census is used in its original form. After the 2011 Census the post-2000 population weights have been updated using the new census data.

Data on 'employed' includes conscripts and those working while receiving pension or child support. The data on students for 1995–97 are estimates.

'Other inactive' is a residual category calculated by deducting the sum of the figures in the indicated categories from the mid-year population, so it includes the institutional population not observed by MEF. The population weights have been corrected using the 2011 Census data.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_03

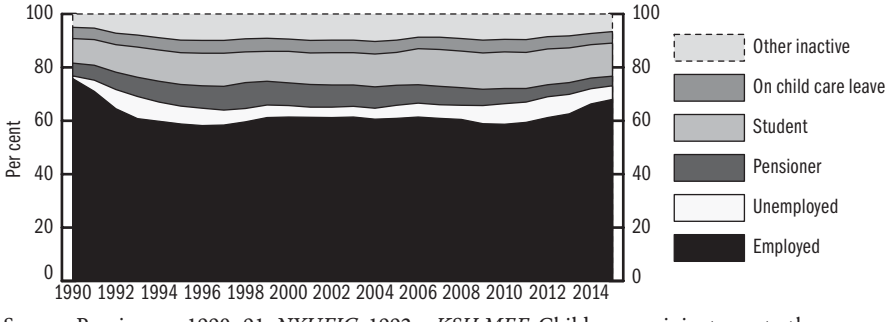
Table 3.4: Labour force participation of the population over 14 years, per cent

Year	Population of males 15–59 and female 15–54								Population of males over 59 and female over 54			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	79.4	0.0	4.9	6.0	4.2	5.5	20.6	100.0	25.9	0.0	74.1	100.0
1990	75.9	1.0	4.8	9.2	4.2	5.0	23.1	100.0	15.1	0.0	84.9	100.0
1995	58.7	6.7	8.1	11.9	4.7	9.8	34.5	100.0	4.7	0.3	95.0	100.0
2000	61.4	4.3	8.5	11.8	4.6	9.4	34.3	100.0	5.4	0.1	94.5	100.0
2001	61.4	3.8	8.5	11.8	4.7	9.9	34.8	100.0	5.8	0.1	94.1	100.0
2002	61.2	3.9	8.3	12.1	4.7	9.8	35.0	100.0	6.7	0.1	93.1	100.0
2003	61.4	4.0	8.0	12.1	4.7	9.8	34.6	100.0	8.3	0.2	91.5	100.0
2004	60.7	4.1	8.0	12.3	4.7	10.3	35.2	100.0	9.6	0.2	90.2	100.0
2005	60.8	4.9	7.5	12.3	4.6	9.8	34.3	100.0	9.8	0.3	89.8	100.0
2006	61.3	5.2	6.9	13.5	4.3	8.7	33.5	100.0	9.8	0.3	89.8	100.0
2007	61.0	5.1	6.9	13.8	4.6	8.7	33.9	100.0	9.9	0.3	89.8	100.0
2008	60.4	5.3	6.6	13.7	4.7	9.2	34.3	100.0	9.7	0.4	89.8	100.0
2009	58.9	6.8	6.1	13.6	4.8	9.8	34.3	100.0	10.2	0.6	89.3	100.0
2010	58.6	7.7	5.7	13.7	4.7	9.5	33.7	100.0	11.2	0.7	88.1	100.0
2011	59.2	7.6	5.1	13.5	4.8	9.6	33.1	100.0	12.1	0.9	87.0	100.0
2012	61.1	7.8	4.5	13.4	4.6	8.5	31.1	100.0	11.9	0.9	87.2	100.0
2013	62.6	7.3	4.4	13.0	4.5	8.2	30.1	100.0	12.2	0.9	86.9	100.0
2014	66.3	5.7	4.0	12.5	4.2	7.3	28.0	100.0	13.5	0.9	85.6	100.0
2015	68.1	5.1	3.6	12.4	4.3	6.6	26.9	100.0	15.0	0.9	84.1	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1995–: *KSH MEF*. Child care recipients: up to the year 1995 *TB* and estimation, after 1995 *MEF*. Unemployment: 1990: *NFSZ REG,* 1995–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_04

Figure 3.1: Labour force participation of population for males 15–59 and females 15–54, total



Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2013ena03_01

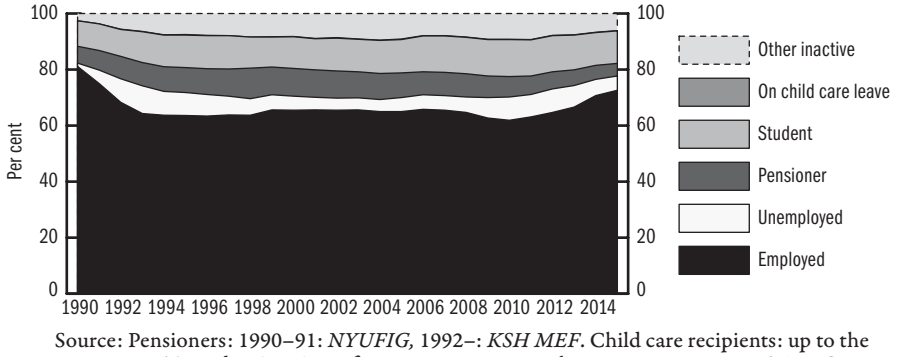
Table 3.5: Labour force participation of the population over 14 years, males, per cent

Year	Population of males 15–59								Population of males 60 and above			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	85.4	0.0	5.4	6.1	0.0	3.1	14.6	100.0	35.0	0.0	65.0	100.0
1990	81.0	1.2	6.0	9.1	0.0	2.6	17.8	100.0	15.7	0.0	84.3	100.0
1995	63.6	8.2	8.9	11.6	0.2	7.5	28.2	100.0	4.7	0.3	95.0	100.0
1996	63.4	7.7	9.2	11.8	0.1	7.8	28.9	100.0	3.7	0.2	96.1	100.0
1997	63.7	6.7	9.7	11.9	0.0	7.9	29.6	100.0	3.3	0.2	96.4	100.0
1998	63.7	5.9	10.9	11.1	0.0	8.4	30.4	100.0	3.4	0.4	96.2	100.0
1999	65.5	5.4	9.9	10.7	0.1	8.3	29.1	100.0	4.6	0.1	95.4	100.0
2000	65.5	5.0	9.9	11.3	0.1	8.2	29.5	100.0	5.0	0.1	94.9	100.0
2001	65.6	4.5	9.8	11.1	0.1	8.9	29.9	100.0	5.1	0.1	94.8	100.0
2002	65.5	4.3	9.7	11.7	0.2	8.6	30.1	100.0	5.6	0.1	94.3	100.0
2003	65.5	4.3	9.3	11.6	0.1	9.1	30.1	100.0	6.5	0.1	93.4	100.0
2004	65.0	4.3	9.3	11.8	0.1	9.5	30.7	100.0	7.8	0.1	92.1	100.0
2005	64.9	5.0	8.8	11.9	0.2	9.1	30.0	100.0	7.9	0.1	92.0	100.0
2006	65.8	5.2	8.2	12.8	0.1	7.9	29.0	100.0	7.2	0.1	92.6	100.0
2007	65.5	5.2	8.3	13.0	0.1	7.9	29.3	100.0	7.4	0.1	92.5	100.0
2008	64.7	5.5	8.3	13.0	0.1	8.4	29.8	100.0	7.0	0.1	92.8	100.0
2009	62.6	7.3	7.7	13.0	0.1	9.2	30.1	100.0	7.3	0.2	92.5	100.0
2010	61.8	8.3	7.3	13.2	0.1	9.2	29.8	100.0	7.2	0.3	92.6	100.0
2011	63.1	8.0	6.6	12.9	0.1	9.3	28.9	100.0	7.8	0.3	91.9	100.0
2012	64.6	8.4	6.1	12.9	0.1	7.8	27.0	100.0	7.6	0.4	92.0	100.0
2013	66.6	7.7	5.6	12.4	0.1	7.6	25.7	100.0	8.7	0.5	90.8	100.0
2014	70.7	5.8	5.0	11.7	0.1	6.7	23.6	100.0	10.4	0.9	88.7	100.0
2015	72.5	5.1	4.5	11.6	0.1	6.1	22.4	100.0	13.3	1.0	85.7	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1995–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990: *NFSZ REG,* 1995–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_05

Figure 3.2: Labour force participation of population for males 15–59



Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena03_02

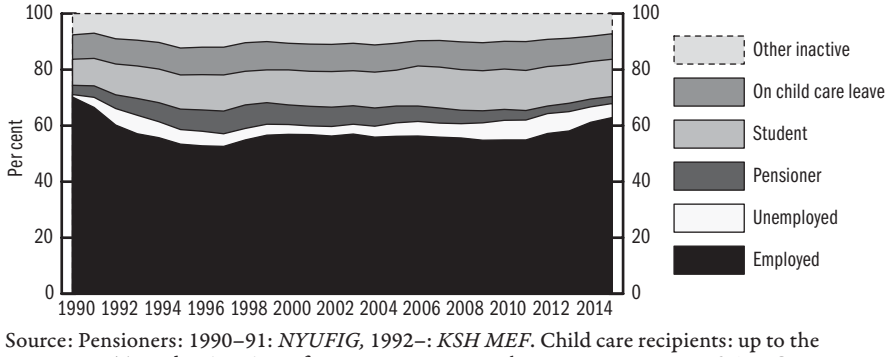
Table 3.6: Labour force participation of the population over 14 years, females, per cent

Year	Population of females 15–54								Population of females 55 and above			
	Employed	Unemployed	Inactive					Total	Employed	Unemployed	Pensioner, other inactive	Total
			Pensioner	Full time student	On child care leave	Other inactive	Inactive total					
1980	72.8	0.0	4.3	5.9	8.8	8.2	27.2	100.0	21.1	0.0	78.9	100.0
1990	70.3	0.9	3.3	9.3	8.7	7.6	28.9	100.0	14.8	0.0	85.2	100.0
1995	53.4	5.2	7.3	12.2	9.6	12.3	41.4	100.0	4.7	0.3	95.1	100.0
1996	52.8	5.2	7.6	12.6	9.8	12.0	42.0	100.0	4.8	0.3	94.9	100.0
1997	52.6	4.5	8.1	12.9	9.9	12.0	42.9	100.0	4.7	0.3	95.0	100.0
1998	55.0	4.1	8.4	12.0	10.2	10.4	40.9	100.0	4.1	0.3	95.6	100.0
1999	56.6	3.9	7.7	11.7	10.1	10.0	39.5	100.0	4.9	0.1	95.0	100.0
2000	56.9	3.5	7.0	12.5	9.5	10.6	39.5	100.0	5.7	0.1	94.2	100.0
2001	56.8	3.1	7.0	12.5	9.7	10.9	40.1	100.0	6.2	0.1	93.7	100.0
2002	56.4	3.4	6.9	12.7	9.7	11.0	40.2	100.0	7.3	0.2	92.5	100.0
2003	56.9	3.5	6.6	12.5	9.8	10.6	39.6	100.0	9.2	0.2	90.6	100.0
2004	56.0	3.9	6.5	12.8	9.7	11.2	40.2	100.0	10.4	0.3	89.3	100.0
2005	56.2	4.8	6.0	12.8	9.6	10.6	38.9	100.0	10.8	0.4	88.8	100.0
2006	56.3	5.2	5.5	14.3	9.0	9.7	38.5	100.0	11.1	0.4	88.5	100.0
2007	55.9	5.0	5.4	14.6	9.5	9.6	39.1	100.0	11.1	0.4	88.4	100.0
2008	55.7	5.1	4.8	14.5	9.9	10.1	39.2	100.0	11.1	0.6	88.4	100.0
2009	54.7	6.2	4.3	14.3	10.0	10.4	39.1	100.0	11.6	0.7	87.7	100.0
2010	54.9	7.0	3.9	14.4	9.9	9.9	38.1	100.0	13.1	1.0	85.9	100.0
2011	54.8	7.1	3.4	14.3	10.3	10.0	38.1	100.0	14.2	1.2	84.6	100.0
2012	57.1	7.1	2.7	14.1	9.7	9.2	36.0	100.0	14.1	1.2	84.7	100.0
2013	58.0	6.9	3.0	13.7	9.5	8.8	35.1	100.0	14.0	1.1	84.9	100.0
2014	61.3	5.5	2.8	13.4	9.0	8.1	33.2	100.0	15.0	0.9	84.0	100.0
2015	62.9	5.0	2.5	13.3	9.1	7.2	32.1	100.0	15.9	0.9	83.2	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1995–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990: *NFSZ REG,* 1995–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_06

Figure 3.3: Labour force participation of population for females 15–54



Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF*. Child care recipients: up to the year 1997 *TB* and estimation, after 1997 *MEF*. Unemployment: 1990–91: *NFSZ REG,* 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena03_03

Table 3.7: Population aged 15–64 by labour market status (self-categorised), in thousands

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Together												
In work	3,834.4	3,852.2	3,862.5	3,831.6	3,769.3	3,681.5	3,660.3	3,690.1	3,748.4	3,824.5	4,039.5	4,159.5
Unemployed	451.0	488.2	470.4	450.2	476.7	591.3	670.7	675.8	700.4	666.5	538.8	454.6
Students, pupils	783.8	792.0	846.3	861.1	863.7	854.8	854.6	842.2	811.2	772.5	733.5	710.3
Pensioner	800.3	755.6	622.9	592.2	635.6	627.6	599.3	582.0	630.3	613.6	557.5	477.5
Disabled	370.4	359.7	506.8	554.4	525.8	498.9	488.4	455.1	356.7	335.7	317.7	318.0
On child care leave	274.7	272.4	275.5	286.2	295.0	293.0	289.3	290.2	265.0	259.1	237.0	236.9
Dependent	133.3	134.6	115.2	111.9	104.0	101.9	95.3	104.3	93.1	96.9	85.3	91.7
Out of work for other reasons	178.4	160.0	107.7	101.8	101.7	104.9	78.2	78.9	89.1	78.0	78.4	81.9
Total	6,826.3	6,814.7	6,807.3	6,789.4	6,771.6	6,753.8	6,736.0	6,718.5	6,694.1	6,646.8	6,587.7	6,530.4
Males												
In work	2,082.8	2,088.3	2,106.3	2,095.3	2,056.8	1,993.3	1,958.0	1,985.4	2,009.3	2,065.1	2,186.4	2,256.0
Unemployed	247.7	265.2	251.6	242.0	255.8	333.6	375.6	372.2	382.9	364.4	283.7	241.4
Students, pupils	391.1	398.5	418.3	428.4	431.7	430.6	432.7	427.2	416.1	393.4	366.9	354.3
Pensioner	322.5	304.5	234.9	217.4	243.4	246.2	245.6	243.7	254.9	236.7	209.7	167.1
Disabled	184.5	178.7	243.0	269.4	257.9	238.2	234.6	215.7	177.1	161.6	152.5	152.0
On child care leave	4.9	6.1	5.6	4.3	5.6	5.7	6.7	4.5	4.1	4.1	3.1	2.9
Dependent	6.0	7.0	5.4	6.3	6.8	6.8	9.6	10.0	7.0	9.8	8.3	9.4
Out of work for other reasons	89.6	80.1	55.1	51.8	51.6	49.8	36.1	35.8	40.8	37.1	36.0	39.8
Total	3,329.1	3,328.4	3,320.2	3,314.9	3,309.6	3,304.2	3,298.9	3,294.4	3,292.2	3,272.1	3,246.7	3,222.9
Females												
In work	1,751.6	1,763.9	1,756.3	1,736.3	1,712.4	1,688.2	1,702.2	1,704.7	1,739.1	1,759.4	1,853.1	1,903.6
Unemployed	203.3	223.0	218.8	208.3	220.9	257.6	295.1	303.6	317.5	302.1	255.0	213.2
Students, pupils	392.7	393.5	428.0	432.7	432.0	424.2	421.9	415.0	395.1	379.0	366.6	356.0
Pensioner	477.8	451.1	388.0	374.8	392.2	381.4	353.7	338.2	375.4	376.9	347.8	310.3
Disabled	185.9	181.0	263.9	285.0	267.9	260.7	253.8	239.5	179.6	174.1	165.2	166.0
On child care leave	269.8	266.3	269.9	281.9	289.4	287.3	282.6	285.7	260.9	255.0	233.8	233.9
Dependent	127.3	127.6	109.7	105.6	97.2	95.1	85.7	94.3	86.1	87.2	77.0	82.3
Out of work for other reasons	88.8	79.9	52.6	50.0	50.1	55.1	42.1	43.1	48.3	40.9	42.4	42.2
Total	3,497.2	3,486.3	3,487.1	3,474.5	3,462.1	3,449.6	3,437.1	3,424.1	3,401.9	3,374.7	3,341.1	3,307.5

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_07

Table 3.8: Population aged 15–64 by labour market status (self-categorised), per cent

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Together												
In work	56.2	56.5	56.7	56.4	55.7	54.5	54.3	54.9	56.0	57.5	61.3	63.7
Unemployed	6.6	7.2	6.9	6.6	7.0	8.8	10.0	10.1	10.5	10.0	8.2	7.0
Students, pupils	11.5	11.6	12.4	12.7	12.8	12.7	12.7	12.5	12.1	11.6	11.1	10.9
Pensioner	11.7	11.1	9.2	8.7	9.4	9.3	8.9	8.7	9.4	9.2	8.5	7.3
Disabled	5.4	5.3	7.4	8.2	7.8	7.4	7.3	6.8	5.3	5.1	4.8	4.9
On child care leave	4.0	4.0	4.0	4.2	4.4	4.3	4.3	4.3	4.0	3.9	3.6	3.6
Dependent	2.0	2.0	1.7	1.6	1.5	1.5	1.4	1.6	1.4	1.5	1.3	1.4
Out of work for other reasons	2.6	2.3	1.6	1.5	1.5	1.6	1.2	1.2	1.3	1.2	1.2	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males												
In work	62.6	62.7	63.4	63.2	62.1	60.3	59.4	60.3	61.0	63.1	67.3	70.0
Unemployed	7.4	8.0	7.6	7.3	7.7	10.1	11.4	11.3	11.6	11.1	8.7	7.5
Students, pupils	11.7	12.0	12.6	12.9	13.0	13.0	13.1	13.0	12.6	12.0	11.3	11.0
Pensioner	9.7	9.1	7.1	6.6	7.4	7.4	7.4	7.4	7.7	7.2	6.5	5.2
Disabled	5.5	5.4	7.3	8.1	7.8	7.2	7.1	6.5	5.4	4.9	4.7	4.7
On child care leave	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Dependent	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3
Out of work for other reasons	2.7	2.4	1.7	1.6	1.6	1.5	1.1	1.1	1.2	1.1	1.1	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females												
In work	50.1	50.6	50.4	50.0	49.5	48.9	49.5	49.8	51.1	52.1	55.5	57.6
Unemployed	5.8	6.4	6.3	6.0	6.4	7.5	8.6	8.9	9.3	9.0	7.6	6.4
Students, pupils	11.2	11.3	12.3	12.5	12.5	12.3	12.3	12.1	11.6	11.2	11.0	10.8
Pensioner	13.7	12.9	11.1	10.8	11.3	11.1	10.3	9.9	11.0	11.2	10.4	9.4
Disabled	5.3	5.2	7.6	8.2	7.7	7.6	7.4	7.0	5.3	5.2	4.9	5.0
On child care leave	7.7	7.6	7.7	8.1	8.4	8.3	8.2	8.3	7.7	7.6	7.0	7.1
Dependent	3.6	3.7	3.1	3.0	2.8	2.8	2.5	2.8	2.5	2.6	2.3	2.5
Out of work for other reasons	2.5	2.3	1.5	1.4	1.4	1.6	1.2	1.3	1.4	1.2	1.3	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent03_08

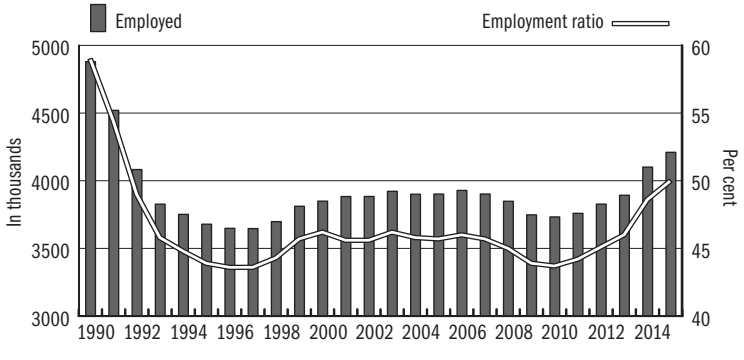
Table 4.1: Employment

Year	In thousands	1992 = 100	Annual changes	Employment ratio[a]
1980	5,458.2	133.7	..	65.3
1990	4,880.0	119.5	..	59.0
1991	4,520.0	110.7	-7.4	54.4
1992	4,082.7	100.0	-9.7	49.0
1993	3,827.0	93.7	-6.2	45.8
1994	3,751.5	91.9	-2.0	44.8
1995	3,678.8	90.1	-1.9	43.9
1996	3,648.2	89.4	-0.9	43.6
1997	3,646.4	89.3	0.0	43.6
1998	3,697.8	90.6	1.4	44.3
1999	3,811.4	93.4	3.2	45.7
2000	3,849.1	94.3	1.0	46.2
2001	3,883.3	95.1	0.3	45.6
2002	3,883.7	95.1	0.0	45.6
2003	3,921.9	96.1	1.2	46.2
2004	3,900.4	95.5	-0.5	45.8
2005	3,901.5	95.6	0.0	45.7
2006	3,928.4	96.2	0.7	46.0
2007	3,902.0	95.6	-0.7	45.7
2008	3,848.3	94.3	-1.4	45.0
2009	3,747.8	91.8	-2.6	43.9
2010	3,732.4	91.4	-0.4	43.7
2011	3,759.0	92.1	0.7	44.2
2012	3,827.2	93.7	1.8	45.1
2013	3,892.8	95.3	1.7	46.0
2014	4,100.9	100.4	5.3	48.6
2015	4,210.5	103.1	2.7	50.0

[a] Per cent of the population over 14 years of age.
Source: 1980–91: *KSH MEM,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_01

Figure 4.1: Employed



Source: 1990–91: *KSH MEM*, 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena04_01

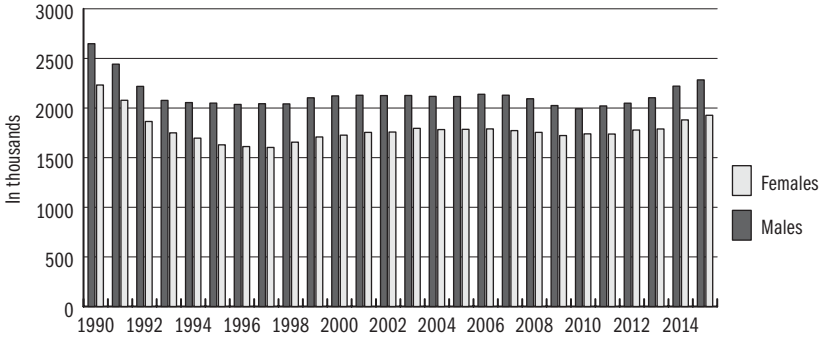
Table 4.2: Employment by gender

Year	Males		Females		Share of females (%)
	In thousands	1992 = 100	In thousands	1992 = 100	
1980	3,015.8	136.0	2,442.4	131.0	44.7
1990	2,648.0	119.4	2,232.0	119.7	45.7
1991	2,442.0	110.1	2,078.0	111.5	46.0
1992	2,218.2	100.0	1,864.5	100.0	45.7
1993	2,077.0	93.6	1,750.0	93.9	45.7
1994	2,055.0	92.6	1,696.5	91.0	45.2
1995	2,049.6	92.4	1,629.2	87.4	44.3
1996	2,036.3	91.8	1,611.9	86.5	44.2
1997	2,043.5	92.1	1,602.9	86.0	44.0
1998	2,041.7	92.0	1,656.1	88.8	44.8
1999	2,103.1	94.8	1,708.4	91.6	44.8
2000	2,122.4	95.7	1,726.7	92.6	44.9
2001	2,128.7	96.0	1,754.6	94.1	45.2
2002	2,125.6	95.8	1,758.1	94.3	45.3
2003	2,126.5	95.6	1,795.4	96.2	45.8
2004	2,117.3	95.5	1,783.1	95.6	45.7
2005	2,116.1	95.4	1,785.4	95.8	45.8
2006	2,138.6	96.4	1,789.8	96.0	45.6
2007	2,129.3	96.0	1,772.7	95.1	45.4
2008	2,093.6	94.4	1,754.7	94.1	45.6
2009	2,025.1	91.3	1,722.8	92.4	46.0
2010	1,992.5	89.8	1,739.8	93.3	46.6
2011	2,021.0	91.1	1,738.0	93.2	46.2
2012	2,048.8	92.4	1,778.4	95.4	46.5
2013	2,103.7	94.8	1,789.0	96.0	46.0
2014	2,220.5	100.1	1,880.4	100.9	45.9
2015	2,283.5	103.0	1,927.0	103.4	45.8

Source: 1980–91: *KSH MEM*, 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_02

Figure 4.2: Employment by gender



Source: 1990–91: *KSH MEM*, 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena04_02

Table 4.3: Composition of the employed by age groups, males, per cent

Year	15–19	20–24	25–49	50–54	55–59	60+	Total
	years old						
1990	5.0	10.8	64.1	8.6	6.8	4.7	100.0
2000	1.5	12.4	67.3	10.6	6.4	1.8	100.0
2001	1.2	10.4	68.6	11.1	6.7	2.0	100.0
2002	0.9	9.4	69.4	11.3	6.9	2.1	100.0
2003	0.7	8.6	69.1	11.8	7.3	2.5	100.0
2004	0.7	7.4	69.5	12.0	7.3	3.0	100.0
2005	0.6	6.8	68.9	12.7	7.9	3.1	100.0
2006	0.6	6.7	71.1	10.3	8.5	2.8	100.0
2007	0.5	6.7	71.3	10.2	8.4	2.9	100.0
2008	0.5	6.4	71.2	10.6	8.5	2.8	100.0
2009	0.4	5.7	70.6	10.9	9.3	3.1	100.0
2010	0.3	5.8	70.5	10.8	9.8	2.8	100.0
2011	0.3	5.5	69.8	10.9	10.0	3.5	100.0
2012	0.3	5.5	69.4	10.7	10.7	3.4	100.0
2013	0.4	6.1	68.6	10.3	10.7	3.9	100.0
2014	0.5	6.4	68.2	9.9	10.5	4.5	100.0
2015	0.7	6.3	67.3	10.0	10.1	5.8	100.0

Source: 1990: Census based estimates. 2000–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_03

Table 4.4: Composition of the employed by age groups, females, per cent

Year	15–19	20–24	25–49	50–54	55+	Total
	years old					
1990	5.2	8.6	66.2	10.0	10.0	100.0
2000	1.4	11.1	69.6	12.7	5.2	100.0
2001	1.1	9.6	70.5	13.1	5.7	100.0
2002	0.8	9.2	69.4	13.8	6.8	100.0
2003	0.5	8.2	68.8	14.0	8.5	100.0
2004	0.5	7.1	68.2	14.6	9.7	100.0
2005	0.4	6.3	67.7	15.4	10.2	100.0
2006	0.4	6.0	70.1	12.9	10.6	100.0
2007	0.3	5.8	70.0	13.1	10.8	100.0
2008	0.3	5.6	69.8	13.4	10.9	100.0
2009	0.2	5.4	69.1	13.5	11.8	100.0
2010	0.3	5.3	67.4	13.6	13.4	100.0
2011	0.2	5.1	66.4	13.4	14.9	100.0
2012	0.2	5.2	66.6	13.4	14.6	100.0
2013	0.3	5.1	67.1	13.1	14.4	100.0
2014	0.4	5.6	66.4	12.7	14.9	100.0
2015	0.4	6.1	65.6	12.5	15.4	100.0

Source: 1990: Census based estimates. 2000–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_04

Table 4.5: Composition of the employed by level of education, males, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1990	37.6	30.5	20.1	11.8	100.0
2000	16.1	41.6	26.7	15.6	100.0
2001	15.6	42.8	26.0	15.6	100.0
2002	14.6	43.2	26.4	15.8	100.0
2003	14.0	41.3	27.7	17.0	100.0
2004	13.0	40.4	28.0	18.6	100.0
2005	13.0	40.8	27.7	18.5	100.0
2006	12.3	41.0	28.2	18.5	100.0
2007	11.7	40.7	28.8	18.8	100.0
2008	11.7	39.4	29.1	19.8	100.0
2009	10.9	38.7	30.1	20.3	100.0
2010	10.6	38.3	30.6	20.5	100.0
2011	10.7	37.2	30.2	21.9	100.0
2012	10.6	36.8	30.1	22.5	100.0
2013	10.2	37.1	30.1	22.6	100.0
2014	11.1	35.8	30.6	22.5	100.0
2015	11.8	34.5	31.0	22.7	100.0

Note: Since 1999, slight changes have occurred in the categorisation system by highest education level.
Source: 1990: Census based estimates. 2000–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_05

Table 4.6: Composition of the employed by level of education, females, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1990	43.4	13.4	31.4	11.8	100.0
2000	19.1	20.9	40.8	19.2	100.0
2001	19.1	21.3	40.3	19.3	100.0
2002	18.5	21.5	40.2	19.8	100.0
2003	16.4	21.5	40.9	21.2	100.0
2004	15.9	20.5	40.2	23.4	100.0
2005	15.4	20.2	40.0	24.4	100.0
2006	14.2	20.7	40.0	25.1	100.0
2007	13.5	21.2	40.0	25.3	100.0
2008	13.3	20.3	39.2	27.2	100.0
2009	12.5	19.8	39.3	28.4	100.0
2010	12.3	20.3	38.8	28.6	100.0
2011	11.7	20.1	38.0	30.2	100.0
2012	11.0	19.5	38.4	31.1	100.0
2013	10.9	19.6	38.1	31.4	100.0
2014	11.4	19.4	37.8	31.5	100.0
2015	11.5	19.1	37.4	32.0	100.0

Note: Since 1999, slight changes have occurred in the categorisation system by highest education level.
Source: 1990: Census based estimates. 2000–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_06

Table 4.7: Employed by employment status, in thousands

Year	Employees	Member of cooperatives	Member of other partnerships	Self-employed and assisting family members	Total
2000	3,255.5	37.1	129.4	407.1	3,829.1
2001	3,313.6	31.4	118.9	404.4	3,868.3
2002	3,337.2	22.5	109.9	401.0	3,870.6
2003	3,399.2	8.6	114.7	399.4	3,921.9
2004	3,347.8	8.1	136.6	407.8	3,900.3
2005	3,367.3	5.8	146.7	381.7	3,901.5
2006	3,428.9	4.8	128.0	366.7	3,928.4
2007	3,415.5	4.7	123.9	357.9	3,902.0
2008	3,378.4	2.6	120.9	346.4	3,848.3
2009	3,274.9	2.5	131.7	338.7	3,747.8
2010	3,272.7	2.9	137.6	319.3	3,732.5
2011	3,302.5	2.0	133.3	321.2	3,759.0
2012	3,378.1	2.3	144.3	302.5	3,827.2
2013	3,453.9	3.3	156.6	279.0	3,892.8
2014	3,652.0	3.6	157.3	288.0	4,100.9
2015	3,753.8	1.7	150.3	304.7	4,210.5

Note: Conscripts are excluded. The participants of winter-time training programs within the Public Works Program are accounted as employees.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_07

Table 4.8: Composition of the employed persons by employment status, per cent

Year	Employees	Member of cooperatives	Member of other partnerships	Self-employed and assisting family members	Total
2000	85.0	1.0	3.4	10.6	100.0
2001	85.7	0.8	3.1	10.5	100.0
2002	86.2	0.6	2.8	10.4	100.0
2003	86.7	0.2	2.8	10.3	100.0
2004	85.8	0.2	3.5	10.5	100.0
2005	86.3	0.1	3.8	9.8	100.0
2006	87.3	0.1	3.2	9.4	100.0
2007	87.6	0.1	3.1	9.2	100.0
2008	87.7	0.1	3.2	9.0	100.0
2009	87.5	0.1	3.6	8.8	100.0
2010	87.7	0.1	3.7	8.5	100.0
2011	87.9	0.0	3.5	8.5	100.0
2012	88.3	0.1	3.8	7.9	100.0
2013	88.9	0.1	4.0	7.0	100.0
2014	89.1	0.1	4.0	6.8	100.0
2015	89.1	0.0	3.6	7.3	100.0

Note: Conscripts are excluded.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_08

Table 4.9: Composition of employed persons by sector[a], by gender, per cent

	2011			2012			2013			2014			2015		
	Males	Females	Together	Males	Females	Together	Males	Females	Together	Males	Females	Together	Males	Females	Together
Agriculture, forestry and fishing	5.7	2.0	3.9	5.6	1.9	3.8	5.1	1.9	3.5	5.0	1.7	3.5	5.3	1.9	3.7
Mining and quarrying	0.5	0.1	0.3	0.4	0.1	0.2	0.4	0.1	0.2	0.4	0.1	0.3	0.4	0.1	0.2
Manufacturing	27.0	18.8	23.0	26.4	17.9	22.3	26.7	18.0	22.6	28.1	18.0	23.3	27.4	18.0	23.0
Electricity, gas, steam and air conditioning supply	1.6	0.6	1.1	1.5	0.5	1.1	1.3	0.5	0.9	1.4	0.6	1.0	1.3	0.4	0.9
Water supply; sewerage, waste management and remediation activities	2.2	0.8	1.5	2.7	0.9	1.8	2.6	0.8	1.7	2.2	0.7	1.5	2.1	0.7	1.5
Construction	11.0	0.9	6.2	10.0	1.0	5.7	10.1	0.9	5.7	10.0	1.0	5.7	10.2	0.9	5.8
Wholesale and retail trade; repair of motor vehicles and motorcycles	11.4	15.8	13.5	10.7	15.9	13.2	10.3	15.6	12.8	10.2	15.5	12.7	9.6	15.2	12.3
Transportation and storage	9.5	4.1	6.9	9.8	3.8	6.9	9.7	3.8	6.9	9.1	3.8	6.6	9.0	3.7	6.5
Accommodation and food service activities	2.9	5.2	4.0	3.1	5.2	4.1	3.0	5.0	4.0	3.0	5.2	4.1	3.5	5.3	4.4
Information and communication	2.9	1.5	2.2	3.4	1.6	2.5	3.2	1.9	2.6	3.0	1.8	2.4	3.1	1.5	2.4
Financial and insurance activities	1.5	3.3	2.4	1.5	3.3	2.4	1.8	3.3	2.5	1.6	3.0	2.3	1.3	3.0	2.1
Real estate activities	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4
Professional, scientific and technical activities	2.0	3.2	2.6	1.9	3.4	2.6	2.2	3.7	2.9	2.0	3.5	2.7	1.9	3.5	2.7
Administrative and support service activities	3.0	2.8	2.9	3.8	2.9	3.4	4.3	2.8	3.6	4.1	3.0	3.6	4.3	2.9	3.6
Public administration and defence; compulsory social security	8.9	9.7	9.3	9.2	9.8	9.5	10.1	11.1	10.6	10.5	11.6	11.0	10.9	13.0	11.9
Education	4.2	15.0	9.4	4.1	14.7	9.2	3.8	14.2	8.8	3.8	14.1	8.7	3.6	13.6	8.3
Human health and social work activities	2.8	11.8	7.1	2.6	12.5	7.3	2.6	12.2	7.2	2.5	11.9	7.0	2.5	11.6	6.8
Arts, entertainment and recreation	1.3	1.7	1.5	1.3	1.8	1.5	1.1	1.6	1.3	1.5	1.6	1.5	1.7	2.0	1.8
Other services	1.0	2.2	1.6	1.2	2.3	1.7	1.2	2.3	1.8	1.2	2.4	1.8	1.2	2.3	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] By TEÁOR'08.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_09

Table 4.10: Employed in their present job for 0–6 months, per cent

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Hungary	8.5	6.8	7.2	6.3	6.6	7.2	6.8	7.0	6.8	7.5	7.6	7.4	7.9	7.3	8.4	9.1	8.9	8.4

Source: MEF, IV. quarterly waves.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_10

Table 4.11: Distribution of employees in the competitive sector[a] by firm size, per cent

Year	Less than 20	20-49	50–249	250–999	1000 and more
	employees				
2002	21.6	14.0	21.5	20.1	22.9
2003	23.0	15.3	20.5	19.3	21.8
2004	23.6	14.8	21.3	18.3	22.0
2005	27.0	15.0	20.5	17.5	20.0
2006	15.7	10.7	25.7	24.3	23.6
2007	25.2	14.2	20.0	18.4	22.2
2008	26.0	15.7	20.7	18.9	18.6
2009	23.4	15.7	19.7	18.4	22.8
2010	23.5	15.7	18.6	18.0	24.2
2011	24.9	15.6	18.5	17.7	23.4
2012	24.2	14.7	18.3	18.6	24.1
2013	23.2	14.5	18.1	19.0	25.2
2014	23.8	15.0	18.4	19.2	23.5
2015	24.0	15.4	18.5	17.9	24.2

[a] Firms employing 5 or more workers.
Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_11

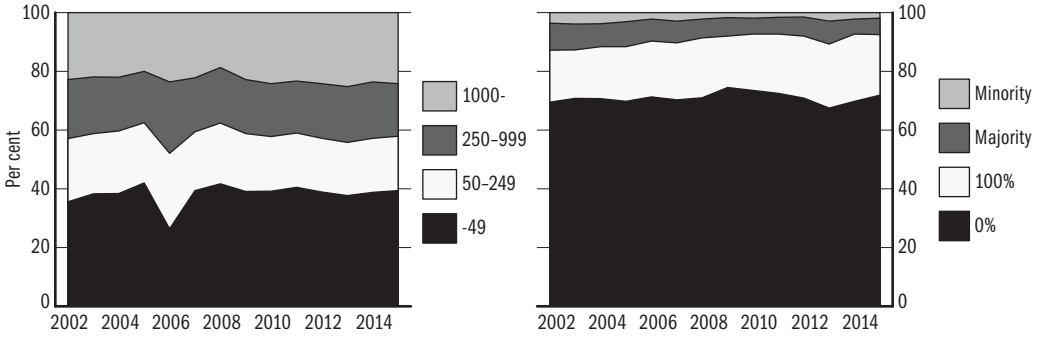
Table 4.12: Employees of the competitive sector[a] by the share of foreign ownership, per cent

Share of foreign ownership	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
100%	17.7	16.5	17.7	18.6	19.0	19.4	20.4	17.5	19.2	20.2	21.1	21.8	22.9	20.6
Majority	9.2	8.8	7.8	8.5	7.5	7.4	6.4	6.3	5.4	5.7	6.5	7.8	5.1	5.6
Minority	3.6	3.9	3.8	3.1	2.2	2.9	2.2	1.7	1.9	1.6	1.5	2.9	2.2	1.9
0%	69.5	70.8	70.7	69.8	71.3	70.3	71.0	74.6	73.5	72.4	70.9	67.5	69.9	71.9

[a] Firms employing 5 or more workers.
Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_12

Figure 4.3: Employees of the corporate sector by firm size and by the share of foreign ownership



Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena04_03

Table 4.13: Employment rate of population aged 15–74 by age group, males, per cent

Year	15–19	20–24	25–49	50–54	55–59	60–64	65–74	Total
1998	11.4	59.9	78.8	66.0	38.3	10.0	3.2	54.4
1999	10.6	60.3	80.5	69.0	44.0	10.4	3.8	56.2
2000	8.4	58.9	80.9	69.6	49.6	11.8	3.8	56.8
2001	7.9	56.7	81.6	68.2	51.3	13.1	3.1	57.1
2002	5.6	53.1	81.9	68.6	52.8	14.4	3.4	57.1
2003	4.8	51.8	82.2	69.7	55.2	16.8	3.8	57.6
2004	4.5	46.5	82.7	69.7	54.0	20.1	4.3	57.5
2005	4.0	43.6	82.5	70.1	56.6	20.9	4.2	57.4
2006	4.1	44.0	83.1	70.7	58.5	18.9	4.2	58.0
2007	3.7	44.0	83.4	71.0	57.3	18.0	4.7	57.8
2008	3.5	42.0	82.9	71.6	54.5	16.5	4.8	56.9
2009	2.4	36.7	80.5	70.5	56.1	16.7	5.0	55.1
2010	2.2	36.7	79.6	69.0	56.3	16.5	4.7	54.2
2011	2.4	36.1	81.0	71.2	56.9	17.4	4.4	55.0
2012	2.2	35.9	81.5	73.1	61.2	17.0	5.2	55.7
2013	2.8	40.8	82.6	74.2	64.9	21.1	4.9	57.4
2014	3.8	45.6	86.6	76.9	70.6	26.9	4.4	60.8
2015	5.9	46.6	87.9	80.5	73.9	35.3	4.6	62.7

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_13

Table 4.14: Employment rate of population aged 15–74 by age group, females, per cent

Year	15–19	20–24	25–49	50–54	55–59	60–64	65–74	Total
1998	10.7	47.5	66.3	52.3	13.6	5.0	1.2	41.0
1999	8.7	48.1	67.3	59.4	16.2	5.5	1.6	42.3
2000	8.0	45.9	67.8	62.5	20.0	5.1	1.8	43.0
2001	6.3	44.2	68.0	62.1	23.2	5.5	1.3	43.1
2002	4.3	44.2	67.0	64.0	28.3	6.0	1.5	43.3
2003	3.1	41.9	67.8	65.8	35.1	7.3	2.0	44.3
2004	2.7	37.4	67.2	66.0	39.8	9.0	1.9	44.1
2005	2.6	34.7	67.4	66.6	41.7	9.6	1.5	44.2
2006	2.5	33.6	67.8	67.5	42.4	8.5	1.6	44.4
2007	2.0	32.4	67.8	68.1	40.0	9.4	2.2	44.1
2008	1.8	31.3	67.8	68.7	38.7	9.8	2.3	43.8
2009	1.5	30.0	66.7	68.3	40.7	9.7	2.2	43.1
2010	1.9	30.3	66.6	69.4	46.6	9.5	2.4	43.6
2011	1.5	30.0	66.2	68.8	49.9	11.0	2.6	43.7
2012	1.4	31.3	68.3	72.7	49.7	11.2	2.6	44.9
2013	1.7	30.5	69.3	74.0	51.4	11.1	2.4	45.4
2014	3.0	35.2	72.3	77.9	56.8	13.4	2.3	48.0
2015	2.9	39.9	73.4	80.3	60.0	17.3	2.6	49.5

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_14

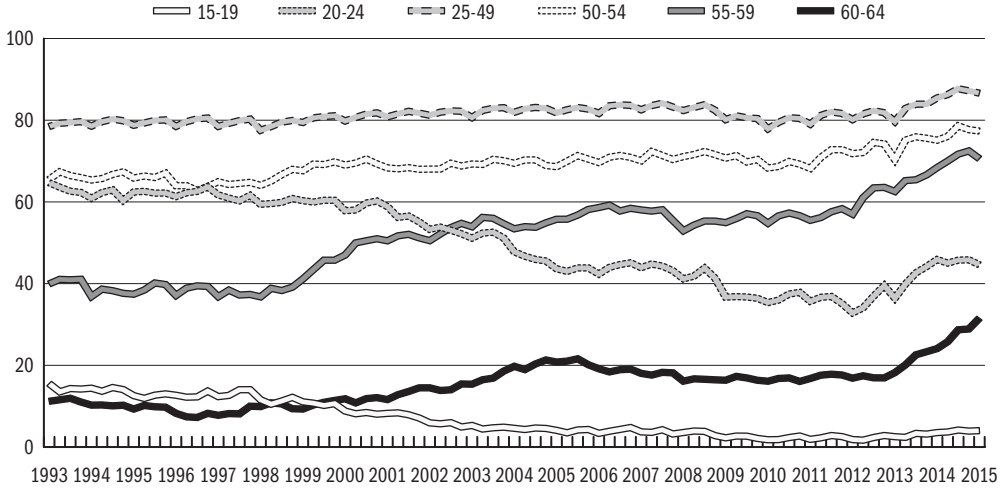
Table 4.15: Employment rate of population aged 15–64 by level of education, males, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1998	35.0	75.3	67.0	84.9	60.4
1999	33.6	76.8	68.3	86.8	62.4
2000	33.6	77.4	67.9	87.1	63.1
2001	33.0	77.6	67.3	87.4	62.9
2002	32.0	77.6	67.1	85.8	62.9
2003	32.4	76.5	67.8	86.4	63.4
2004	31.0	75.7	67.3	87.1	63.1
2005	31.6	74.7	66.9	86.9	63.1
2006	31.4	75.6	67.7	86.0	63.9
2007	31.0	74.4	67.3	85.6	63.7
2008	31.1	72.4	66.1	84.3	62.7
2009	28.8	69.5	64.6	82.8	60.7
2010	28.1	67.7	64.2	81.8	59.9
2011	29.0	68.0	64.5	83.7	60.7
2012	30.0	68.7	64.6	84.4	61.6
2013	30.8	70.9	67.1	85.3	63.7
2014	36.3	74.8	71.2	87.1	67.8
2015	39.9	77.1	73.2	88.6	70.3

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_15

Figure 4.4: Activity rate by age groups, males aged 15-64, quarterly



Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena04_04

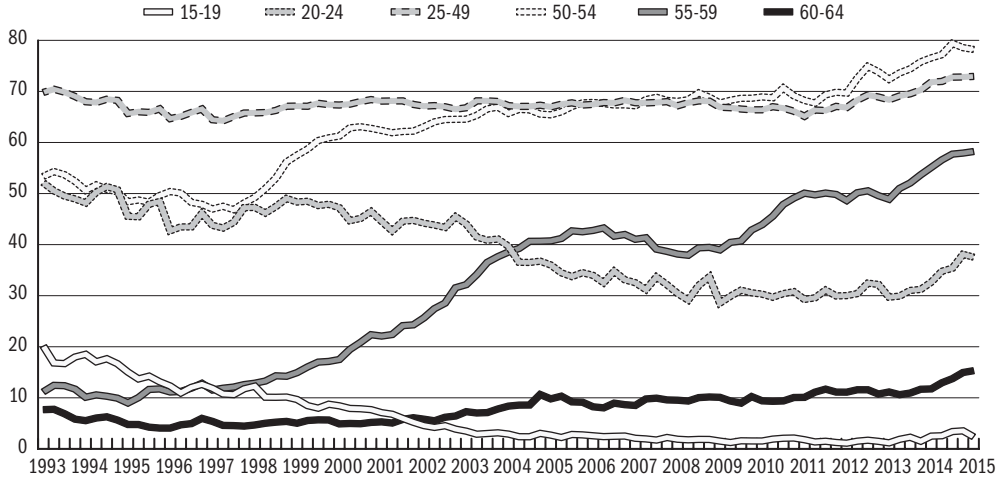
Table 4.16: Employment rate of population aged 15–64 by level of education, females, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1998	26.6	60.5	58.1	76.9	47.3
1999	26.1	61.4	59.0	77.5	49.0
2000	26.0	61.0	59.3	77.8	49.7
2001	26.1	60.8	59.2	77.8	49.8
2002	26.0	60.4	58.6	77.9	49.8
2003	25.3	59.7	59.5	78.3	50.9
2004	25.0	58.8	58.1	78.1	50.7
2005	25.1	57.6	57.9	78.9	51.0
2006	24.3	57.8	57.5	78.0	51.1
2007	23.6	57.2	57.2	75.5	50.7
2008	23.7	55.2	56.1	75.3	50.3
2009	22.7	54.0	54.6	74.2	49.6
2010	23.3	56.2	54.0	74.3	50.2
2011	22.5	56.1	53.9	74.6	50.3
2012	22.6	56.8	56.3	74.3	51.9
2013	23.7	57.1	56.6	74.2	52.6
2014	27.3	60.4	59.1	76.1	55.9
2015	28.7	62.3	61.3	77.3	57.8

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent04_16

Figure 4.5: Activity rate by age groups, females aged 15-64, quarterly



Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena04_05

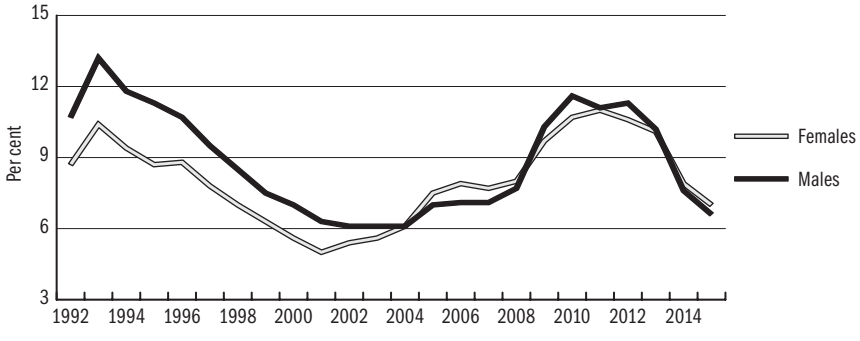
Table 5.1: Unemployment rate by gender and share of long term unemployed, per cent

Year	Unemployment rate			Share of long term unemployed[a]
	Males	Females	Total	
1992	10.7	8.7	9.8	..
1993	13.2	10.4	11.9	..
1994	11.8	9.4	10.7	43.2
1995	11.3	8.7	10.2	50.6
1996	10.7	8.8	9.9	54.4
1997	9.5	7.8	8.7	51.3
1998	8.5	7.0	7.8	48.8
1999	7.5	6.3	7.0	49.5
2000	7.0	5.6	6.4	49.1
2001	6.3	5.0	5.7	46.7
2002	6.1	5.4	5.8	44.9
2003	6.1	5.6	5.9	43.9
2004	6.1	6.1	6.1	45.0
2005	7.0	7.5	7.2	46.2
2006	7.1	7.9	7.5	46.9
2007	7.1	7.7	7.4	48.1
2008	7.7	8.0	7.8	48.1
2009	10.3	9.7	10.0	42.9
2010	11.6	10.7	11.2	50.6
2011	11.1	11.0	11.0	49.4
2012	11.3	10.6	11.0	47.0
2013	10.2	10.1	10.2	50.4
2014	7.6	7.9	7.7	49.5
2015	6.6	7.0	6.8	49.0

[a] Long term unemployed are those who have been without work for 12 months or more, excluding those who start a new job within 90 days.
Note: Conscripted soldiers are included in the denominator.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_01

Figure 5.1: Unemployment rates by gender



Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_01

Table 5.2: Unemployment rate by level of education, males, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1999	14.3	8.2	5.0	1.5	7.5
2000	13.4	7.7	4.8	1.6	7.0
2001	13.6	6.4	4.3	1.2	6.3
2002	14.1	6.2	4.0	1.4	6.1
2003	13.6	6.6	3.9	1.6	6.1
2004	14.3	6.4	4.1	1.7	6.1
2005	15.6	7.4	4.9	2.3	7.0
2006	17.3	7.0	5.1	2.6	7.1
2007	18.7	6.8	5.1	2.4	7.1
2008	20.2	7.7	5.2	2.3	7.7
2009	24.6	10.7	7.6	3.6	10.3
2010	27.2	12.2	8.3	4.9	11.6
2011	25.5	12.1	8.3	4.1	11.1
2012	25.3	12.0	9.6	4.2	11.3
2013	24.5	10.8	8.4	3.4	10.2
2014	18.4	7.8	6.2	2.8	7.6
2015	16.7	6.7	5.3	2.2	6.6

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_02

Table 5.3: Composition of the unemployed by level of education, males, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1999	34.5	45.3	17.4	2.8	100.0
2000	32.9	45.8	17.9	3.4	100.0
2001	36.5	43.2	17.5	2.8	100.0
2002	36.7	43.3	16.7	3.3	100.0
2003	34.0	44.7	17.2	4.1	100.0
2004	33.9	42.6	18.6	4.9	100.0
2005	32.1	43.1	19.0	5.8	100.0
2006	33.4	40.3	19.9	6.4	100.0
2007	35.1	38.6	20.4	5.9	100.0
2008	35.9	39.4	19.2	5.5	100.0
2009	31.2	40.5	21.7	6.6	100.0
2010	30.3	40.5	21.1	8.1	100.0
2011	29.4	41.1	21.9	7.6	100.0
2012	28.1	39.3	24.9	7.6	100.0
2013	29.2	39.3	24.4	7.1	100.0
2014	30.6	37.0	24.5	7.9	100.0
2015	33.4	34.9	24.5	7.2	100.0

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_03

Table 5.4: Unemployment rate by level of education, females, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1999	10.5	8.0	5.2	1.3	6.3
2000	9.1	7.4	4.9	1.5	5.6
2001	8.4	6.4	4.0	1.6	5.0
2002	9.3	6.5	4.4	2.4	5.4
2003	10.5	7.2	4.4	1.9	5.6
2004	10.3	8.0	5.3	2.9	6.1
2005	13.0	9.8	6.7	3.1	7.5
2006	16.2	10.4	6.5	2.7	7.9
2007	16.3	9.7	6.2	3.2	7.7
2008	17.4	9.6	6.8	3.1	8.0
2009	21.6	12.6	7.8	4.1	9.7
2010	22.8	12.6	9.6	4.3	10.7
2011	24.5	12.9	9.9	4.4	11.0
2012	24.4	12.7	9.4	4.7	10.6
2013	22.7	12.8	9.0	4.3	10.1
2014	18.7	9.3	7.1	3.4	7.9
2015	18.1	8.7	5.9	2.6	7.0

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_04

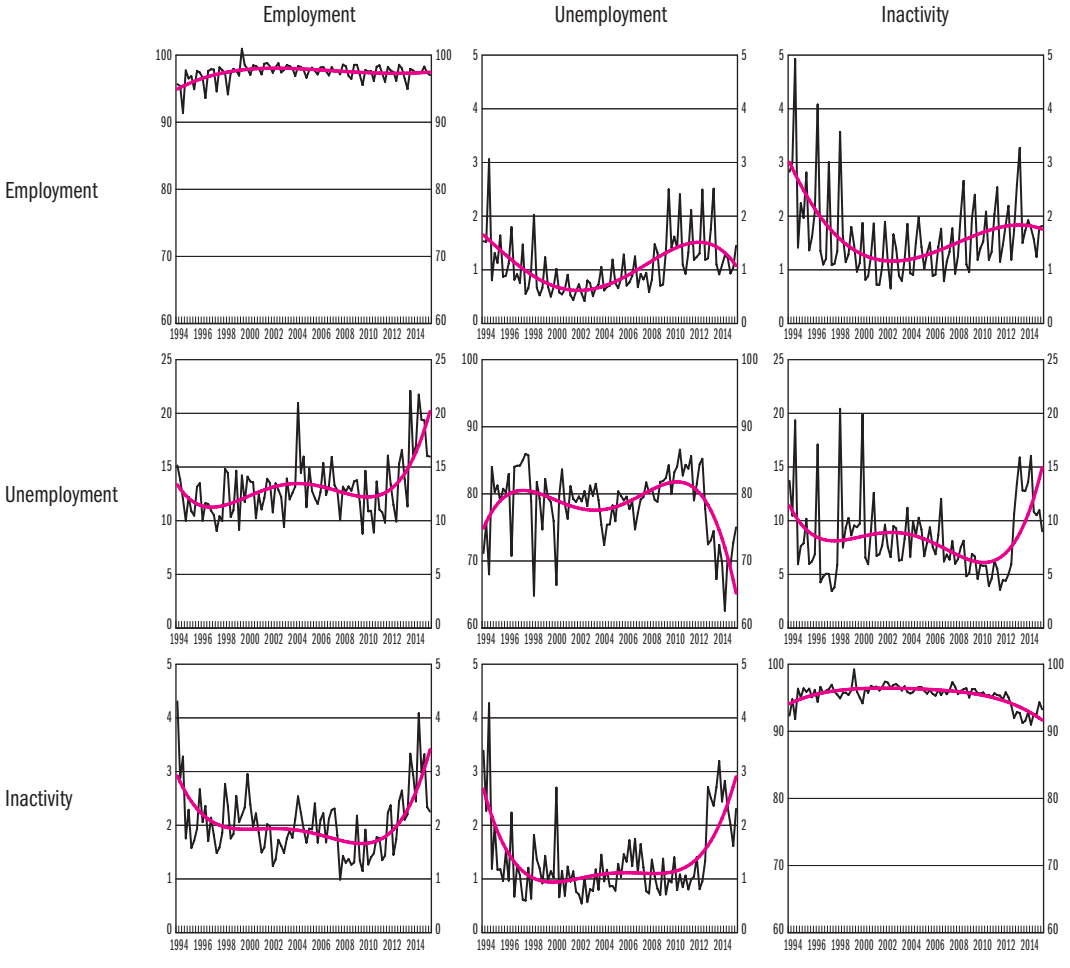
Table 5.5: Composition of the unemployed by level of education, females, per cent

Year	8 grades of primary school or less	Vocational school	Secondary school	College, university	Total
1999	36.2	26.2	33.8	3.8	100.0
2000	31.8	28.2	35.0	5.0	100.0
2001	33.7	28.0	32.2	6.1	100.0
2002	33.2	26.0	32.2	8.5	100.0
2003	32.7	28.3	32.0	7.0	100.0
2004	27.8	27.4	34.2	10.6	100.0
2005	28.2	27.1	35.2	9.5	100.0
2006	31.8	27.9	32.3	8.0	100.0
2007	31.3	27.2	31.6	9.9	100.0
2008	32.3	24.7	33.0	10.0	100.0
2009	31.8	26.4	30.6	11.2	100.0
2010	30.5	24.4	34.3	10.7	100.0
2011	30.8	24.1	33.9	11.2	100.0
2012	29.8	23.8	33.5	12.9	100.0
2013	28.5	25.6	33.4	12.5	100.0
2014	30.5	23.1	33.4	13.0	100.0
2015	33.5	24.1	31.2	11.3	100.0

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_05

Figure 5.2: Intensity of quarterly flows between labour market status, population between 15–64 years



Note: The calculations were carried out for the age group between 15-64 based on KSH labour force survey microdata. The probability of transition is given by the number of people who transitioned from one status to the other in the quarter, divided by the initial size of the group in the previous quarter, which were then corrected to preserve the consistency of stock flows. The red curves show the trend smoothed using a 4th degree polynomial.
Source: KSH MEF.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_02

Table 5.6: The number of unemployed[a] by duration of job search, in thousands

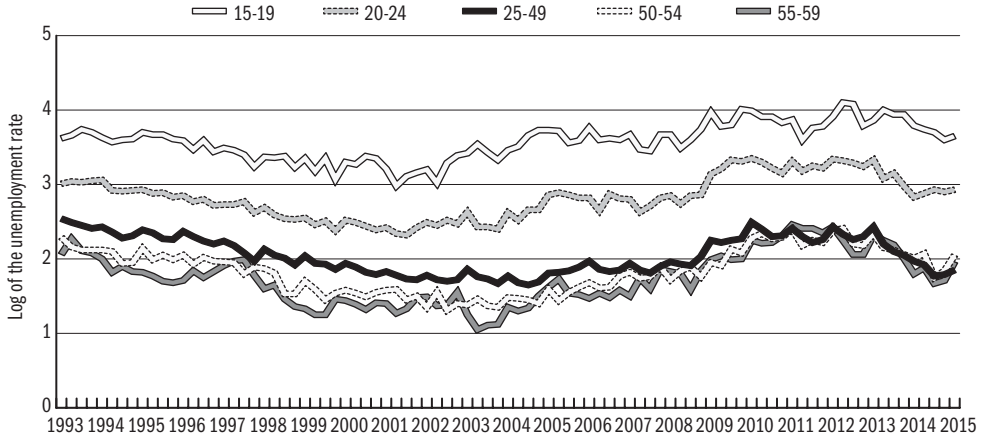
Year	Length of job search, weeks [month]								Total
	1–4 [<1]	5–14 [1–3]	15–26 [4–6]	27–51 [7–11]	52 [12]	53–78 [13–18]	79–104 [19–24]	105– [>24]	
1992	43.9	90.9	96.4	110.7	10.6	41.7	38.4	n.a.	432.6
1993	36.2	74.8	87.9	120.5	14.7	75.1	83.7	n.a.	492.9
1994	30.5	56.5	65.0	91.9	8.4	63.0	73.8	40.4	429.5
1995	23.0	51.0	56.5	69.4	20.2	57.2	34.3	93.2	404.8
1996	19.9	46.4	49.3	61.5	18.2	56.1	37.1	100.2	388.7
1997	16.1	43.7	45.9	54.4	15.7	44.5	31.1	77.3	328.7
1998	12.9	44.2	44.5	45.7	16.0	39.0	27.6	63.5	293.4
1999	15.4	44.1	38.8	46.0	13.2	38.1	26.8	62.3	284.7
2000	16.7	38.5	35.1	42.8	12.7	36.9	23.6	55.4	261.3
2001	14.9	37.0	33.2	38.6	11.5	31.6	20.9	44.2	231.9
2002	15.5	39.4	34.8	40.7	11.6	32.7	19.8	42.5	237.0
2003	15.9	42.1	38.9	42.0	14.5	27.6	17.6	43.0	241.6
2004	13.0	42.0	39.9	41.8	13.5	33.4	19.6	47.2	250.4
2005	14.8	48.9	44.1	51.3	14.1	41.0	27.4	54.3	295.9
2006	13.2	51.1	48.5	52.0	17.9	41.1	26.6	59.7	310.0
2007	13.9	49.5	44.2	50.5	12.8	42.8	26.2	65.1	304.9
2008	13.5	50.3	47.9	53.4	13.5	39.1	26.3	74.0	317.9
2009	18.7	71.4	66.6	77.5	18.4	51.3	27.1	79.0	410.0
2010	16.9	65.4	62.5	83.5	23.2	74.7	42.6	93.7	462.5
2011	28.9	70.7	62.8	70.0	18.0	64.7	40.1	103.7	458.9
2012	39.2	64.0	63.1	80.5	22.2	59.5	36.6	100.9	466.0
2013	48.2	49.4	53.7	62.1	25.3	49.8	45.0	97.1	430.7
2014	36.5	41.5	44.9	46.3	19.0	35.1	29.2	82.7	335.3
2015	30.9	43.0	38.6	44.0	18.2	30.0	23.7	69.6	298.0

[a] Not including those unemployed who will find a new job within 30 days; since 2003: within 90 days.

Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_06

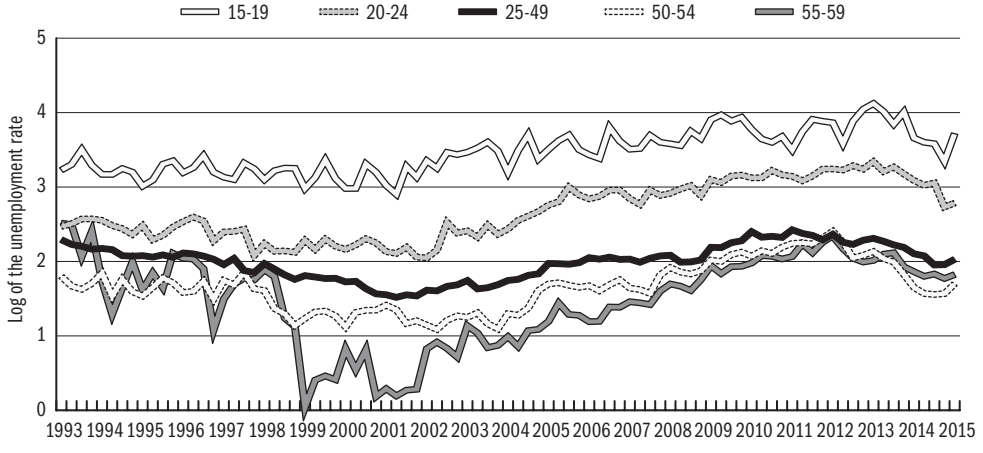
Figure 5.3: Unemployment rate by age groups, males aged 15-59, quarterly



Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_03

Figure 5.4: Unemployment rate by age groups, females aged 15-59, quarterly



Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_04

Table 5.7: Registered unemployed[a] and LFS unemployment

Year	Registered unemployed		LFS unemployed, total		LFS unemployed, age 15-24	
	In thousands	rate in %	In thousands	rate in %	In thousands	rate in %
1990	47.7	–	..	..	..	..
1995	507.7	10.6	416.5	10.2	114.3	18.6
1996	500.6	11.0	400.1	9.9	106.3	17.9
1997	470.1	10.5	348.8	8.7	95.8	15.9
1998	423.1	9.5	313.0	7.8	87.6	13.4
1999	409.5	9.7	284.7	7.0	78.6	12.4
2000	390.5	9.3	262.5	6.4	70.7	12.1
2001	364.1	8.5	232.9	5.7	55.7	10.8
2002	344.7	8.0	238.8	5.8	56.5	12.3
2003	357.2	8.3	244.5	5.9	54.9	13.4
2004	375.9	8.7	252.9	6.1	55.9	15.5
2005	409.9	9.4	303.9	7.2	66.9	19.4
2006	393.5	9.0	318.2	7.5	64.1	19.1
2007	426.9	9.7	312.1	7.4	57.4	18.0
2008	442.3	10.0	326.3	7.8	60.0	19.5
2009	561.8	12.8	417.8	10.0	78.8	26.4
2010	582.7	13.3	469.4	11.2	78.3	26.4
2011	582.9	13.2	466.0	11.0	74.5	26.0
2012	559.1	12.6	473.2	11.0	84.6	28.2
2013	527.6	11.9	441.0	10.2	83.5	26.6
2014	422.4	9.7	343.3	7.7	67.6	20.4
2015	378.2	8.5	307.8	6.8	58.9	17.3

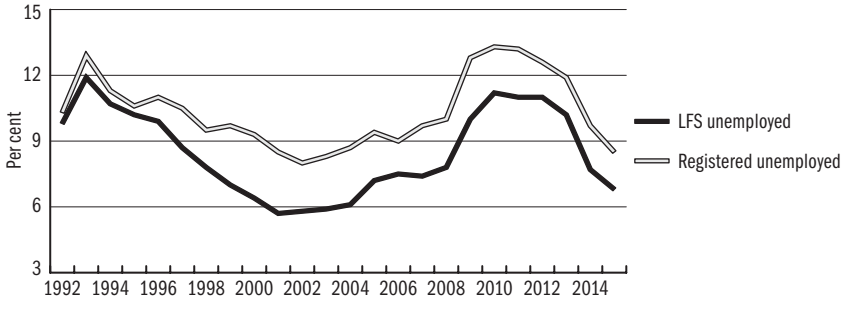
[a] Since 1st of November, 2005: database of registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.

Note: The denominator of registered unemployment/jobseekers' rate in the economically active population on 1st January the previous year.

Source: Registered unemployment/jobseekers: *NFSZ;* LFS unemployment: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_07

Figure 5.5: Registered and LFS unemployment rates



Note: Since 1st of November, 2005: database of registered jobseekers.

Source: Registered unemployment/jobseekers: *NFSZ*; LFS unemployment: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_05

Table 5.8: Composition of the registered unemployed[a] by educational attainment, yearly averages, per cent

Educational attainment	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8 grades of primary school or less	41.0	42.0	42.4	42.7	42.3	41.9	42.0	42.4	43.3	40.1	39.3	40.3	40.3	40.5	41.0	42.4
Vocational school	34.9	34.1	33.5	32.9	32.3	32.4	32.1	31.5	30.9	32.5	31.4	29.8	29.2	29.0	28.3	27.1
Vocational secondary school	13.2	13.1	13.2	13.1	13.4	13.5	13.4	13.3	13.1	14.4	15.0	14.9	15.1	15.3	15.3	15.0
Grammar school	8.0	7.7	7.6	7.5	7.7	7.9	8.0	8.2	8.2	8.5	9.1	9.5	9.7	9.8	10.1	10.1
College	2.1	2.2	2.4	2.7	3.1	3.2	3.3	3.3	3.3	3.2	3.7	3.8	3.8	3.6	3.4	3.4
University	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.2	1.2	1.5	1.7	1.8	1.8	1.9	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Since 1st of November, 2005: registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_08

Table 5.9: The distribution of registered unemployed school-leavers[a] by educational attainment, yearly averages, per cent

Educational attainment	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8 grades of primary school or less	26.8	31.1	33.7	34.7	35.2	36.1	38.2	40.1	41.3	37.7	35.2	35.6	34.9	35.5	39.4	43.8
Vocational school	27.8	23.7	20.6	20.4	20.2	20.5	19.7	18.1	17.3	18.9	18.9	18.5	19.8	20.1	18.3	16.9
Vocational secondary school	25.4	25.3	25.5	23.2	22.1	21.5	20.3	20.7	21.2	23.1	23.9	23.6	23.7	23.1	21.7	19.8
Grammar school	13.7	12.6	11.6	10.8	10.7	10.8	11.7	12.8	13.3	13.7	14.3	15.0	14.9	14.9	15.0	14.7
College	4.8	5.5	6.2	7.7	8.1	7.8	6.9	5.8	4.9	4.5	4.8	4.2	3.6	3.4	2.8	2.3
University	1.5	1.8	2.4	3.3	3.6	3.4	3.0	2.5	2.0	2.1	2.8	3.1	3.0	3.0	2.7	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Since 1st of November, 2005: registered school-leaver jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_09

Table 5.10: Registered unemployed by economic activity as observed in the LFS, per cent

Year	Employed	LFS-unemployed	Inactive	Total	Year	Employed	LFS-unemployed	Inactive	Total
2000	4.7	54.3	41.0	100.0	2008	3.9	62.8	33.2	100.0
2001	6.5	45.2	48.3	100.0	2009	3.7	67.1	29.2	100.0
2002	4.4	47.4	48.2	100.0	2010	3.2	70.4	26.4	100.0
2003	9.4	44.1	46.5	100.0	2011	3.5	66.7	29.8	100.0
2004	3.0	53.5	43.5	100.0	2012	3.4	64.9	31.7	100.0
2005	2.3	59.7	38.0	100.0	2013	4.9	61.6	33.4	100.0
2006	3,0	60.9	36.1	100.0	2014	6.2	60.5	33.2	100.0
2007	3.7	62.2	34.1	100.0	2015	3.9	67.1	29.0	100.0

Note: The data pertain to those who consider themselves registered jobseekers in the KSH MEF. Those who reported that their last contact with the employment centre was more than two months ago were filtered from among those who reported themselves as registered unemployed.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_10

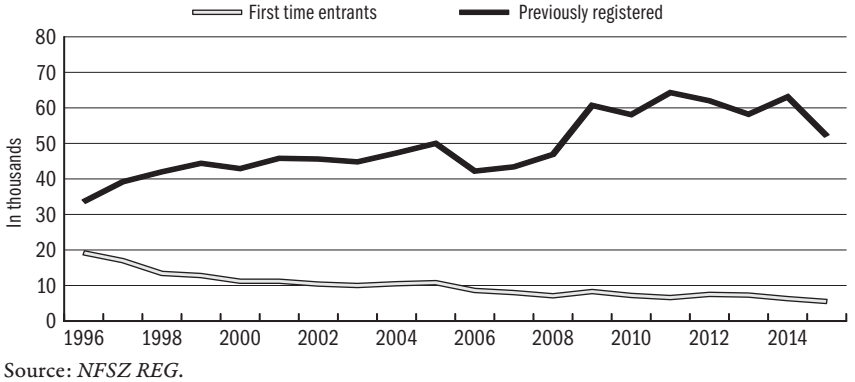
Table 5.11: Monthly entrants to the unemployment register[a], monthly averages, in thousands

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
First time entrants	11.2	11.2	10.4	10.0	10.5	10.8	8.6	8.0	7.1	8.3	7.2	6.6	7.5	7.3	6.3	5.5
Previously registered	42.9	45.8	45.6	44.8	47.3	50.0	42.2	43.4	46.9	60.7	58.1	64.3	62.0	58.2	63.1	52.1
Together	54.1	57.0	56.0	54.8	57.8	60.7	50.8	51.4	54.0	69.0	65.3	70.9	69.5	65.5	69.4	57.6

[a] Since 1st of November, 2005: database of jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
Source: *NFSZ REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_11

Figure 5.6: Entrants to the unemployment register, monthly averages, in thousands



Source: *NFSZ REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena05_06

Table 5.12: Selected time series of registered unemployment, monthly averages, in thousands and per cent

	2000	2001	2002	2003	2004	2005	2006	2007
Registered unemployment[a]	390.5	364.1	344.7	357.2	375.9	409.9	393.5	426.9
Of which: School-leavers	26.0	26.8	28.5	31.3	33.8	40.9	38.7	40.4
Non school-leavers	364.4	337.4	316.2	325.9	342.2	369.1	354.7	386.5
Male	209.7	196.4	184.6	188.0	193.3	210.4	200.9	219.9
Female	180.8	167.7	160.1	169.2	182.6	199.5	192.5	207.0
25 years old and younger	79.1	75.6	71.1	71.6	71.4	78.9	75.8	80.3
Manual workers	321.2	302.0	286.3	296.2	308.5	336.2	321.9	..
Non manual workers	69.3	62.1	58.4	61.0	67.4	73.7	71.6	..
Unemployment benefit recipients[b]	131.7	119.2	114.9	120.0	124.0	134.4	151.5	134.6
Unemployment assistance recipients[c]	143.5	131.2	113.4	116.2	120.4	133.4	121.8	133.0
Unemployment rate[d]	9.3	8.5	8.0	8.3	8.7	9.4	9.0	9.7
Shares within registered unemployed, %								
School-leavers	6.7	7.3	8.3	8.8	9.0	10.0	9.8	9.5
Male	53.7	53.9	53.5	52.6	51.4	51.3	51.1	51.5
25 years old and younger	20.3	20.8	20.6	20.0	19.0	19.2	16.5	18.8
Manual workers	82.2	82.9	83.1	82.9	82.1	82.0	81.8	..
Flows, in thousands								
Inflow to the Register	54.1	57.0	56.0	54.8	57.8	60.7	50.8	51.4
Of which: school-leavers	8.0	7.8	7.8	7.7	7.6	8.2	7.0	6.2
Outflow from the Register	56.8	59.4	55.8	53.5	54.4	59.8	51.4	48.4
Of which: school-leavers	8.2	7.7	7.5	7.6	7.1	7.9	7.1	6.0

	2008	2009	2010	2011	2012	2013	2014	2015
Registered unemployment[a]	442.3	561.8	582.7	582.9	559.1	527.6	422.4	378.2
Of which: school-leavers	41.4	49.3	52.6	52.9	61.5	66.0	54.6	47.0
Non school-leavers	400.9	512.5	530.1	529.9	497.6	461.6	367.8	331.2
Male	228.3	297.9	305.0	297.1	275.8	267.7	214.2	187.5
Female	214.0	263.9	277.7	285.8	283.3	259.9	208.2	190.7
25 years old and younger	75.9	104.3	102.8	102.3	101.1	97.8	78.2	68.8
Manual workers	..	..	..	..	..	..	..	..
Non manual workers	..	..	..	..	..	..	..	..
Unemployment benefit recipients[b]	136.5[e]	202.1	187.7	159.9	71.1	61.2	56.4	57.1
Unemployment assistance recipients[c]	147.5	156.0	167.8	182.1	200.3	184.4	132.4	126.2
Unemployment rate[d]	10.0	12.8	13.3	13.2	12.6	11.9	9.5	8.5
Shares within registered unemployed, %								
School-leavers	9.4	8.8	9.0	9.1	11.0	12.5	12.9	12.4
Male	51.6	53.0	52.3	51.0	49.3	50.8	50.7	49.6
25 years old and younger	17.2	18.6	17.6	17.5	18.1	18.5	18.5	18.2
Manual workers	..	..	..	..	..	..	..	..
Flows, in thousands								
Inflow to the Register	54.0	69.0	65.3	70.9	69.5	65.5	69.4	57.6
Of which: school-leavers	6.3	7.5	7.9	8.2	10.0	10.8	11.2	9.0
Outflow from the Register	51.3	58.4	66.4	74.2	68.1	78.4	71.3	62.1
Of which: school-leavers	6.2	6.7	7.5	8.1	8.6	11.8	11.3	9.7

[a] Since 1st of November, 2005: registered jobseekers. (The data concern the closing date of each month.) From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.

[b] Since 1st of November, 2005: jobseeker benefit recipients. From September 1st, 2011, the system of jobseeking support changed.
[c] Only recipients who are in the NFSZ register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to the year 2004, and in the number of those receiving regular social assistance from 2005 to 2008. From 2009, those receiving social assistance were included in a new support type, the on call support. This allowance was replaced by the wage replacement support from January 1, 2011, then from September 1, 2011, the name was changed to employment substitution support.
[d] Relative index: registered unemployment rate in the economically active population. From 1st of November, 2005, registered jobseekers' rate in the economically active population.
[e] The new IT system introduced at the NFSZ in 2008 made the methodological changes possible:
1) The filtering out of those returning after, or starting a break from, the number of those entering or leaving the different types of jobseeking support. The main reasons for a break are,
- work for short time periods, receipt of child support (GYES) or TGYÁS, or involvement in training.
2) Taking into account in the previous period the number of those entrants, for whom the first accounting of the jobseeking support was delayed due to missing documentation.
2008 data, comparable to 2009: 141.5 thousand people.
Source: *NFSZ REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_12

Table 5.13: The number of registered unemployed[a] who became employed on subsidised and non-subsidised employment[b]

	2009		2010		2011		2012		2013		2014		2015	
	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent
Subsidised employment	170,464	40.0	198,974	38.5	282,673	48.5	261,631	50.0	359,962	60.2	351,550	63.2	278,875	61.0
Non-subsidised employment	255,356	60.0	317,622	61.5	299,716	51.5	261,581	50.0	237,795	39.8	204,887	36.8	177,960	39.0
Total	425,820	100.0	516,596	100.0	582,389	100.0	523,212	100.0	597,757	100.0	556,437	100.0	456,835	100.0

[a] Since 1st of November, 2005: registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
[b] Annual totals, the number of jobseekers over the year who were placed in work. It reflects the placements at the time of their exit from the registry.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_13

Table 5.14: Benefit recipients and participation in active labour market programmes

Year		Unemployment benefit[a]	Regular social assistance[b]	UA for school-leavers	Do not receive provision	Public work[c]	Retraining[c]	Wage subsidy[c]	Other programmes[c]	Total
1990	In thousands	42.5	–	–	18.6	..	..	..	..	61.0
	Per cent	69.6	n.a.	n.a.	30.4	..	..	..	..	100.0
2000	In thousands	117.0	139.7	0.0	106.5	26.7	25.3	27.5	73.5	516.2
	Per cent	22.7	27.1	0.0	20.6	5.2	4.9	5.3	14.2	100.0
2001	In thousands	111.8	113.2	0.0	105.2	29.0	30.0	25.8	37.2	452.2
	Per cent	24.7	25.0	0.0	23.3	6.4	6.6	5.7	8.2	100.0
2002	In thousands	104.8	107.6	–	115.3	21.6	23.5	21.2	32.8	426.8
	Per cent	24.6	25.2	–	27.0	5.1	5.5	5.0	7.7	100.0
2003	In thousands	105.1	109.5	–	125.0	21.2	22.5	20.1	36.6	440.0
	Per cent	23.9	24.9	–	28.4	4.8	5.1	4.6	8.3	100.0
2004	In thousands	117.4	118.4	–	132.3	16.8	12.6	16.8	28.5	442.8
	Per cent	26.5	26.7	–	29.9	3.8	2.8	3.8	6.4	100.0
2005	In thousands	125.6	127.8	–	140.2	21.5	14.7	20.8	31.0	481.6
	Per cent	26.1	26.5	–	29.1	4.5	3.1	4.3	6.4	100.0
2006	In thousands	117.7	112.9	–	146.4	16.6	12.3	14.6	13.8	434.3
	Per cent	27.1	26.0	–	33.7	3.8	2.8	3.4	3.2	100.0
2007	In thousands	128.0	133.1	–	151.8	19.3	14.6	23.4	6.8	477.0
	Per cent	27.6	28.7	–	32.7	2.7	2.3	3.7	2.3	100.0
2008	In thousands	120.7[d]	145.7	–	158.2	21.2	21.2	25.0	14.1	506.1
	Per cent	23.8	28.8	–	31.3	4.2	4.2	4.9	2.8	100.0
2009	In thousands	202.8	151.9	–	215.0	135.3	13.6	17.8	54.1	790.5
	Per cent	25.7	19.2	–	27.2	17.1	1.7	2.3	6.8	100.0
2010	In thousands	159.6	163.5	–	222.4	164.5	17.8	26.7	40.3	794.8
	Per cent	20.1	20.6	–	28.0	20.7	2.2	3.4	5.1	100.0
2011	In thousands	122.8	168.2	–	239.8	91.6	13.6	20.4	39.9	696.3
	Per cent	17.6	24.2	–	34.4	13.2	2.0	2.9	5.7	100.0
2012	In thousands	56.3	185.6	–	281.1	92.4	15.4	30.0	2.2	663.0
	Per cent	8.5	28.0	–	42.4	13.9	2.3	4.5	0.3	100.0
2013	In thousands	55.3	169.3	–	264.0	149.5	42.0[e]	31.7	3.8	715.5
	Per cent	7.7	23.6	–	36.9	20.9	5.9	4.4	0.5	100.0
2014	In thousands	58.6	123.4	–	216.5	139.1	24.6	17.7	2.8	582.7
	Per cent	10.0	21.3	–	37.3	24.0	4.2	3.1	0.5	100.0
2015	In thousands	55.0	110.6	–	168.7	224.9	6.2	9.1	5.6	580.1
	Per cent	9.5	19.1	–	29.1	38.8	1.1	1.6	1.0	100.0

[a] Since 1st of November, 2005: jobseeker benefit recipients. From September 1, 2011, the system of jobseeking support changed.

[b] Only recipients who are in the NFSZ register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to the year 2004, and in the number of those receiving regular social assistance from 2005 to 2008. From 2009, those receiving social assistance were included in a new support type, the on call support. This allowance was replaced by the wage replacement support from January 1, 2011, then from September 1, 2011., the name was changed to employment substitution support.

[c] Up to the year 2008 the number financed from the MPA Decentralized Base, since 2009 the number financed from MPA, TAMOP.

Public-type employment: community service, public service, public work programmes.

Wage subsidy: wage subsidy, wage-cost subsidy, work experience acquisition assstance to career-starters, support for employment of availability allowance recipients, part-time employment, wage support for those losing their job due to the crisis.

Other support: job preservation support, support to would-be entrepreneurs, contribution to costs related to commuting to work, job creation support, jobseeker's clubs.
[d] The new IT system introduced at the NFSZ in 2008 made the methodological changes possible:
1) The filtering out of those returning after a break or starting a break from the number of those entering or leaving the different types of jobseeking support. The main reasons for a break are work for short time periods, receipt of child support (GYES) or TGYÁS, or involvement in training.
2) Taking into account in the previous period the number of those entrants, for whom the first accounting of the jobseeking support was delayed due to missing documentation.
2008 data, comparable to 2009: 134.1 thousand people.
[e] In 2013, 18.1 thousand trainees were simultaneously involved in public works programmes.
Note: The closing numbers from October of each year. For the percentage data, the sum of those registered and those taking part in labour market programmes ≈100.0.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_14

Table 5.15: The ratio of those who are employed among the former participants of ALMPs[a], per cent

Active labour market programmes	2000[b]	2001[b]	2002[b]	2003[b]	2004[b]	2005[b]	2006[b]	2007[b]	2008[b]	2009[c]	2010[c]	2011[c]	2012[c]	2013[c]	2014[c]	2015[c]
Suggested training programmes[d]	48.4	45.4	43.3	43.0	45.5	43.8	41.1	37.5	42.2	40.4	49.4	42.6	44.9	55.1	61.4	54.8
Accepted training programmes[e]	52.0	49.3	45.8	46.0	45.6	51.4	50.9	47.6	48.0	41.9	48.8	41.6	56.7	65.9	58.8	63.4
Retraining of those who are employed[f]	94.9	94.2	92.7	93.3	92.1	90.4	..	92.3	93.9	..	59.9	75.0	65.7	72.7	61.4	87.7
Support for self-employment[g]	89.4	89.2	90.7	89.6	90.7	89.6	86.4	87.6	83.6	73.1	76.4	71.5	72.6	74.1	76.3	81.0
Wage subsidy programmes[h]	62.3	59.7	62.9	62.0	64.6	62.6	62.3	63.4	65.0	72.4	90.9	69.6	70.3	73.0	56.0	70.9
Work experience programmes[i]	57.9	64.5	66.9	66.1	66.5	66.8	66.6	66.3	74.6	..	..	72.0	69.9	68.5	–	–
Further employment programme[j]	73.8	71.6	78.4	78.2	71.5	70.9	65.0	77.5	–	–	–	–	–	–	–	–

[a] The data relate to people having completed their courses successfully.
[b] Three months after the end of programmes.
[c] Six months after the end of programmes.
[d] Suggested training: group training programmes for jobseekers organized by the NFSZ.
[e] Accepted training: participation in programmes initiated by the jobseekers and accepted by NFSZ for full or partial support.
[f] Training for employed persons: training for those whose jobs are at risk of termination, if new knowledge allows them to adapt to the new needs of the employer.
[g] Support to help entrepeneurship: support of jobseekers in the amount of the monthly minimum wage or maximum HUF 3 million lump sum support (to be repaid or not), aimed at helping them become individual entrepreneurs or self-employed.
[h] Wage support: aimed at helping the employment of disadvantaged persons, who would not be able to, or would have a harder time finding work without support. The data on wage subsidies and labour cost subsidies exclude the programs supporting job seeking school leavers and student work during summer vacation.
[i] Work experience-gaining support: the support of new entrants with no work experience for 6-9 months, the amount of the support is equal to 50-80% of the wage costs. The instrument was discontinued after December 31, 2006.. In 2009 they reintroduced the work experience gaining support for skilled new entrants, for employers who ensure employment of at least 4 hours a day and for 365 days. The amount of the support is 50-100% of the wage cost. Monitoring for the first exiters is available from 2011. The program supporting the school to work transition of skilled school leavers was abolished in 2014.
[j] Further employment programmes: to support the continued employment of new entrants under the age of 25 for 9 months. Discontinued from December 31, 2006.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_15

Table 5.16: Distribution of registered unemployed[a], unemployment benefit recipients[b] and unemployment assistance recipients[c] by educational attainment

Educational attainment	2006	2007	2008	2008[e]	2009	2010	2011	2012	2013	2014	2015
Registered unemployed											
8 grades of primary school or less	41.5	42.8	43.8	–	40.0	39.2	39.9	40.1	40.1	42.4	42.4
Vocational school	32.3	31.5	30.7	–	33.1	31.4	29.8	29.1	28.9	27.6	27.1
Vocational secondary school	13.6	13.2	12.8	–	14.4	15.0	15.0	15.2	15.6	14.9	15.1
Grammar school	8.2	8.2	8.1	–	8.3	9.1	9.7	9.8	10.0	9.9	10.0
College	3.2	3.1	3.2	–	3.0	3.7	3.9	3.9	3.6	3.3	3.4
University	1.2	1.2	1.2	–	1.1	1.5	1.7	1.9	1.9	1.8	2.0
Total	100.0	100.0	100.0	–	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	359.6	402.7	415.6	–	549.0	546.0	553.3	524.4	497.0	438.6	366.9
Unemployment benefit recipients[d]											
8 grades of primary school or less	25.4	25.4	24.4	26.3	25.7	24.1	23.4	20.2	21.8	27.8	24.8
Vocational school	39.5	37.4	37.0	39.2	39.4	36.2	34.5	34.5	34.8	33.3	33.1
Vocational secondary school	18.7	19.2	19.3	18.3	18.5	19.7	20.1	21.2	21.2	19.0	20.0
Grammar school	10.1	10.9	11.0	10.6	10.1	11.6	12.3	12.7	12.0	10.9	11.8
College	4.5	5.0	6.0	5.7	4.5	5.8	6.7	7.6	6.7	5.7	6.4
University	1.8	2.1	2.3	2.1	1.7	2.6	3.1	3.8	3.6	3.3	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	91.5	119.3	92.5	126.9	200.5	165.8	145.9	53.1	53.0	60.0	50.0
Unemployment assistance recipients[c]											
8 grades of primary school or less	60.1	60.3	60.3	–	59.4	56.4	56.1	53.4	52.4	53.5	54.1
Vocational school	27.7	27.1	26.5	–	26.6	27.4	26.1	26.4	26.6	26.1	25.6
Vocational secondary school	6.5	6.8	6.8	–	7.5	8.6	9.0	10.3	10.9	10.5	10.4
Grammar school	4.5	4.4	4.7	–	4.8	5.6	6.3	7.1	7.3	7.2	7.3
College	1.0	1.1	1.2	–	1.2	1.5	1.8	2.1	2.0	1.8	1.8
University	0.3	0.3	0.4	–	0.4	0.5	0.6	0.8	0.8	0.8	0.8
Total	100.0	100.0	100.0	–	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	116.5	130.9	145.8	–	144.1	161.7	174.7	193.5	177.4	138.8	130.8

[a] Since 1st of November, 2005: registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.

[b] Since 1st of November, 2005: those receiving jobseeking support. From the 1st of September 2011, the system of jobseeking support changed.

[c] Only recipients who are in the NFSZ register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to the year 2004, and in the number of those receiving regular social assistance from 2005 to 2008. From 2009, those receiving social assistance were included in a new support type, the on call support. This allowance was replaced by the wage replacement support from January 1, 2011, then from September 1, 2011, the name was changed to employment substitution support.

[d] After 1st of November, 2005: jobseeking support. Does not contain those receiving unemployment aid prior to pension in 2004. From the 1st of September 2011, the system of jobseeking support changed.

[e] The new IT system introduced at the NFSZ in 2008 made the methodological changes possible:
1) The filtering out of those returning after or starting a break from the number of those entering or leaving the different types of jobseeking support. The main reasons for a break are, - work for short time periods, receipt of child support (GYES) or TGYÁS, or involvement in training.
2) Taking into account in the previous period the number of those entrants, for whom the first accounting of the jobseeking support was delayed due to missing documentation.
The right-hand column of 2008 contains the 2008 data in a form comparable to the 2009 data.

Note: Data from the closing date of June in each year.

Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_16

Table 5.17: Outflow from the Register of Beneficiaries

Year	Total number of outflows	Of which: became employed, %	Of which: benefit period expired, %	Year	Total number of outflows	Of which: became employed, %	Of which: benefit period expired, %
1997	327,486	26.8	58.7	2007	251,889	33.4	46.9
1998	322,496	26.5	64.5	2008	232,151	40.0	48.7
1999	320,132	26.0	67.4	2008[a]	261,573	43.4	48.9
2000	325,341	28.1	64.6	2009	345,216	37.9	56.0
2001	308,780	27.2	65.1	2010	352,535	38.9	55.8
2002	303,288	27.6	66.7	2011	329,728	39.2	55.7
2003	297,640	26.7	65.2	2012	368,803	21.9	77.8
2004	308,027	27.4	64.6	2013	328,508	21.3	75.6
2005	329,738	27.2	63.0	2014	300,516	27.0	67.4
2006	234,273	33.2	53.7	2015	296,171	32.5	63.4

[a] The new IT system introduced at the NFSZ in 2008 made the methodological changes possible:
1) The filtering out of those returning after or starting a break from the number of those entering or leaving the different types of jobseeking support. The main reasons for a break are, - work for short time periods, receipt of child support (GYES) or TGYÁS, or involvement in training.
2) Taking into account in the previous period the number of those entrants, for whom the first accounting of the jobseeking support was delayed due to missing documentation.
The row of 2008[a] contains the data from 2008 in the form comparable to the 2009 data.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_17

Table 5.18: The distribution of the total number of labour market training participants[a]

Groups of training participants	2000	2001	2002	2003	2004	2005	2006	2007
Participants in suggested training	52,198	53,447	46,802	45,261	33,002	29,252	36,212	32,747
Participants in accepted training	30,949	32,672	31,891	28,599	19,406	9,620	7,327	5,766
One Step Forward (OFS) programme	–	–	–	–	–	–	–	270
Non-employed participants together	83,147	86,211	78,693	73,859	52,407	38,872	43,539	38,783
Of which: school-leavers	22,131	20,592	19,466	18,320	12,158	9,313	1,365	1,111
Employed participants	5,026	5,308	4,142	9,036	7,487	4,853	3,602	3,467
Total	88,173	91,519	82,835	82,895	59,894	43,725	47,141	42,250
	2008	2009	2010	2011	2012	2013[b]	2014[b]	2015[b]
Participants in suggested training	48,561	41,373	50,853	32,172	43,438	22,574	10,900	330
Participants in accepted training	4,939	8,241	6,853	2,495	2,446	22,574	1,275	1,189
One Step Forward (OFS) programme	59,347	11,169	2,316	–	–	–	–	–
Non-employed participants together	112,847	60,783	57,706	34,667	45,884	132,587	200,466	61,127
Of which: school-leavers	18,719	21,103	12,030	7,935	9,976	106,333	31,083	3,981
Employed participants	37,466	12,496	336	908	716	631	827	14,389
Total	150,313	73,279	60,358	35,575	46,600	133,218	201,293	75,516

[a] The data contain the number of those financed from the NFA decentralized employment base, as well as those involved in training as a part of the HEFOP 1.1 and the TÁMOP 1.1.2 programmes.
[b] The data include public works participants simultaneously involved in training (88,004 public works participants in 2013, 143,275 public works participants in 2014, 50,124 public works participants in 2015).
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_18

Table 5.19: Employment ratio of participants ALMPs by gender, age groups and educational attainment for the programmes finished in 2015[a], per cent

	Non-employed participants			Supported self-employment[b]	Wage subsidy programme
	suggested training	accepted training	total		
By gender					
Males	53.9	66.2	54.1	80.3	69.4
Females	55.7	59.5	55.7	81.6	72.0
By age groups					
–20	45.3	58.5	45.5	83.3	70.0
20–24	52.2	55.7	52.3	87.0	73.6
25–29	54.3	77.0	54.7	86.8	70.1
–29 together	51.9	62.3	65.1	86.8	72.4
30–34	55.6	63.4	55.7	77.7	72.1
35–39	56.0	56.7	56.0	82.8	74.0
40–44	56.7	64.8	56.8	74.4	71.8
45–49	56.9	62.7	57.0	81.3	72.5
50–54	58.3	69.8	58.5	81.4	73.0
55+	56.3	73.7	56.6	70.8	64.2
By educational attainment					
Less than primary school	54.2	64.3	54.3	75.6	63.6
Primary school	52.9	84.2	53.1	100.0	53.0
Vocational school for skilled workers	57.2	67.6	57.4	80.7	71.0
Vocational school	56.1	60.0	56.1	89.5	67.4
Vocational secondary school	54.8	60.3	55.0	82.8	74.8
Technicians secondary school	56.2	80.0	57.1	83.6	76.0
Grammar school	54.2	52.4	54.2	80.9	72.2
College	52.2	47.6	52.0	81.3	79.2
University	50.2	69.2	51.3	76.6	79.0
Total	55.4	63.7	55.5	81.0	70.9

[a] Includes all kinds of wage subsidies except financial support for student work during vacation.
[a] Survival rate.
Note: 6 months after the end of each programme.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_19

Table 5.20: Distribution of the average annual number of those with no employment status who participate in training categorised by the type of training, percentage

Types of training	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Approved qualification	78.8	78.7	77.6	78.3	75.1	72.9	71.5	69.0	65.8	63.6	65.2	68.6	71.6	50.2	53.3	59.4
Non-approved qualification	14.7	14.0	13.6	12.6	15.0	14.5	16.9	19.9	22.8	26.4	25.4	21.1	19.0	44.2	43.2	37.9
Foreign language learning	6.5	7.3	8.8	9.1	9.9	12.6	11.5	11.1	11.4	10.0	9.4	10.3	9.4	5.6	3.5	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_20

Table 5.21: The distribution of those entering training programmes by age groups and educational level

	2010	2011	2012	2013			2014			2015		
				training	training for public works participants	together	training	training for public works participants	together	training	training for public works participants	together
Total number of entrants	39,780	18,464[a]	33,540	28,089	78,052	106,141	24,137	68,518	92,655	12,016	28,036	40,052
By age groups, %												
–20	3.8	4.0	3.2	5.6	2.8	3.6	6.3	4.1	4.7	11.5	4.8	6.8
20–24	23.9	27.2	23.4	33.8	12.7	18.3	30.0	15.3	19.1	39.3	15.8	22.8
25–44	52.4	46.5	46.7	43.8	47.3	46.4	43.7	47.8	46.7	35.8	49.5	45.4
45–49	8.8	8.3	10.0	7.1	12.9	11.3	7.6	11.5	10.5	6.0	10.5	9.2
50+	11.0	14.0	16.6	9.7	24.3	20.4	12.4	21.4	19.0	7.4	19.4	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
By level of education, %												
Less than primary school	3.0	0.7	2.7	1.0	9.7	7.4	1.2	8.1	6.3	0.8	6.9	5.1
Primary school	24.5	28.2	34.4	24.9	53.3	45.8	28.7	49.8	44.3	35.2	44.6	41.8
Vocational school	25.5	24.8	26.2	22.3	25.6	24.7	22.7	23.3	23.2	19.7	21.5	21.0
Vocational and technical secondary school	23.7	24.2	19.0	27.1	6.5	11.9	24.9	9.7	13.6	23.5	14.0	16.8
Grammar school	15.8	15.7	12.9	19.0	4.2	8.1	17.6	7.0	9.8	17.8	9.4	11.9
College, university	7.5	6.4	4.8	5.8	0.7	2.0	4.9	2.1	2.8	3.0	3.6	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] The drastic decrease in the number of training programmes offered was due to the centralization of decision-making regarding the financing of training programmes, and the concurrent new requirement according to which only training programmes with a verifiable direct effect on employment were approved. Due to these, the number of preventative and general knowledge training programmes among those supported decreased. The majority of training participants were enrolled within the framework of EU programmes.

The significant growth in the number of trainees, during and following 2012, was predominantly explained by the inclusion into training of public works participants. The data for 2013 and 2014 make a distinction between those and other trainees.

Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent05_21

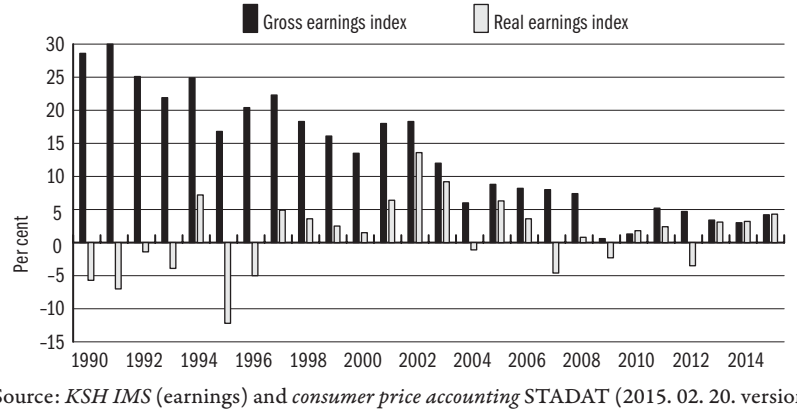
Table 6.1: Annual changes of gross nominal and net real earnings

Year	Gross earnings	Net earnings	Gross earnings index	Net earnings index	Consumer price index	Real earnings index
	HUF		previous year = 100			
1990	13,446	10,108	128.6	121.6	128.9	94.3
1995	38,900	25,891	116.8	112.6	128.2	87.8
1996	46,837	30,544	120.4	117.4	123.6	95.0
1997	57,270	38,145	122.3	124.1	118.3	104.9
1998	67,764	45,162	118.3	118.4	114.3	103.6
1999	77,187	50,076	116.1	112.7	110.0	102.5
2000	87,750	55,785	113.5	111.4	109.8	101.5
2001	103,554	64,913	118.0	116.2	109.2	106.4
2002	122,481	77,622	118.3	119.6	105.3	113.6
2003	137,193	88,753	112.0	114.3	104.7	109.2
2004	145,523	93,715	106.1	105.6	106.8	98.9
2005	158,343	103,149	108.8	110.1	103.6	106.3
2006	171,351	110,951	108.2	107.6	103.9	103.6
2007	185,018	114,282	108.0	103.0	108.0	95.4
2008	198,741	121,969	107.4	107.0	106.1	100.8
2009	199,837	124,116	100.6	101.8	104.2	97.7
2010	202,525	132,604	101.3	106.8	104.9	101.8
2011	213,094	141,151	105.2	106.4	103.9	102.4
2012	223,060	144,085	104.7	102.1	105.7	96.6
2013	230,714	151,118	103.4	104.9	101.7	103.1
2014	237,695	155,717	103.0	103.0	99.8	103.2
2015	247,784	162,300	104.2	104.2	99.9	104.3

Source: *KSH IMS* (earnings) and *consumer price accounting*. Gross earnings, gross earnings index: 2000–: STADAT (2016. 02. 19. version). Net earnings, net earnings index: 2008–: STADAT (2016.02.19.version). Consumer price index: 1990–: STADAT (2016. 02. 14. version). Real earnings index: 1990–: STADAT (2016. 02.19. version).

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent06_01

Figure 6.1: Annual changes of gross and net real earnings



Source: *KSH IMS* (earnings) and *consumer price accounting* STADAT (2015. 02. 20. version).

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena06_01

Table 6.2.a: Gross earnings ratios in the economy, HUF/person/month

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Agriculture, forestry and fishing	103,190	112,388	122,231	133,570	137,101	143,861	153,301	164,136	171,921	180,251	189,169
Mining and quarrying	171,465	190,530	202,985	225,650	244,051	234,243	254,607	271,012	279,577	287,036	290,096
Manufacturing	145,997	158,597	172,277	183,081	190,331	200,692	213,281	230,877	241,170	253,162	263,336
Electricity, gas, steam and air conditioning supply	243,039	265,912	294,241	321,569	345,035	363,900	379,606	404,073	410,485	422,444	438,629
Water supply; sewerage, waste management and remediation activities	140,699	151,912	164,572	178,049	181,818	193,604	207,614	223,206	224,654	224,447	231,073
Construction	106,608	117,626	136,301	146,475	152,204	153,130	156,682	163,649	177,790	185,680	196,810
Wholesale and retail trade; repair of motor vehicles and motorcycles	131,068	145,243	158,077	171,780	175,207	185,812	196,942	212,521	218,936	223,882	230,226
Transportation and storage	149,068	162,091	173,776	186,376	196,350	200,129	210,146	217,794	223,410	230,138	239,102
Accommodation and food service activities	95,823	102,908	112,222	120,600	122,561	122,699	125,757	139,731	147,023	152,874	157,234
Information and communication	288,876	306,792	328,902	358,217	366,752	368,113	392,963	410,045	426,460	449,412	460,319
Financial and insurance activities	349,809	401,580	390,511	431,601	427,508	433,458	456,980	459,744	470,966	486,054	494,014
Real estate activities	134,409	145,550	159,225	169,845	177,747	182,903	184,829	219,287	212,391	214,163	221,378
Professional, scientific and technical activities	200,830	212,963	244,998	281,150	292,974	297,489	303,292	330,860	320,422	345,198	367,193
Administrative and support service activities	119,555	128,486	139,127	147,125	149,131	145,576	149,675	163,300	169,223	181,338	197,808
Public administration and defence; compulsory social security	207,356	223,009	253,335	267,657	234,696	242,958	252,848	247,139	258,803	262,055	282,264
Education	181,444	191,211	193,250	204,600	194,958	195,930	192,984	197,344	216,927	245,933	258,391
Human health and social work activities	144,100	151,889	160,050	169,977	161,265	142,282	153,832	151,446	151,287	143,047	146,842
Arts, entertainment and recreation	154,312	161,416	183,898	183,813	179,199	179,976	192,407	209,930	216,869	226,327	213,265
Other service activities	133,846	140,893	153,512	157,950	160,375	150,025	162,490	175,872	174,777	181,601	192,884
National economy, total	158,343	171,351	185,018	198,741	199,837	202,525	213,094	223,060	230,664	237,695	247,784
Of which:											
- Business sector	148,555	162,531	177,415	192,044	200,304	206,863	217,932	233,829	242,191	252,664	262,456
- Budgetary institutions	182,185	193,949	206,225	219,044	201,632	195,980	203,516	200,027	207,191	209,706	220,315

Note: The data are recalculated based on the industrial classification system in effect from 2008.
Source: *KSH* mid-year IMS.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent06_02a

Table 6.2.b: Gross earnings ratios in the economy, per cent

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Agriculture, forestry and fishing	65.2	65.6	66.1	67.2	68.6	71.0	72.0	73.6	74.5	75.8	76.3
Mining and quarrying	108.3	111.2	109.7	113.5	122.1	115.5	119.5	120.9	121.2	120.7	117.1
Manufacturing	92.2	92.6	93.1	92.1	95.2	99.1	100.0	103.4	104.6	106.4	106.3
Electricity, gas, steam and air conditioning supply	153.5	155.2	159.0	161.8	172.7	179.6	178.2	181.1	178.0	177.8	177.0
Water supply; sewerage, waste management and remediation activities	88.9	88.7	88.9	89.6	91.0	95.6	97.4	100.0	97.4	94.7	93.3
Construction	67.3	68.6	73.7	73.7	76.2	75.5	73.5	73.4	77.1	78.0	79.4
Wholesale and retail trade; repair of motor vehicles and motorcycles	82.8	84.8	85.4	86.4	87.7	91.7	92.4	95.3	94.9	94.3	92.9
Transportation and storage	94.1	94.6	93.9	93.8	98.3	98.9	98.6	97.8	96.9	96.9	96.5
Accommodation and food service activities	60.5	60.1	60.7	60.7	61.3	60.6	59.0	62.7	63.7	64.4	63.5
Information and communication	182.4	179.0	177.8	180.2	183.5	181.7	184.4	183.9	184.9	189.0	185.8
Financial and insurance activities	220.9	234.4	211.1	217.2	213.9	214.0	214.5	206.2	204.2	204.1	199.4
Real estate activities	84.9	84.9	86.1	85.5	88.9	90.2	86.8	98.3	92.1	90.5	89.3
Professional, scientific and technical activities	126.8	124.3	132.4	141.5	146.6	146.9	142.4	148.4	138.9	145.1	148.2
Administrative and support service activities	75.5	75.0	75.2	74.0	74.6	71.9	70.3	73.3	73.4	77.3	79.8
Public administration and defence; compulsory social security	131.0	130.1	136.9	134.7	117.4	120.2	118.7	110.8	112.2	110.2	113.9
Education	114.6	111.6	104.4	102.9	97.6	96.7	90.6	88.5	94.0	103.4	104.3
Human health and social work activities	91.0	88.6	86.5	85.5	80.7	70.3	72.2	67.9	65.6	60.2	59.3
Arts, entertainment and recreation	97.5	94.2	99.4	92.5	89.7	88.8	90.3	94.1	94.0	95.0	86.1
Other service activities	84.5	82.2	83.0	79.5	80.3	74.1	76.1	78.9	75.8	76.1	77.8
National economy, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Of which:											
- Business sector	93.8	94.9	95.9	96.6	100.2	102.1	102.3	104.8	105.0	106.3	105.9
- Budgetary institutions	115.1	113.2	111.5	110.2	100.9	96.8	95.5	89.7	89.8	88.2	88.9

Note: The data are recalculated based on the industrial classification system in effect from 2008.
Source: *KSH* mid-year IMS.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent06_02b

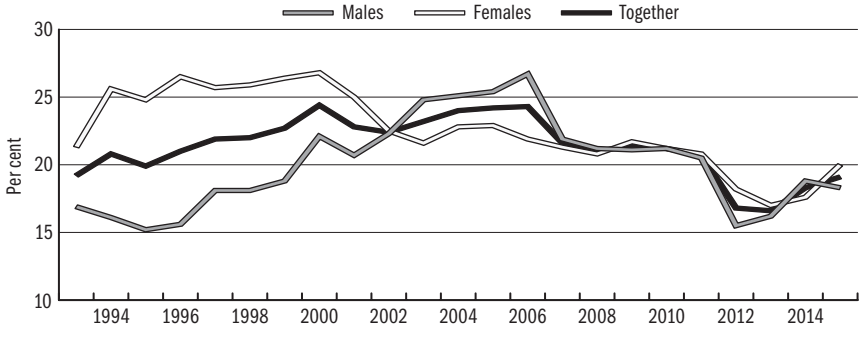
Table 6.3: Regression-adjusted earnings differentials

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Male	0.1490	0.1500	0.1550	0.1790	0.1700	0.1500	0.1550	0.1570	0.1560	0.1330	0.1240
Less than primary school	-0.3900	-0.4800	-0.4010	-0.4390	-0.3970	-0.5750	-0.5110	-0.5360	-0.4860	-0.5240	-0.5430
Primary school	-0.3670	-0.3730	-0.3800	-0.4170	-0.4010	-0.4540	-0.4290	-0.4220	-0.4170	-0.4150	-0.3540
Vocational school	-0.2650	-0.2750	-0.2840	-0.2920	-0.2770	-0.3050	-0.2810	-0.2640	-0.2660	-0.2260	-0.1860
College, university	0.5870	0.5900	0.5810	0.5620	0.5580	0.6190	0.6220	0.6160	0.5750	0.6000	0.5980
Estimated labour market experience	0.0237	0.0238	0.0252	0.0255	0.0248	0.0259	0.0267	0.0256	0.0238	0.0244	0.0069
Square of estimated labour market experience	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	0.0000
Public sector	0.1600	0.1130	0.0876	-0.0009	0.0257	-0.1260	-0.1450	-0.1680	-0.2800	-0.2600	-0.0622

Note: the results indicate the earnings differentials of the various groups relative to the reference group in log points (approximately percentage points). All parameters are significant at the 0.01 level. The region parameters can be seen in Table 9.6.
Reference categories: female, with leaving certificate (general education certificate), not in the public sector, working in the Central-Transdanubia region.
Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent06_03

Figure 6.2: The percentage of low paid workers by gender, per cent



Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena06_02

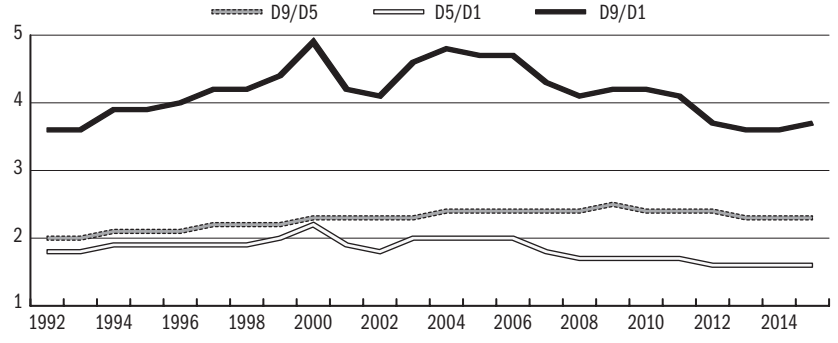
Table 6.4: Percentage of low paid workers[a] by gender, age groups, level of education and industries

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
By gender																
Males	22.1	20.7	22.3	24.8	25.1	25.4	26.7	21.9	21.2	21.1	21.2	20.5	15.5	16.2	18.8	18.3
Females	26.8	25.0	22.5	21.6	22.8	22.9	21.9	21.3	20.8	21.7	21.2	20.8	18.2	17.0	17.6	20.0
By age groups																
–24	37.0	35.5	37.6	39.9	43.9	44.2	46.3	40.1	34.6	38.9	38.2	36.6	26.4	30.9	29.7	31.2
25–54	22.8	21.9	21.8	22.3	23.6	24.0	24.2	21.4	20.6	21.0	20.9	20.4	16.3	16.3	18.0	18.5
55+	19.8	18.1	16.2	15.3	16.5	16.5	16.4	15.8	15.5	17.6	18.1	17.6	17.0	14.3	16.4	18.5
By level of education																
8 grades of primary school or less	43.4	40.4	38.3	37.1	39.6	41.2	40.1	41.4	41.3	47.4	43.4	45.4	38.6	38.7	41.1	42.1
Vocational school	31.2	29.4	32.1	35.4	35.7	36.8	37.9	32.9	32.1	33.5	33.3	31.3	25.2	24.0	27.5	28.3
Secondary school	18.8	18.0	16.5	17.7	18.6	18.6	19.7	16.1	15.4	16.4	17.3	17.2	13.7	15.3	17.0	18.4
Higher education	4.7	4.7	3.6	3.5	3.9	3.8	4.3	2.5	2.4	2.3	2.9	2.7	2.0	2.5	3.0	2.9
By industries[b]																
Agriculture, forestry, fishing	38.0	34.3	37.9	37.3	37.1	37.5	41.6	37.9	36.6	36.7	34.6	31.8	21.8	26.3	28.2	25.8
Manufacturing	20.0	19.1	19.4	25.4	24.7	22.1	24.1	20.8	23.5	23.0	20.5	19.4	13.7	14.1	16.7	15.1
Construction	42.9	41.7	44.8	49.8	51.2	50.2	55.2	43.1	37.5	38.1	43.0	41.9	31.8	35.9	43.8	41.0
Trade, repairing	42.8	41.3	44.0	49.0	49.3	51.5	49.4	40.9	35.9	35.2	36.4	35.2	24.2	27.3	28.9	31.3
Transport, storage, communication	11.3	10.6	10.5	13.6	12.6	13.8	15.1	13.2	14.6	11.2	13.3	13.1	10.1	11.6	14.9	13.8
Financial intermediation	25.3	22.6	20.7	23.1	23.9	24.6	26.2	20.9	20.0	20.5	20.7	19.6	15.0	16.6	19.0	16.5
Public administration and defence, compulsory social security	13.7	13.8	9.3	6.6	8.2	6.0	6.3	7.4	6.7	8.7	8.8	9.8	13.4	9.1	11.8	15.3
Education	21.5	22.6	16.0	4.8	6.9	8.8	6.1	9.0	7.2	11.9	10.6	11.2	16.3	14.9	10.2	15.7
Health and social work	26.7	19.9	16.1	6.3	8.4	10.3	8.6	12.6	11.1	14.5	13.8	14.3	18.2	13.6	9.2	14.6
Total	24.4	22.8	22.4	23.2	24.0	24.2	24.3	21.6	21.0	21.4	21.2	20.7	16.8	16.6	18.3	19.1

[a] Percentage of those who earn less than 2/3 of the median earning amount.
[b] 2000–2008: by TEÁOR'03, 2009: by TEÁOR'08.
Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent06_04

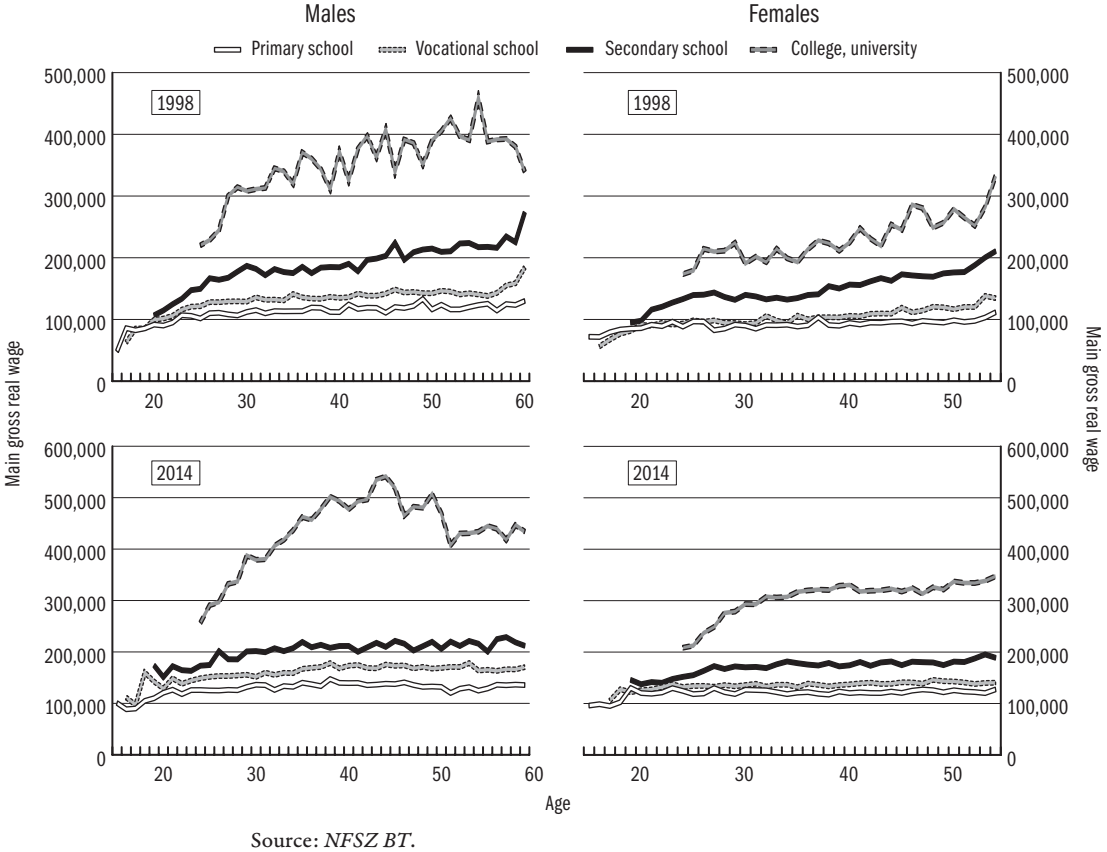
Figure 6.3: The dispersion of gross monthly earnings



Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena06_03

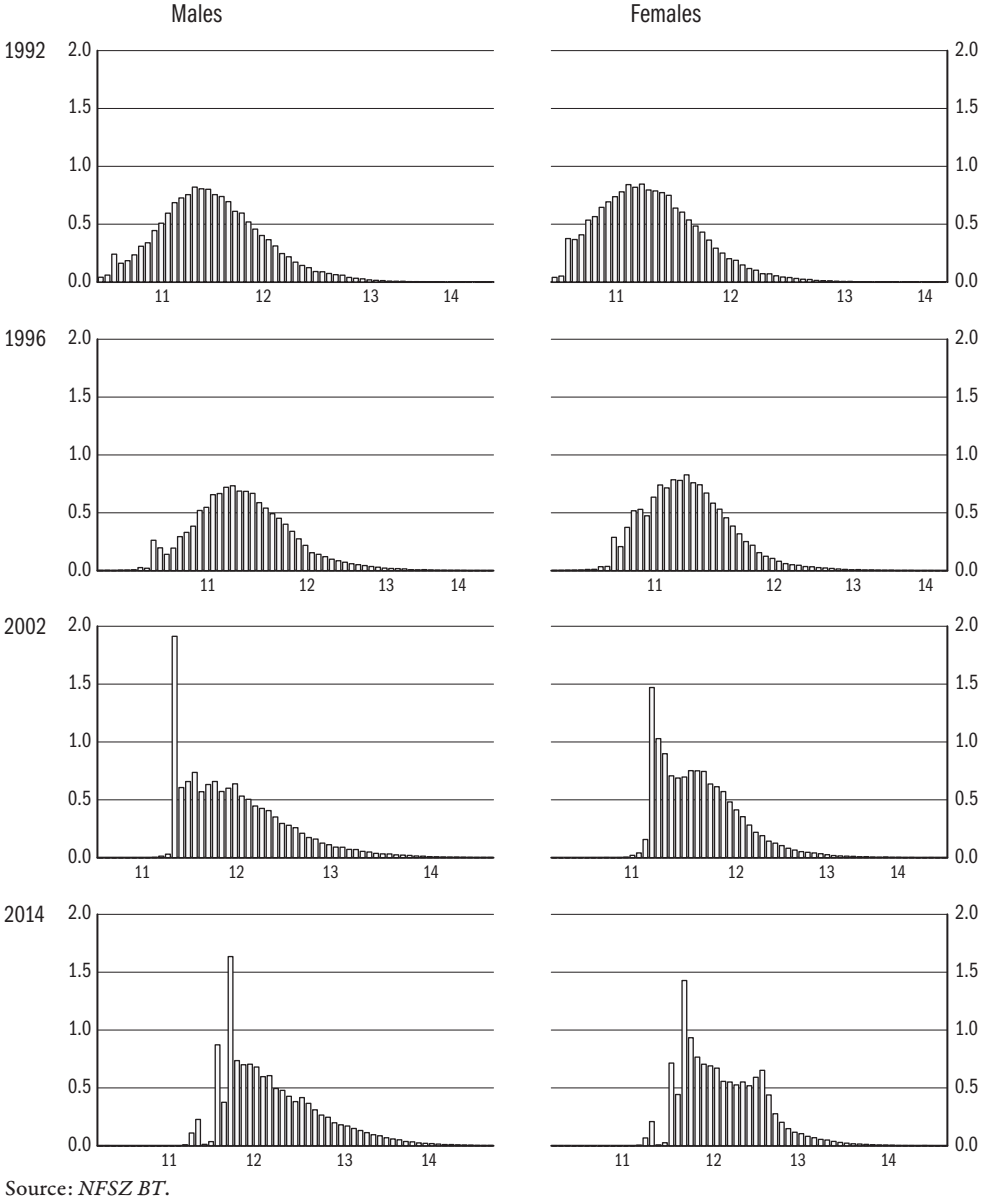
Figure 6.4: Age-income profiles by education level in 1998 and 2014, women and men



Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena06_04

Figure 6.5: The dispersion of the logarithm of gross real earnings (2014 = 100%)



Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena06_05

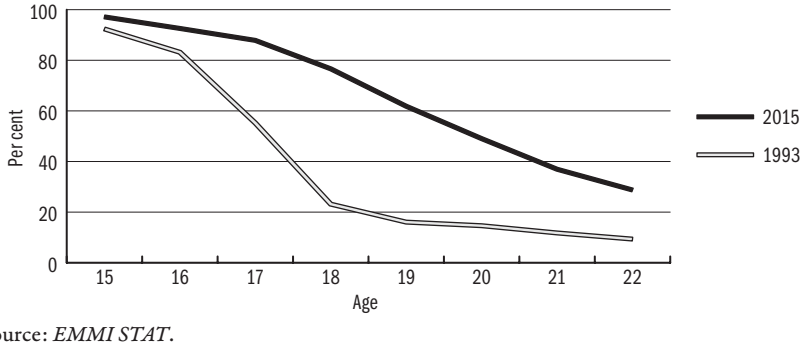
Table 7.1: School-leavers by level of education, full-time education

Year	Primary school	Vocational school	Secondary school	College, university
1980	119,809	49,232	43,167	14,859
1990	164,614	54,933	53,039	15,963
1995	122,333	57,057	70,265	20,024
1996	120,529	54,209	73,413	22,128
1997	116,708	46,868	75,564	24,411
1998	113,651	42,866	77,660	25,338
1999	114,302	38,822	73,965	27,049
2000	114,250[a]	35,500[a]	72,200[a]	29,843
2001	114,200[a]	33,500[a]	70,372	29,746
2002	113,923	26,941	69,612	30,785
2003	117,747	26,472	71,944	31,911
2004	113,179	26,620	76,669	31,633
2005	115,626	25,519	77,025	32,732
2006	114,240	24,427	76,895	29,871
2007	108,889	17,967	77,527	29,059
2008	106,426	19,289	68,453	28,957
2009	102,798	20,138	78,004	36,064
2010	103,643	20,693	77,930	38,456
2011	96,825	20,720	76,354	35,433
2012	92,254	29,299	73,802	36,262
2013	88,913	21,948	68,407	37,089
2014	87,102	21,684	69,148	39,226
2015[b]	89,034	21,348	65,326	41,083

[a] Estimated data.
[b] Preliminary data.
Note: Primary school: completed the 8th grade. Other levels: received certificate. Excluding special schools, from the year 2000 excluding special education. College, university: from 2007 including graduates in BA/BSc, MA/MSc and undivided (joint bachelor and master courses) training.
Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent07_01

Figure 7.1: Full time students as a percentage of the different age groups



Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena07_01

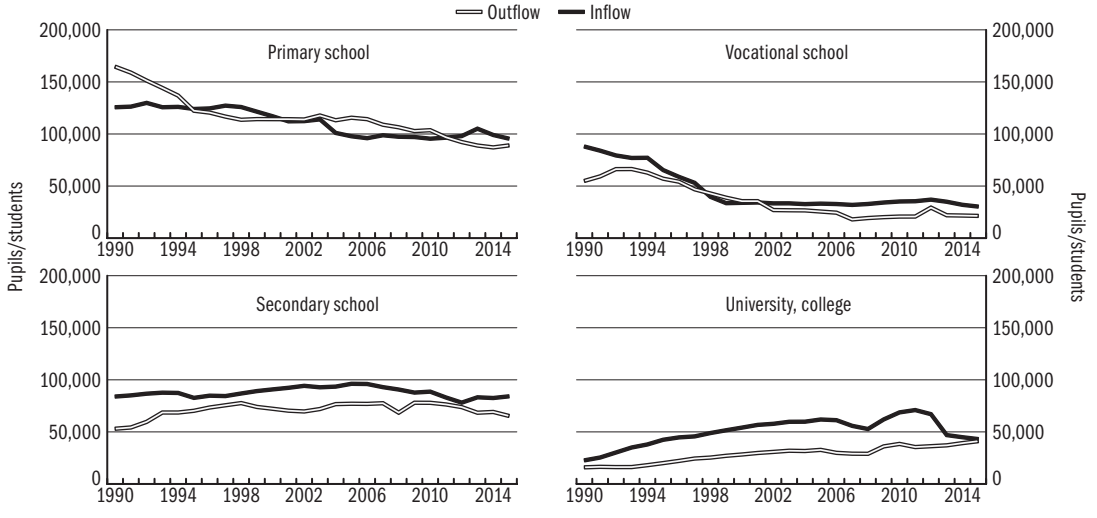
Table 7.2: Pupils/students entering the school system by level of education, full-time education

Year	Primary school	Vocational school	Secondary school	College, university
1990	125,665	87,932	83,939	22,662
2000	117,000[a]	33,900[a]	90,800[a]	54,100[a]
2001	112,144	34,210	92,322	56,709
2002	112,345	33,363	94,223	57,763
2003	114,020	33,394	92,817	59,699
2004	101,021	32,645	93,469	59,783
2005	97,810	33,114	96,181	61,898
2006	95,954	32,732	95,989	61,231
2007	98,766	31,897	92,957	55,789
2008	97,345	32,774	90,667	52,755
2009	97,083	34,177	87,731	61,948
2010	95,469	35,177	88,644	68,715
2011	96,455	35,420	83,025	70,954
2012	98,013	36,954	78,090	67,014
2013	105,075	34,927	83,198	46,931
2014	99,048	31,976	82,532	44,867
2015[b]	95,519	30,287	84,143	43,080

[a] Estimated data.
[b] Preliminary data.
Note: Excluding special schools, from the year 2000 excluding special education. College, university: from the 2005/2006 school year including first year students in BA/BSc, MA/MSc and undivided (joint bachelor and master courses) training. Figures on entrants to bachelor and master programs before and after the 2013/2014 Autumn semester are not comparable.
Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent07_02

Figure 7.2: Flows of the educational system by level



Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena07_02

Table 7.3: The number of full time pupils/students by level of education

Year	Primary school	Vocational school	Secondary school	College, university
2001/02	905,932	124,615	420,889	184,071
2002/03	893,261	123,069	426,384	193,155
2003/04	874,296	123,206	437,909	204,910
2004/05	854,930	123,008	438,496	212,292
2005/06	828,594	121,815	441,002	217,245
2006/07	800,635	119,520	443,166	224,616
2007/08	783,948	122,973	441,886	227,118
2008/09	765,822	123,640	439,957	224,894
2009/10	752,896	128,479	443,078	222,564
2010/11	736,977	129,076	438,892	218,057
2011/12	729,000	129,250	428,122	218,304
2012/13	725,068	117,356	413,531	214,320
2013/14	730,664	104,925	388,717	209,208
2014/15	731,575	92,389	370,764	203,576
2015/16[a]	728,604	80,346	363,378	195,419

[a] Preliminary data.

Note: Excluding special education schools, from the 2000/2001 school year excluding special education. From the 2001/2002 school year, students in grades 5-8 who attend a 6 or 8 year secondary general school are included in the number of high school students. College, university: from the 2005/2006 school year, includes students in BA/BSc, MA/MSc and undivided (joint bachelor and master courses) training.

Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent07_03

Table 7.4: The number of part-time pupils/students by level of education

Year	Primary school	Vocational school	Secondary school	College, university
2001/02	2,793	2,453	95,231	129,167
2002/03	2,785	3,427	93,172	148,032
2003/04	3,190	3,216	93,322	162,037
2004/05	2,766	3,505	90,321	166,174
2005/06	2,543	4,049	89,950	163,387
2006/07	2,319	4,829	91,035	151,203
2007/08	2,245	5,874	83,008	132,273
2008/09	2,083	4,983	74,008	115,957
2009/10	2,035	6,594	70,124	105,511
2010/11	1,997	8,068	76,404	99,962
2011/12	2,264	10,383	74,204	98,081
2012/13	2,127	12,776	72,808	85,316
2013/14	2,587	12,140	70,588	73,088
2014/15	2,548	9,946	66,522	67,904
2015/16[a]	2,293	9,685	63,345	64,110

[a] Preliminary data.

Note: College, university: from the 2005/2006 school year, including students in BA/BSC, MA/MSc and undivided (joint bachelor and master courses) training.

Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent07_04

Table 7.5: Number of applicants for full-time high school courses

Year	Applying	Admitted	Admitted as a percentage of applied	Applying as a percentage of the secondary school graduates in the given year	Admitted as a percentage of the secondary school graduates in the given year
1980	33,339	14,796	44.4	77.2	34.3
1989	44,138	15,420	34.9	84.0	29.3
1990	46,767	16,818	36.0	88.2	31.7
1991	48,911	20,338	41.6	90.2	37.5
1992	59,119	24,022	40.6	99.1	40.3
1993	71,741	28,217	39.3	104.6	41.1
1994	79,805	29,901	37.5	116.3	43.6
1995	86,548	35,081	40.5	123.2	49.9
1996	79,369	38,382	48.4	108.1	52.3
1997	81,924	40,355	49.3	108.4	53.4
1998	81,065	43,629	53.8	104.4	56.2
1999	82,815	44,538	53.8	112.0	60.2
2000	82,957	45,546	54.9	114.9	63.1
2001	84,380	49,874	59.1	119.8	70.8
2002	88,978	52,552	59.1	127.8	75.5
2003	87,110	52,703	60.5	121.1	73.3
2004	95,871	55,179	57.6	125.0	72.0
2005	91,583	52,863	57.7	118.9	68.6
2006	84,262	53,983	64.1	109.6	70.2
2007	74,849	50,941	68.1	96.5	65.7
2008	66,963	52,081	77.8	97.8	76.1
2009	90,878	61,262	67.4	116.5	78.5
2010	100,777	65,503	65.0	129.3	84.1
2011	101,835	66,810	65.6	133.4	87.5
2012	84,075	61,350	73.0	113.9	83.1
2013	75,392	56,927	75.5	110.2	83.2
2014	79,765	54,688	68.6	115.4	79.1
2015	79,255	53,069	67.0	121.3	81.2

Note: Including students applying and admitted to BA/BSc, MA/MSc and undivided (joint bachelor and master courses) training. From 2008 students applying and admitted in repeated, spring and autumn admission procedures altogether.
Source: *EMMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent07_05

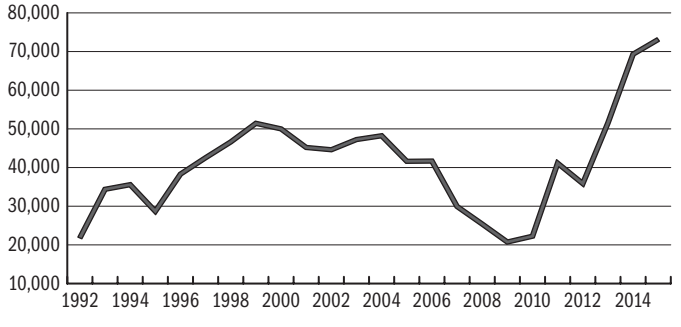
Table 8.1: The number of vacancies[a] reported to the local offices of the NFSZ

Year	Number of vacancies at closing date	Number of registered unemployed[b] at closing date	Vacancies per 100 registered unemployed[b]
1991	14,343	227,270	6.3
1992	21,793	556,965	3.9
1993	34,375	671,745	5.1
1994	35,569	568,366	6.3
1995	28,680	507,695	5.6
1996	38,297	500,622	7.6
1997	42,544	470,112	9.0
1998	46,624	423,121	11.0
1999	51,438	409,519	12.6
2000	50,000	390,492	12.8
2001	45,194	364,140	12.4
2002	44,603	344,715	12.9
2003	47,239	357,212	13.2
2004	48,223	375,950	12.8
2005	41,615	409,929	10.2
2006	41,677	393,465	10.6
2007	29,933	426,915	7.0
2008	25,386	442,333	5.7
2009	20,739	561,768	3.7
2010	22,241	582,664	3.8
2011	41,123	582,868	7.1
2012	35,850	559,102	6.4
2013	51,524	527,624	9.8
2014	69,316	422,445	16.4
2015	73,122	378,181	19.3

[a] Monthly average stock figures.
[b] Since 1st of November, 2005: registered jobseekers.
Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent08_01

Figure 8.1: The number of vacancies reported to the local offices of the NFSZ



Source: *NFSZ*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena08_01

Table 8.2: Firms intending to increase/decrease their staff[a], per cent

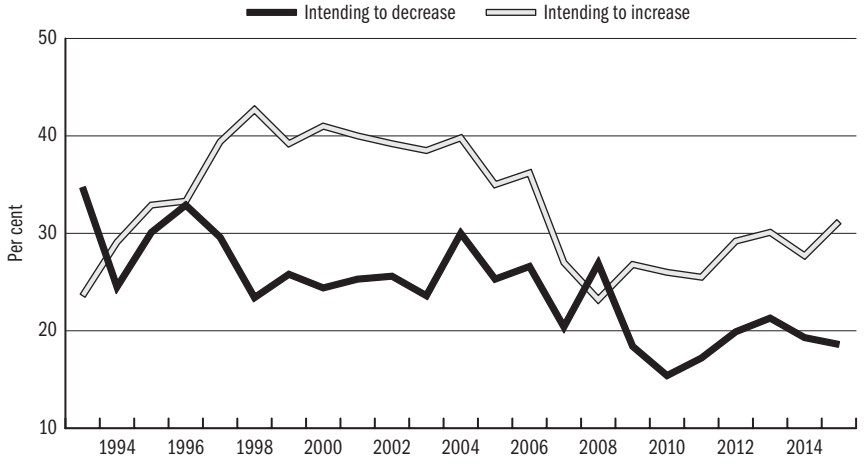
Year		Intending to decrease	Intending to increase	Year		Intending to decrease	Intending to increase
1994	I.	24.5	29.1	2002	I.	25.6	39.2
	II.	21.0	29.7		II.	27.9	35.4
1995	I.	30.1	32.9	2003	I.	23.6	38.5
	II.	30.9	27.5		II.	32.1	34.3
1996	I.	32.9	33.3	2004		30.0	39.8
	II.	29.4	30.4	2005		25.3	35.0
1997	I.	29.6	39.4	2006		26.6	36.2
	II.	30.7	36.8	2007		20.4	27.0
1998	I.	23.4	42.7	2008		26.9	23.2
	II.	28.9	37.1	2009		18.4	26.8
1999	I.	25.8	39.2	2010		15.4	26.0
	II.	28.8	35.8	2011		17.2	25.5
2000	I.	24.4	41.0	2012		19.9	29.2
	II.	27.2	36.5	2013		21.3	30.1
2001	I.	25.3	40.0	2014		19.3	27.7
	II.	28.6	32.6	2015		18.6	31.2

[a] In the period of the next half year following the interview date, in the sample of NFSZ PROG, since 2004: 1 year later from the interview date.

Source: *NFSZ PROG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent08_02

Figure 8.2: Firms intending to increase/decrease their staff



Source: *NFSZ PROG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena08_02

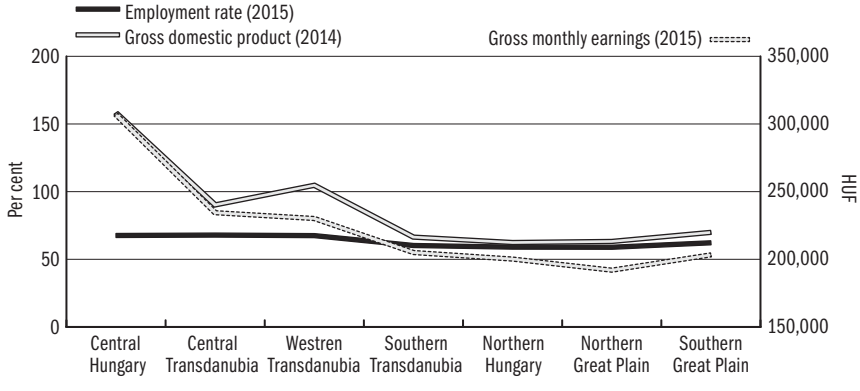
Table 9.1: Regional inequalities: Employment rate[a]

Year	Central Hungary	Central Transdanubia	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	Total
1993	58.4	55.2	60.5	52.9	49.3	48.4	53.4	54.5
1994	57.2	54.4	59.9	52.4	47.7	47.5	53.0	53.5
1995	57.1	53.1	58.5	48.8	46.3	46.4	53.0	52.5
1996	56.8	52.7	59.3	50.3	45.7	45.6	52.8	52.4
1997	56.8	53.6	59.8	50.0	45.7	45.2	53.6	52.5
1998	57.7	56.0	61.6	51.5	46.2	46.4	54.2	53.7
1999	59.7	58.5	63.1	52.8	48.1	48.8	55.3	55.6
2000	60.5	59.2	63.4	53.5	49.4	49.0	56.0	56.3
2001	60.6	59.3	63.1	52.3	49.7	49.5	55.8	56.2
2002	60.9	60.0	63.7	51.6	50.3	49.3	54.2	56.2
2003	61.7	62.3	61.9	53.4	51.2	51.6	53.2	57.0
2004	62.9	60.3	61.4	52.3	50.6	50.4	53.6	56.8
2005	63.3	60.2	62.0	53.4	49.5	50.2	53.8	56.9
2006	63.1	61.3	62.5	53.2	50.7	51.1	54.0	57.4
2007	62.9	61.4	62.8	51.0	50.4	50.3	54.5	57.0
2008	62.7	59.9	61.6	50.8	49.4	49.5	54.0	56.4
2009	61.3	57.3	59.2	51.7	48.2	48.0	52.9	55.0
2010	60.0	57.0	58.6	52.4	48.3	49.0	54.1	54.9
2011	60.2	59.1	59.9	51.1	48.4	49.9	54.1	55.4
2012	61.7	59.2	61.0	51.9	49.1	51.8	55.5	56.7
2013	62.7	60.7	61.8	54.8	51.6	53.2	56.3	58.1
2014	66.0	64.3	65.8	58.6	55.7	57.3	59.7	61.8
2015	67.6	67.9	67.5	60.2	59.0	58.9	62.2	63.9

[a] Age: 15–64.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_01

Figure 9.1: Regional inequalities: Labour force participation rates, gross monthly earnings and gross domestic product in NUTS-2 level regions



Source: Employment rate: *KSH MEF*; gross domestic product: *KSH*; earnings: *NFSZ BT*.

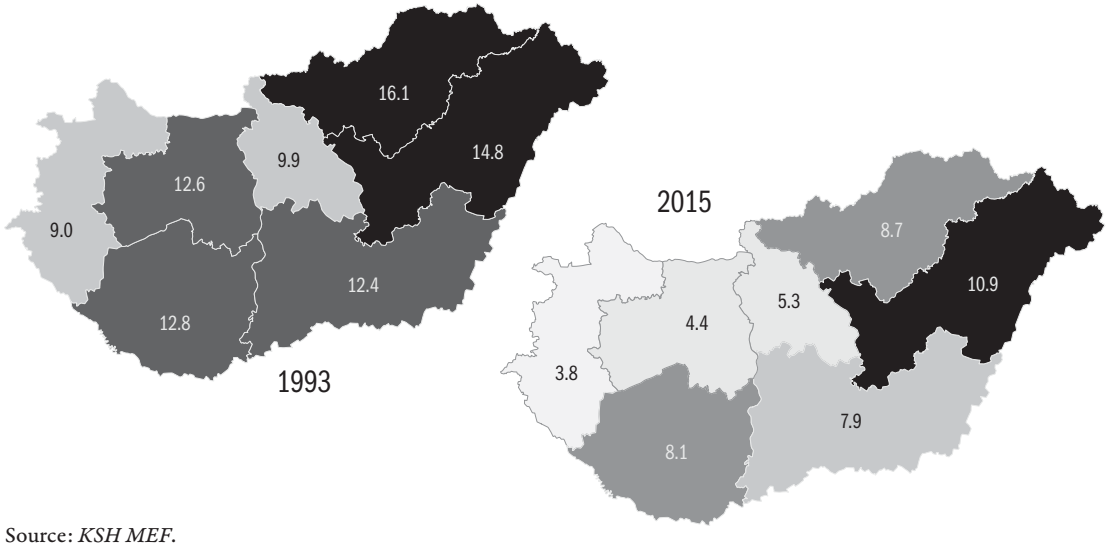
Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_01

Table 9.2: Regional inequalities: LFS-based unemployment rate[a]

Year	Central Hungary	Central Transdanubia	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	Total
1995	7.4	11.0	6.9	12.1	16.0	13.8	9.3	10.3
1996	8.2	10.4	7.1	9.4	15.5	13.2	8.4	10.0
1997	7.0	8.1	6.0	9.9	14.0	12.0	7.3	8.8
1998	5.7	6.8	6.1	9.4	12.2	11.1	7.1	7.8
1999	5.2	6.1	4.4	8.3	11.6	10.2	5.8	7.0
2000	5.3	4.9	4.2	7.8	10.1	9.3	5.1	6.4
2001	4.3	4.3	4.1	7.7	8.5	7.8	5.4	5.7
2002	3.9	5.0	4.0	7.9	8.8	7.8	6.2	5.8
2003	4.0	4.6	4.6	7.9	9.7	6.8	6.5	5.9
2004	4.5	5.6	4.6	7.3	9.7	7.2	6.3	6.1
2005	5.2	6.3	5.9	8.8	10.6	9.1	8.2	7.2
2006	5.1	6.0	5.8	9.2	10.9	10.9	8.0	7.5
2007	4.8	4.9	5.1	9.9	12.6	10.7	8.0	7.4
2008	4.5	5.8	5.0	10.3	13.3	12.1	8.7	7.8
2009	6.5	9.2	8.7	11.2	15.3	14.1	10.6	10.0
2010	8.9	10.0	9.3	12.4	16.2	14.4	10.4	11.2
2011	9.0	9.5	7.3	12.9	16.4	14.6	10.5	11.0
2012	9.5	9.9	7.5	12.1	16.1	13.9	10.3	11.0
2013	8.7	8.7	7.7	9.3	12.6	14.2	11.0	10.2
2014	6.2	5.6	4.6	7.8	10.4	11.8	9.0	7.7
2015	5.3	4.4	3.8	8.1	8.7	10.9	7.9	6.8

[a] Age: 15–74.
Source: *KSH MEF*.
Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_02

Figure 9.2: Regional inequalities: LFS-based unemployment rates in NUTS-2 level regions



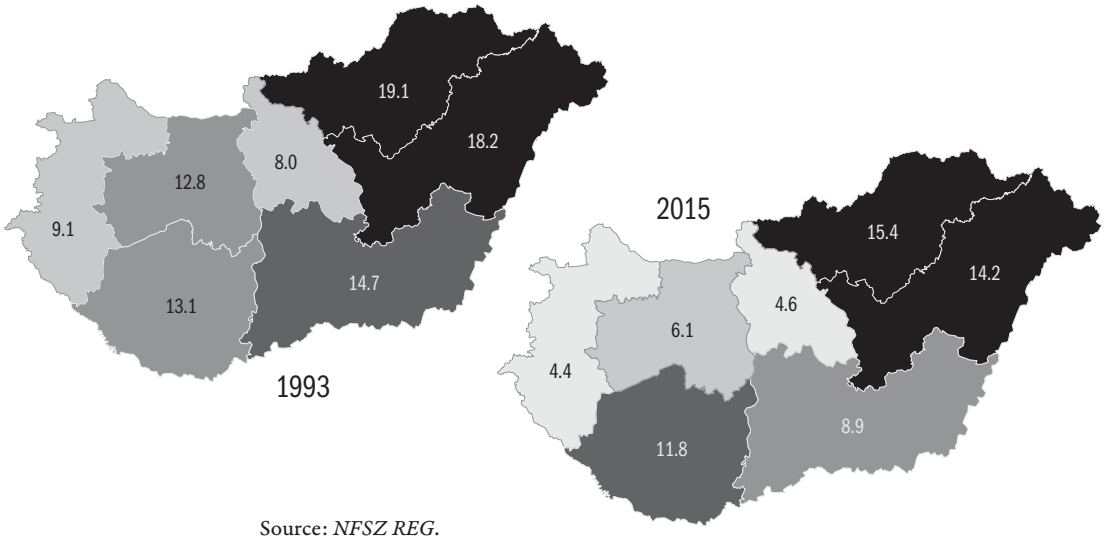
Source: *KSH MEF*.
Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_02

Table 9.3: Regional differences: The share of registered unemployed[a] relative to the economically active population[b], per cent

Year	Central Hungary	Central Transdanubia	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	Total
2000	3.8	7.5	5.6	11.8	17.2	16.0	10.4	9.3
2001	3.2	6.7	5.0	11.2	16.0	14.5	9.7	8.5
2002	2.8	6.6	4.9	11.0	15.6	13.3	9.2	8.0
2003	2.8	6.7	5.2	11.7	16.2	14.1	9.7	8.3
2004	3.2	6.9	5.8	12.2	15.7	14.1	10.4	8.7
2005	3.4	7.4	6.9	13.4	16.5	15.1	11.2	9.4
2006	3.1	7.0	6.3	13.0	15.9	15.0	10.7	9.0
2007	3.5	6.9	6.3	13.6	17.6	16.6	11.7	9.7
2008	3.6	7.1	6.3	14.3	17.8	17.5	11.9	10.0
2009	5.4	11.5	9.5	17.8	20.9	20.2	14.4	12.8
2010	6.6	11.8	9.3	17.1	21.5	20.9	15.2	13.3
2011	6.8	10.9	8.0	16.6	21.5	22.0	14.5	13.2
2012	6.6	9.9	7.4	16.4	21.2	21.0	13.6	12.6
2013	6.4	9.5	7.4	15.4	19.5	19.4	19.0	13.0
2014	5.2	7.1	5.4	13.6	17.4	16.7	10.5	9.8
2015	4.6	6.1	4.4	11.8	15.4	14.2	8.9	8.5

[a] Since 1st of November, 2005: the ratio of registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
[b] The denominator of the ratio is the economically active population on January 1st of the previous year.
Source: *NFSZ REG*.
Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_03

Figure 9.3: Regional inequalities: The share of registered unemployed relative to the economically active population, per cent, in NUTS-2 level regions



Source: *NFSZ REG*.
Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_03

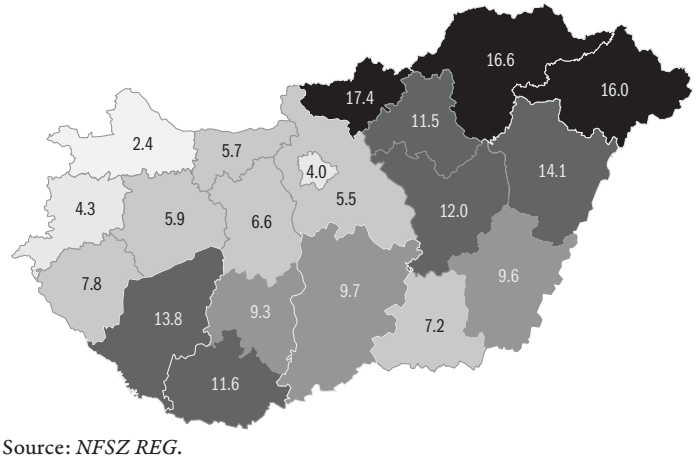
Table 9.4: Annual average registered unemployment rate[a] by counties, per cent[b]

County	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Budapest	0.1	5.7	3.0	2.6	2.2	2.4	2.8	2.9	2.6	3.0	3.1	4.6	5.9	6.2	6.1	5.8	4.5	4.0
Baranya	1.1	11.8	11.6	11.1	11.2	11.9	11.6	13.4	13.3	12.9	13.6	14.7	17.1	16.6	16.4	15.0	9.1	11.6
Bács-Kiskun	1.1	11.0	10.0	9.3	8.8	9.4	9.9	10.4	10.2	11.4	12.0	17.9	15.6	14.8	13.7	13.3	15.8	9.7
Békés	1.1	14.0	13.1	11.9	11.2	11.5	12.0	13.0	13.5	15.0	14.8	17.3	18.1	17.8	15.8	14.8	12.0	9.6
Borsod-Abaúj-Zemplén	2.3	16.7	20.3	19.0	19.1	19.6	18.3	18.9	18.0	19.9	20.1	23.1	23.7	23.5	22.9	20.9	19.6	16.6
Csongrád	1.0	9.9	8.6	8.3	8.1	8.5	9.7	10.7	8.8	9.2	9.3	11.6	12.4	11.5	11.5	11.0	8.5	7.2
Fejér	1.0	10.6	7.2	6.4	6.4	7.1	7.3	7.4	7.3	7.1	7.5	11.5	12.4	12.1	10.8	10.1	7.6	6.6
Győr-Moson-Sopron	0.5	6.8	4.6	4.1	4.0	4.1	4.6	5.4	4.6	4.1	4.1	6.9	6.8	5.7	5.0	4.6	2.9	2.4
Hajdú-Bihar	0.9	14.2	14.7	13.6	12.8	13.1	12.9	14.0	13.9	15.6	16.5	19.1	20.3	20.7	19.9	18.6	16.1	14.1
Heves	1.6	12.5	12.0	10.6	9.8	10.0	10.6	11.3	11.1	12.2	12.7	15.8	16.1	16.1	15.7	15.0	11.9	11.5
Jász-Nagykun-Szolnok	1.6	14.6	13.4	11.5	10.2	10.7	11.2	12.0	11.4	11.8	12.2	15.5	16.4	18.1	16.8	15.4	13.4	12.0
Komárom-Esztergom	1.0	11.3	8.3	7.0	6.7	6.0	5.8	6.8	5.8	5.4	5.5	10.2	10.4	9.5	8.9	8.7	6.5	5.7
Nógrád	2.4	16.3	14.9	14.3	13.8	14.6	14.6	16.1	16.1	17.7	17.8	21.2	22.0	22.9	23.9	21.7	19.1	17.4
Pest	0.5	7.6	5.2	4.4	3.7	3.7	3.8	4.2	3.9	4.3	4.4	6.7	7.7	7.6	7.4	7.2	6.2	5.5
Somogy	1.4	11.2	11.9	11.6	11.5	12.2	13.4	14.5	14.6	16.2	16.9	19.4	18.9	18.3	18.2	17.1	16.1	13.8
Szabolcs-Szatmár-Bereg	2.6	19.3	19.5	17.8	16.7	17.7	17.5	18.6	18.8	21.0	22.4	24.7	24.8	26.0	25.0	23.0	19.5	16.0
Tolna	1.6	12.2	11.8	11.0	10.0	10.7	11.6	11.8	10.5	11.5	12.1	15.2	14.7	14.2	13.7	13.7	11.1	9.3
Vas	0.4	7.2	5.2	4.9	4.5	5.0	6.0	6.8	6.1	6.2	6.1	9.8	9.6	7.7	6.7	6.9	5.1	4.3
Veszprém	0.9	10.0	7.2	6.9	6.6	7.0	7.3	8.0	7.7	8.0	8.2	12.6	12.3	10.8	9.6	9.4	6.9	5.9
Zala	0.8	9.2	7.2	6.5	6.4	7.0	7.4	9.3	9.0	9.3	9.4	13.0	12.9	11.7	11.6	12.3	9.6	7.8
Total	1.0	10.6	9.3	8.5	8.0	8.3	8.7	9.4	9.0	9.7	10.0	12.8	13.3	13.2	12.6	11.9	9.8	8.5

[a] Since 1st of November, 2005: the ratio of registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployed to registered jobseekers.
[b] The denominator of the ratio is the economically active population on January 1st of the previous year.
Source: *NFSZ REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_04

Figure 9.4: Regional inequalities: Means of registered unemployment rates in the counties, 2015



Source: *NFSZ REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_04

Table 9.5: Regional inequalities: Gross monthly earnings[a]

Year	Central Hungary	Central Transdanubia	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	Total
2000	114,637	87,078	83,668	74,412	77,714	73,858	73,591	90,338
2001	132,136	100,358	96,216	86,489	88,735	84,930	84,710	103,610
2002	149,119	110,602	106,809	98,662	102,263	98,033	97,432	117,672
2003	170,280	127,819	121,464	117,149	117,847	115,278	113,532	135,472
2004	184,039	137,168	131,943	122,868	128,435	124,075	121,661	147,111
2005	192,962	147,646	145,771	136,276	139,761	131,098	130,406	157,770
2006	212,001	157,824	156,499	144,189	152,521	142,142	143,231	171,794
2007	229,897	173,937	164,378	156,678	159,921	153,241	153,050	186,229
2008	245,931	185,979	174,273	160,624	169,313	160,332	164,430	198,087
2009	254,471	187,352	182,855	169,615	169,333	160,688	164,638	203,859
2010	258,653	194,794	183,454	171,769	173,696	162,455	169,441	207,456
2011	264,495	197,774	184,311	181,500	185,036	173,243	177,021	214,540
2012	279,073	215,434	202,189	208,895	196,566	191,222	187,187	230,073
2013	290,115	220,495	209,418	190,126	188,635	178,499	187,762	230,018
2014	296,089	228,974	219,727	200,359	204,472	194,654	196,667	240,675
2015	306,890	234,443	230,142	205,020	200,174	191,973	203,280	245,210

[a] Gross monthly earnings (HUF/person), May.

Note: The data refer to full-time employees in the budgetary sector and firms employing at least 5 workers, respectively.

Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_05

Table 9.6: Regression-adjusted earnings differentials

Year	Central Hungary	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain
2000	0.0729	-0.0067	-0.1610	-0.1320	-0.1500	-0.1660
2001	0.0739	-0.0200	-0.1500	-0.1400	-0.1550	-0.1630
2002	0.0903	-0.0378	-0.1120	-0.0950	-0.1170	-0.1070
2003	0.0493	-0.0542	-0.1220	-0.1220	-0.1400	-0.1410
2004	0.0648	-0.0313	-0.1410	-0.0953	-0.1400	-0.1270
2005	0.0291	-0.0372	-0.1310	-0.1010	-0.1450	-0.1390
2006	0.0660	-0.0214	-0.1400	-0.0874	-0.1380	-0.1100
2007	0.0636	-0.0840	-0.1420	-0.1290	-0.1590	-0.1450
2008	0.0446	-0.0904	-0.1750	-0.1350	-0.1920	-0.1660
2009	0.0791	-0.0464	-0.1270	-0.1210	-0.1420	-0.1490
2010	0.0693	-0.0748	-0.1380	-0.1270	-0.1710	-0.1500
2011	0.1060	-0.0306	-0.0810	-0.0059	-0.0884	-0.0944
2012	0.0676	-0.0443	-0.0791	-0.1020	-0.1320	-0.1240
2013	0.0415	-0.0544	-0.1190	-0.1190	-0.1620	-0.1350
2014	0.0239	-0.0436	-0.1180	-0.1080	-0.1320	-0.1250

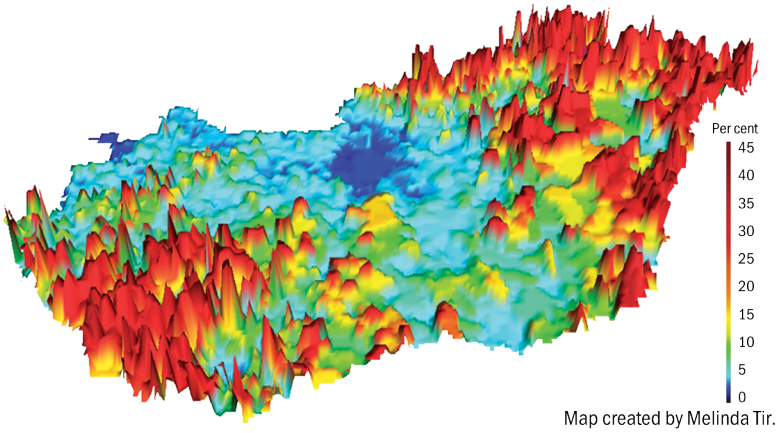
Note: the results indicate the earnings differentials of the various groups relative to the reference group in log points (approximately percentage points). All parameters are significant at the 0.01 level.

Reference category: women, with leaving certificate (general education certificate), not in the public sector, working in the Central-Transdanubia region.

Source: *NFSZ BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_06

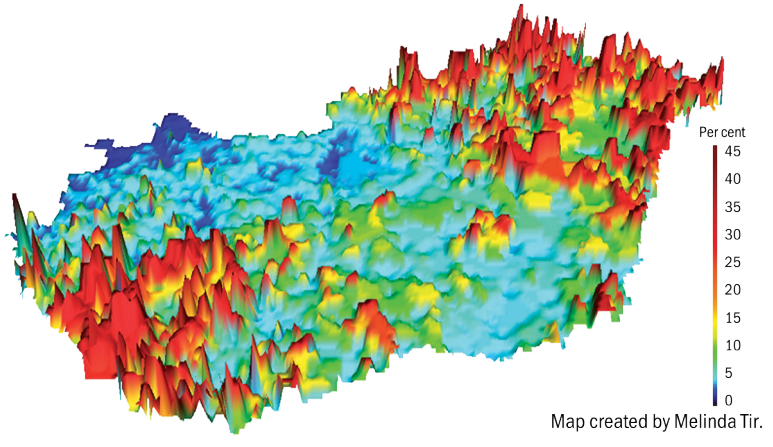
Figure 9.5: The share of registered unemployed relative to the population aged 15–64, 1st quarter 2007, per cent



Note: The ratio of registered unemployed was calculated using the following method: number of registered unemployed divided by the permanent population of age 15-64. The number of registered unemployed is a quarterly average. The permanent population data is annual.
Source: *Registered unemployed: NFSZ IR. Population: KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_05

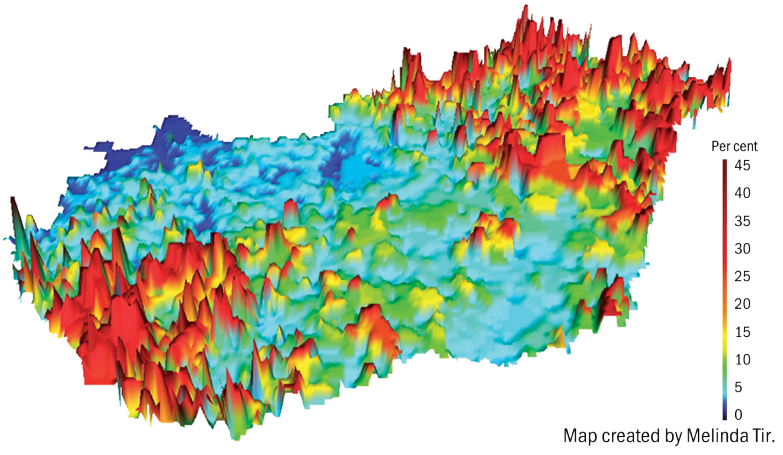
Figure 9.6: The share of registered unemployed relative to the population aged 15–64, 1st quarter 2015, per cent



Note: The ratio of registered unemployed was calculated using the following method: number of registered unemployed divided by the permanent population of age 15-64. The number of registered unemployed is a quarterly average. The permanent population data is from the year 2014 (since 2015 data is not yet available).
Source: *Registered unemployed: NFSZ IR. Population: KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_06

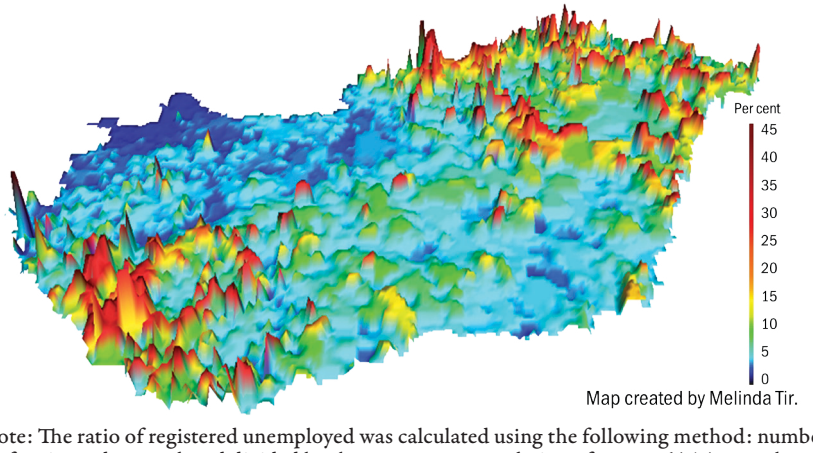
Figure 9.7: The share of registered unemployed relative to the population aged 15–64, 3rd quarter 2007, per cent



Note: The ratio of registered unemployed was calculated using the following method: number of registered unemployed divided by the permanent population of age 15-64. The number of registered unemployed is a quarterly average. The permanent population data is annual.
Source: *Registered unemployed: NFSZ IR. Population: KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_07

Figure 9.8: The share of registered unemployed relative to the population aged 15–64, 3rd quarter 2015, per cent



Note: The ratio of registered unemployed was calculated using the following method: number of registered unemployed divided by the permanent population of age 15-64. The number of registered unemployed is a quarterly average. The permanent population data is from the year 2014 (since 2015 data is not yet available).
Source: *Registered unemployed: NFSZ IR. Population: KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2016ena09_08

Table 9.7: Regional inequalities: Gross domestic product

Year	Central Hungary	Central Transdanubia	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain	Total
Thousand HUF/person/month								
2001	2,380	1,397	1,547	1,107	991	1,023	1,113	1,509
2002	2,802	1,502	1,757	1,239	1,090	1,126	1,209	1,714
2003	3,005	1,729	2,017	1,348	1,214	1,256	1,307	1,882
2004	3,332	1,958	2,142	1,461	1,358	1,363	1,454	2,079
2005	3,615	2,098	2,206	1,540	1,471	1,426	1,534	2,227
2006	3,949	2,183	2,417	1,614	1,544	1,521	1,609	2,397
2007	4,218	2,348	2,478	1,709	1,618	1,586	1,666	2,540
2008	4,462	2,433	2,612	1,831	1,674	1,685	1,805	2,694
2009	4,396	2,190	2,454	1,802	1,594	1,697	1,732	2,620
2010	4,480	2,350	2,685	1,828	1,626	1,716	1,753	2,705
2011	4,561	2,504	2,862	1,904	1,699	1,830	1,890	2,821
2012	4,687	2,546	2,909	1,959	1,720	1,867	1,966	2,886
2013	4,893	2,721	3,064	2,058	1,856	1,920	2,103	3,039
2014	5,162	2,941	3,414	2,167	2,037	2,062	2,280	3,262
Per cent								
2001	157.5	92.7	102.7	73.5	65.7	67.9	73.9	100.0
2002	163.4	87.7	102.6	72.4	63.6	65.7	70.6	100.0
2003	159.5	91.9	107.3	71.7	64.6	66.8	69.5	100.0
2004	159.9	94.4	103.5	70.3	65.4	65.6	70.0	100.0
2005	162.0	94.5	99.6	69.2	66.2	64.1	69.0	100.0
2006	164.5	91.3	101.3	67.3	64.5	63.4	67.2	100.0
2007	165.8	92.6	98.1	67.2	63.8	62.4	65.6	100.0
2008	165.4	90.5	97.5	67.9	62.2	62.5	67.0	100.0
2009	167.7	83.7	94.1	68.6	60.9	64.7	66.0	100.0
2010	165.1	87.2	100.1	67.6	60.3	63.4	64.8	100.0
2011	161.5	88.7	102.0	67.5	60.2	64.8	66.9	100.0
2012	162.6	88.4	101.4	67.8	59.8	64.0	67.8	100.0
2013	161.0	89.5	100.8	67.7	61.1	63.2	69.2	100.0
2014	158.2	90.2	104.7	66.4	62.4	63.2	69.9	100.0

Note: The data on 2000-2012 have been retrospectively revised following ESA2010 standards (European System of National and Regional Accounts)
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_07

Table 9.8: Commuting

Year	Working in the place of residence		Commuter	
	in thousands	per cent	in thousands	per cent
1980	3,848.5	76.0	1,217.2	24.0
1990	3,380.2	74.7	1,144.7	25.3
2001	2,588.2	70.1	1,102.1	29.9
2005	2,625.1	68.2	1,221.3	31.8
2011	2,462.8[a]	62.5	1,479.8	37.2

[a] Includes those working abroad but classified by the respondents of LFS as household members.
Source: NSZ, microcensus.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent09_08

Table 10.1: Strikes

Year	Number of strikes	Number of persons involved	Hours lost, in thousands
1995[a]	7	172,048	1,708
2000	5	26,978	1,192
2001	6	21,128	61
2002	4	4,573	9
2003	7	10,831	19
2004	8	6,276	116
2005	11	1,425	7
2006	16	24,665	52
2007	13	64,612	186
2008	8	8,633	..
2009	9	3,134	8.6
2010	7	3,263	133.1
2011	1	..	..
2012	3	1,885	4.6
2013	1	..	..
2014	0	0	0

[a] Teachers strikes number partly estimated.
Source: *KSH* strike statistics.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_01

Table 10.2: National agreements on wage increase recommendations[a]

	OÉT – from 2013 VKF – Recommendations			Actual indexes	
Year	Minimum	Average	Maximum	Budgetary sector	Competitive sector
2000	108.5	..	111.0	112.3	114.2
2001	..	..	..	122.9	116.3
2002	108.0	..	110.5	129.2	113.3
2003	..	4.5 % real wage growth	..	117.5	108.9
2004	..	107.0–108.0	..	100.4	109.3
2005	..	106.0	..	112.8	106.9
2006	..	104.0–105.0	..	106.4	109.3
2007	..	105.5–108.0	..	106.4	109.1
2008	..	105.0–107.5	..	106.2	108.4
2009	..	103.0–105.0	..	92.1	104.3
2010	..	real wage preservation	..	100.5[b]	102.6[b]
2011	..	104.0–106.0	..	99.3	105.4
2012	–	no wage recommendations	–	103.7	107.3
2013	..	real wage preservation	..	110.9	103.4[b]
2014	..	103.5	..	105.9	104.3
2015	..	103.0-104.0	..	106.3	103.9

[a] Average increase rates of gross earnings from recommendations by the National Interest Reconciliation Council (OÉT) and the Permanent Consultation Forum of the Business Sector and the Government (VKF, from 2013 onwards). Previous year = 100.
[b] Mean real wage index.
Source: *KSH, NGM*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_02

Table 10.3: Single employer collective agreements in the business sector

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	1,025	1,033	1,032	1,027	962	966	959	942	951	951	950
Number of persons covered	513,118	489,568	532,065	467,964	432,086	448,138	448,980	442,723	448,087	443,543	458,668

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_03

Table 10.4: Single institution collective agreements in the public sector

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	1,750	1,435	1,711	1,710	1,737	1,751	1,744	1,735	1,736	1,734	798
Number of persons covered	228,080	203,497	224,246	222,547	225,434	224,651	222,136	261,401	260,388	259,797	301,430

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_04

Table 10.5: Multi-employer collective agreements in the business sector

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	71	75	74	78	80	82	81	81	83	83	83
Number of persons covered	92,196	86,079	83,117	80,506	222,236	221,627	202,005	204,585	173,614	219,050	299,487

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_05

Table 10.6: Multi-institution collective agreements in the public sector

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	5	4	2	1	1	1	1	0	0	0	0
Number of persons covered	403	360	238	..	..	..	320	0	0	0	0

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_06

Table 10.7: The number of firm wage agreements[a], the number of affected firms, and the number of employees covered

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	298	302	214	202	785	905	888	863	874	876	867
Number of persons covered	169,639	151,022	171,259	100,206	377,677	414,522	416,562	415,751	422,887	384,182	424,914

[a] Until 2008, the data relate to the number of 'wage agreements' concerning the next year's average wage increase, in the typical case. In and after 2009, the figures relate to resolutions within collective agreements, which affect the remuneration of workers (including long-term agreements on wage supplements, bonuses, premia, non-wage benefits and rights and responsibilities connected with wage payments).

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_07

Table 10.8: The number of multi-employer wage agreements[a], the number of affected firms, and the number of covered companies and employees

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of agreements	40	44	40	45	62	68	68	73	74	74	74
Number of companies	145	162	147	150	2,350	2,460	2,199	2,219	1,096	2,886	2,885
Number of persons covered	35,039	42,817	33,735	40,046	191,258	211,753	180,131	191,013	160,092	208,128	289,154

[a] Until 2008, the data relate to the number of 'wage agreements' concerning the next year's average wage increase, in the typical case. In and after 2009, the figures relate to resolutions within collective agreements, which affect the remuneration of workers (including long-term agreements on wage supplements, bonuses, premia, non-wage benefits and rights and responsibilities connected with wage payments).

Source: *NGM,* Employment Relations Information System.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_08

Table 10.9: The share of employees covered by collective agreements, percent[a]

	Multi-employer collective agreements in the business sector[b]					Single employer collective agreements in the national economy				
Industries	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Agriculture	27.80	21.93	23.08	21.12	40.83	12.47	9.81	11.71	9.87	21.81
Mining and quarrying	6.37	5.27	5.36	5.35	6.87	37.84	57.86	40.51	40.46	58.42
Manufacturing	11.40	12.78	11.95	11.94	10.82	23.36	25.94	25.95	25.86	27.28
Electricity, gas, steam and air conditioning supply	69.28	70.27	69.67	73.69	78.50	60.04	59.16	53.09	53.19	58.00
Water supply; sewerage, waste management and remediation activities	25.15	24.32	23.87	27.10	35.25	55.95	46.97	46.61	46.57	59.09
Construction	98.93	98.27	99.88	98.00	98.91	6.74	5.47	5.84	6.65	6.63
Wholesale and retail trade; repair of motor vehicles and motorcycles	3.41	6.71	6.83	6.88	7.56	11.22	7.74	7.82	7.71	7.34
Transportation and storage	15.27	15.69	14.82	37.38	42.22	56.26	58.68	56.65	54.40	59.69
Accommodation and food service activities	94.28	93.24	92.42	87.66	93.51	9.94	8.23	6.49	6.24	5.62
Information and communication	0.82	0.88	0.88	0.81	0.74	20.25	18.93	20.14	19.19	20.81
Financial and insurance activities	4.97	5.72	5.24	5.36	5.85	32.36	35.11	33.41	32.89	37.50
Real estate activities	39.78	16.37	15.73	17.36	16.77	29.30	25.69	24.61	26.14	26.82
Professional, scientific and technical activities	2.32	4.01	4.58	4.49	5.39	8.53	10.97	12.24	12.78	10.37
Administrative and support service activities	12.59	6.33	6.22	7.06	6.30	7.78	8.17	8.01	8.17	6.18
Public administration and defence; compulsory social security	..	..	..	..	..	6.89	14.48	14.52	15.55	7.27
Education	..	4.79	3.91	4.81	5.43	40.51	44.83	41.94	44.98	70.79
Human health and social work activities	..	..	..	..	..	35.88	38.24	34.48	36.38	26.50
Arts, entertainment and recreation	1.28	0.14	0.16	0.14	0.09	19.79	23.57	24.01	22.99	21.68
Other service activities	0.84	0.62	0.63	1.46	7.58	6.78	7.07	8.76	6.88	11.80
National economy, total	19.86	19.94	19.34	21.51	20.85	23.52	25.05	24.24	24.59	25.84

[a] Percentage share of employees covered by collective agreements.

[b] In the observed period only a single multi-employer collective agreement was in effect in the public sector.

Source: *NGM*, Employment Relations Information System, Register of Collective Agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_09

Table 10.10: Single employer collective agreements in the national economy

Industries	Number of collective agreements						The number of employees covered by collective agreements					
	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
Agriculture	65	64	65	66	66	66	9,765	9,310	7,628	8,709	7,680	17,603
Mining and quarrying	10	10	9	9	9	9	1,474	1,491	2,142	1,475	1,498	2,057
Manufacturing	339	344	344	354	355	353	142,402	144,844	157,710	157,659	157,178	174,379
Electricity, gas, steam and air conditioning supply	50	48	47	45	44	43	16,003	14,581	13,807	12,194	12,414	13,450
Water supply; sewerage, waste management and remediation activities	70	69	67	68	68	69	24,236	23,737	19,175	19,010	19,010	25,021
Construction	49	48	45	45	46	47	7,917	7,800	6,153	6,190	7,488	7,540
Wholesale and retail trade; repair of motor vehicles and motorcycles	126	126	119	118	119	117	38,031	37,973	25,686	25,573	25,565	25,212
Transportation and storage	59	60	57	59	59	50	102,452	102,164	104,150	98,748	96,550	109,336
Accommodation and food service activities	38	37	36	35	35	34	8,337	8,342	6,576	4,944	4,986	4,969
Information and communication	15	15	14	15	15	15	14,256	14,256	13,540	13,727	13,727	15,514
Financial and insurance activities	26	27	27	26	26	26	22,729	20,997	22,300	20,892	20,892	22,476
Real estate activities	33	31	31	32	32	32	8,781	8,522	6,957	7,100	7,079	7,367
Professional, scientific and technical activities	54	55	53	54	54	57	6,822	6,795	8,628	10,047	10,047	9,534
Administrative and support service activities	24	25	24	25	24	24	10,507	11,359	11,080	11,206	11,080	10,238
Public administration and defence; compulsory social security	103	105	102	105	104	104	16,433	17,015	37,643	38,313	40,431	21,224
Education	1,293	1,292	1,295	1291	1,292	352	106,485	106,233	113,995	102,582	114,377	176,637
Human health and social work activities	241	239	236	226	228	226	77,719	88,141	100,879	92,631	95,961	94,549
Arts, entertainment and recreation	92	94	92	91	91	92	7,242	7,109	7,786	7,637	7,592	9,341
Other service activities	19	18	18	19	18	19	1,422	1,482	1,515	1,514	1,474	2,283
National economy, total	2,706	2,707	2,681	2,683	2,685	1,735	623,013	632,151	667,350	640,151	655,029	748,730

Source: *NGM*, Employment Relations Information System, Register of Collective Agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_10

Table 10.11: Multi-employer collective agreements in the business sector[a]

Industries	The number of firms covered by the multi-employer[b] collective agreements						The number of employees covered by multi-employer collective agreements					
	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
Agriculture	601	601	600	27	41	706	20,724	20,416	16,833	17,098	17,002	32,822
Mining and quarrying	5	5	5	3	4	4	251	251	195	195	195	242
Manufacturing	604	601	179	155	174	231	69,871	68,953	75,700	70,908	72,623	67,668
Electricity, gas, steam and air conditioning supply	36	36	34	35	35	34	18,096	16,818	16,393	15,991	17,142	17,962
Water supply; sewerage, waste management and remediation activities	23	23	23	22	28	28	9,769	9,769	9,229	9,229	9,283	11,450
Construction	489	491	486	484	510	555	116,745	113,936	110,173	105,521	110,173	112,034
Wholesale and retail trade; repair of motor vehicles and motorcycles	127	125	68	47	192	240	11,538	11,551	22,258	22,316	22,827	25,944
Transportation and storage	197	155	157	155	1,209	1,560	26,780	26,780	26,867	24,972	63,934	73,515
Accommodation and food service activities	37	37	31	29	37	35	65,581	65,410	63,526	61,204	63,526	73,759
Information and communication	10	10	12	12	12	11	543	543	597	597	597	550
Financial and insurance activities	12	12	13	7	9	12	4,082	3,215	3,626	3,269	3,269	3,499
Real estate activities	56	56	47	28	34	40	10,579	10,579	4,048	4,048	4,055	4,030
Professional, scientific and technical activities	43	43	39	33	45	58	1,621	1,621	2,755	3,293	3,326	4,368
Administrative and support service activities	87	87	84	82	104	111	16,862	16,862	7,855	7,888	10,013	9,310
Public administration and defence; compulsory social security	0	0	0	0	1	3	0	0	0	0	0	1,540
Education	17	17	17	20	24	26	..	..	171	171	172	189
Human health and social work activities	1	1	1	0	2	0	..	..	..	..	..	..
Arts, entertainment and recreation	1	1	1	1	4	2	127	127	13	13	13	10
Other service activities	8	8	7	2	2	13	133	121	88	83	204	1,125
National economy, total	2,354	2,309	1,804	1,142	2,467	3,669	373,302	366,952	360,327	346,796	398,354	440,017

[a] In the observed period only a single multi-employer collective agreement was in effect in the public sector.

[b] Multi-employer collective agreements are those concluded and/or extended by several employers or employer organizations.

Source: *NGM*, Employment Relations Information System, Register of Collective Agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent10_11

Table 11.1: Family benefits

Year	Tax credit for families[a]		Child benefit[b]		Regular child protection allowance[c]		Wage related maternity benefit[d]		Flat rate maternity benefits[d]	
	Average monthly amount, HUF	Average number of recipient families	Average monthly amount per family, HUF	Average number of recipient families	Average monthly amount, HUF	Average number of recipient families	Average monthly amount, HUF	Average number of recipients	Average monthly amount, HUF	Average number of recipients
2005	6,979	924,263	12,596	1,264,500	5,619	663,000	58,676	87,172	25,706	208,708
2006	9,392	122,883	21,637	1,269,000	–	–	63,221	91,678	27,102	212,741
2007	..	..	23,031	1,224,000	–	–	68,763	93,973	28,496	207,608
2008	..	..	24,521	1,246,600	–	–	74,518	94,514	30,880	208,652
2009	..	..	24,524	1,245,900	–	–	78,725	95,050	30,328	214,416
2010	..	..	24,442	1,224,000	–	–	83,959	94,682	30,041	217,807
2011	..	..	24,528	1,190,707	–	–	84,929	87,717	..	207,550
2012	..	..	24,491	1,167,640	–	–	91,050	81,839	..	206,645
2013	..	..	24,257	1,149,796	–	–	96,661	81,234	..	198,685
2014	..	..	23,674	1,113,581	–	–	104,547	83,701	..	197,327

[a] Introduced in 1999. Beginning in 2006, this became a part of family benefits, only families with 3 or more children are entitled to tax credits to the amount of 4,000 HUF per child. The system of family tax credit changed in 2011. The deduction from the base of personal income tax is Ft 62,500 in the case of one dependent and Ft 206,250 in the case of three or more dependents.

[b] Annual mean. From 1999 to November 8, 2002, the child care benefit includes the family allowance and schooling support. Beginning in 2002, the benefits paid in the 13th month are included as well.

[c] Annual average. Was in use from 1998 to 2005.

[d] Annual average.

Source: *NAV, KSH* Welfare Statistics.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_01

Table 11.2: Unemployment benefits and average earnings

Year	Insured unemployment benefit and other non-means tested benefits[a]		Means tested unemployment assistance		Net monthly earnings, HUF[b]
	Average monthly amount, HUF	Average number of recipients	Average monthly amount, HUF	Average number of recipients	
2006	43,344	109,095	23,771	160,426	110,951
2007	46,208	96,463	25,705	194,779	114,282
2008	49,454	97,047	27,347	213,436	121,969
2009	51,831	152,197	23,117	167,287	124,116
2010	50,073	125,651	27,574	174,539	132,604
2011	52,107	110,803	25,139	209,918	141,151
2012	63,428	62,380	21,943	236,609	144,085
2013	68,730	48,019	22,781	212,699	151,118
2014	69,720	42,423	22,800	160,858	155,690
2015	72,562	40,576	..	..	162,300

[a] Average of headcount at the end of the month.

[b] The average net wage refers to the entire economy, competitive sector after 2001: firms with at least 4 employees.

Source: *NFSZ*: *Labour Market Report, 2001*. *KSH*: *Welfare systems 2007, Welfare Statistics, Yearbook of Demographics. KSH Social Statistics Yearbooks. KSH* Stadat.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_02

Table 11.3.a: Number of those receiving pension[a], and the mean sum of the provisions they received in January of the given year

Year	Old age pension			Disability pension under and above retirement age		
	Number of recipients	Average amount before increase, HUF	Average amount after increase, HUF	Number of recipients	Average amount before increase, HUF	Average amount after increase, HUF
2002	1,664,062	43,368	47,561	789,544	37,369	40,972
2003	1,657,271	50,652	54,905	799,966	43,185	46,801
2004	1,637,847	57,326	60,962	806,491	48,180	51,220
2005	1,643,409	63,185	67,182	808,107	52,259	55,563
2006	1,658,387	69,145	72,160	806,147	56,485	58,935
2007	1,676,477	74,326	78,577	802,506	59,978	63,120
2008	1,716,315	81,975	87,481	794,797	65,036	69,160
2009	1,731,213	90,476	93,256	779,130	70,979	73,166
2010	1,719,001	94,080	98,804	750,260	73,687	77,500
2011	1,700,800	99,644	104,014	721,973	77,945	81,367
2012	1,959,202[b]	99,931	104,610	302,990[c]	..	..

[a] Pension: Excludes survivors pensions.
[b] From 2012 onwards, the disability pensions of persons older than the mandatory retirement age are granted as old-age pensions.
[c] Excludes persons older than the mandatory retirement age.
Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_03a

Table 11.3.b: Number of those receiving pension[a], and the mean sum of the provisions they received in January of the given year, from 2013

Type of benefit	Number of recipients			Average amount before increase, HUF			Average amount after increase, HUF		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Old age pension	2,000,128	2,037,126	2,022,905	107,236	113,063	n.a.	112,781	115,786	118,439
– old age pension of persons above the mandatory retirement age[b]	1,900,661	1,925,103	1,894,897	109,841	112,700	n.a.	115,521	115,416	118,194
– pension for women entitled to retire before the mandatory age after having accumulated at least 40 accrual years	90,166	105,172	122,253	109,803	114,035	n.a.	115,474	116,753	117,926
– old age pension of persons younger than the mandatory retirement age	9,301	6,851	5,755	188,664	200,081	n.a.	198,473	204,882	210,014

[a] Pension: Excludes survivors pensions. From 2012 onwards, no old-age pension is granted to persons younger than the mandatory retirement age. Exceptions are pensions for women having accumulated 40 or more accrual years.
[b] From 2012 onwards, the disability pensions of persons older than the mandatory retirement age are granted as old-age pensions.
Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_03b

Table 11.4.a: Number of those receiving social annuities for people with damaged health, and the mean sum of the provisions they received after the increase, in January of the given year

Year	Temporary annuity		Regular social annuity		Health damage annuity for miners		Total	
	Number of recipients	Average amount, HUF	Number of recipients	Average amount, HUF	Number of recipients	Average amount, HUF	Number of recipients	Average amount, HUF
2002	11,523	26,043	200,980	17,645	3,348	59,558	215,851	18,744
2003	12,230	30,135	203,656	19,907	3,345	65,380	219,231	21,171
2004	11,949	33,798	207,300	21,370	2,950	69,777	222,199	22,681
2005	13,186	36,847	207,091	22,773	2,839	74,161	223,116	24,259
2006	14,945	40,578	195,954	23,911	2,786	77,497	213,685	25,776
2007	19,158	42,642	184,845	25,050	2,693	80,720	206,696	27,406
2008	21,538	46,537	170,838	27,176	2,601	85,805	194,977	30,096
2009	21,854	46,678	159,146	27,708	2,533	86,165	183,533	30,774
2010	20,327	47,060	148,704	27,645	2,448	86,252	171,479	30,783
2011	16,448	47,096	139,277	27,588	2,371	86,411	158,096	30,500

Disability pensions and temporary provisions for disability groups 1-2, granted prior to 2012, have been transformed to 'disability allotments'. The provisions for permanent social benefit recipients born before 1955 have also been transformed to 'disability allotments'. Disability pensions and permanent social benefits granted before 2012 to the members of disability group 3 have been transformed to 'rehabilitation allotment'. The conditions of these provisions will be set in the framework of a complex revision of entitlement and eligibility.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_04a

Table 11.4.b: Number of those receiving social annuities for people with damaged health, and the mean sum of the provisions they received after the increase, in January of the given year, from 2013

Support for disabled persons	Number of recipients			Average amount before increase, HUF			Average amount after increase, HUF		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Disability and rehabilitation provision	444,014	418,617	404,880	62,780	64,811	n.a.	66,035	66,364	67,759
– disability provision for persons older than the mandatory retirement age	41,162	52,186	44,436	63,260	71,362	n.a.	66,542	73,077	74,509
– disability provision for persons younger than the mandatory retirement	209,264	198,312	217,625	70,753	71,783	n.a.	74,422	73,503	74,463
– rehabilitation provision	178,112	161,761	140,658	51,718	53,262	n.a.	54,398	54,538	54,810
– rehabilitation benefit	13,265	4,153	n.a.	80,101	84,886	n.a.	84,256	86,919	n.a.
– annuity for miners with damaged health	2,211	2,205	2,161	86,455	92,174	n.a.	90,915	94,369	96,567

Disability pensions and temporary provisions for disability groups 1-2, granted prior to 2012, have been transformed to 'disability allotments'. The provisions for permanent social benefit recipients born before 1955 have also been transformed to 'disability allotments'. Disability pensions and permanent social benefits granted before 2012 to the members of disability group 3 have been transformed to 'rehabilitation allotment'. The conditions of these provisions will be set in the framework of a complex revision of entitlement and eligibility.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_04b

Table 11.5: The median age for retirement and the number of pensioners

	2006		2007		2008		2009		2010	
Pension	Age	Persons	Age	Persons	Age	Persons	Age	Persons	Age	Persons
Females										
Old age and similar pensions	57.5	46,093	57.8	62,015	57.3	39,290	59.9	15,243	60.7	13,617
Disability and accident-related disability pension	49.3	18,488	49.8	15,837	50.5	8,565	51.1	9,065	50.8	10,478
Rehabilitation annuity	–	–	–	–	44.1	1,604	44.9	6,574	47.6	6,789
Total	55.2	64,581	56.2	77,852	55.7	49,459	54.1	30,882	54.4	30,884
Males										
Old age and similar	59.9	33,134	59.7	50,878	59.8	25,749	59.7	37,116	60.2	37,219
Disability and accident-related disability pension	50.6	23,045	51.1	19,032	51.9	11,069	52.3	11,992	52.1	13,345
Rehabilitation annuity	–	–	–	–	44.5	1,556	44.8	6,278	47.4	6,123
Total	56.1	56,179	57.4	69,910	56.9	38,374	56.4	55,386	56.9	56,687
Together										
Old age and similar pensions	58.5	79,227	58.7	112,893	58.3	65,039	59.7	52,359	60.3	50,836
Disability and accident-related disability pension	50.0	41,533	50.5	34,869	51.3	19,634	51.8	21,057	51.5	23,823
Rehabilitation annuity	–	–	–	–	44.3	3,160	44.9	12,852	47.5	12,912
Total	55.6	120,760	56.8	147,762	56.2	87,833	55.6	86,268	56.0	87,571

	2011		2012		2013		2014		2015[a]	
Females										
Old age and similar pensions	58.5	84,922	59.2	52,494	59.6	40,283	59.6	38,920	59.9	38,701
Pension for women entitled to retire before the mandatory age after having accumulated at least 40 accrual years	57.6	54,770	57.8	26,639	58.0	24,143	58.3	27,603	58.7	27,092
Disability and accident-related disability pension	50.7	8,667	–	–	–	–	–	–	–	–
Rehabilitation annuity	47.2	4,386	..	..	..	..	..	..	..	..
Total	57.3	97,975	..	..	..	..	..	..	..	..
Males										
Old age and similar pensions	60.3	43,240	61.8	20,630	62.2	21,628	62.7	18,422	62.6	20,044
Disability and accident-related disability pension	51.9	10,673	–	–	–	–	–	–	–	–
Rehabilitation annuity	47.0	4,102	..	..	..	..	..	..	..	..
Total	57.8	58,015	..	..	..	..	..	..	..	..
Together										
Old age and similar pensions	59.1	128,162	59.9	73,124	60.5	61,911	60.6	57,342	60.8	58,745
Disability and accident-related disability pension	51.4	19,340	–	–	–	–	–	–	–	–
Rehabilitation annuity	47.1	8,488	..	..	..	..	..	..	..	..
Total	57.5	155,990	..	..	..	..	..	..	..	..

[a] Preliminary data.

Note: The source of these statistics is data from the pension determination system of the ONYF (NYUGDMEG), so these do not include the data for the armed forces and the police. Data on MÁV is included from 2008. The data on 2012-2014 have been revised and may differ from those in earlier publications.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_05

Table 11.6: The number of those receiving a disability annuity and the mean sum of the provisions they received after the increase, in January of the given year

Year	Disability annuity		Year	Disability annuity	
	Number of recipients	Average amount, HUF		Number of recipients	Average amount, HUF
2002	26,350	20,931	2009	31,263	33,434
2003	27,058	23,884	2010	31,815	33,429
2004	27,923	25,388	2011	32,314	33,429
2005	28,738	27,257	2012	32,560	33,426
2006	29,443	28,720	2013	32,463	33,422
2007	30,039	30,219	2014	32,497	33,422
2008	30,677	32,709	2015	32,528	34,034

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_06

Table 11.7: Newly determined disability pension claims and detailed data on the number of newly determined old-age pension claims

Year	Disability and accident-related disability pensions	Old-age and old-age type pensions[a]			From the total: at the age limit			From the total: under the age limit		
	Total	Male	Female	Together	Male	Female	Together	Male	Female	Together
2000	55,558	18,071	29,526	47,597	613	813	1,426	16,089	26,859	42,948
2001	54,645	28,759	14,267	43,026	2,200	4,882	7,082	25,175	7,396	32,571
2002	52,211	30,209	25,719	55,928	2,593	646	3,239	26,346	23,503	49,849
2003	48,078	32,574	13,574	46,148	3,058	5,098	8,156	28,064	6,537	34,601
2004	44,196	35,940	36,684	72,624	3,842	989	4,831	30,234	33,817	64,051
2005	41,057	33,175	48,771	81,946	4,035	6,721	10,756	27,719	40,142	67,861
2006	36,904	34,207	47,531	81,738	4,013	732	4,745	29,025	45,675	74,700
2007	34,991	51,037	62,168	113,205	3,722	6,660	10,382	45,731	54,177	99,908
2008	19,832	25,912	39,423	65,335	3,154	288	3,442	22,180	38,761	60,941
2009	21,681	37,468	15,468	52,936	4,193	6,692	10,885	32,452	8,289	40,741
2010	24,094	37,394	13,719	51,113	6,350	7,213	13,563	29,990	5,801	35,791
2011	19,340	43,240	84,922	128,162	9,058	7,938	16,996	32,400	76,019	108,419
2012	n.a.	20,630	52,494	73,124	8,208	7,632	15,840	7,621	41,926	49,547
2013	n.a.	21,628	40,283	61,911	16,006	11,333	27,339	531	25,647	26,178
2014	n.a.	18,422	38,920	57,342	10,521	6,966	17,487	1,758	28,737	30,495
2015[b]	n.a.	20,044	38,701	58,745	11,462	7,558	19,020	2,264	28,118	30,382

[a] Before 2012 old-age type pensions include: old-age pensions given with a retirement age threshold allowance (early retirement), artists' pensions, pre-pension up until 1997, miners' pensions. From 2012 onwards the data include the recipients of allowances substituting (abolished) early retirement pensions.

[b] Preliminary data.

Note: Pensions disbursed in the given year (determined according to the given year's rules). The source of these statistics is data from the pension determination system of the ONYF (NYUGDMEG), so these do not include the data for the armed forces and the police. The data on 2012-2014 have been revised and may differ from those in earlier publications.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_07

Table 11.8: Retirement age threshold

	Calendar year																					
Birth year	2009	2010	2011	2012	2013	2014 I.	2014 II.	2015 I.	2015 II.	2016	2017 I.	2017 II.	2018 I.	2018 II.	2019	2020 I.	2020 II.	2021 I.	2021 II.	2022	2023	2024
1948	61	62	63	64	65	66	66	67	67	68	69	69	70	70	71	72	72	73	73	74	75	76
1949	60	61	62	63	64	65	65	66	66	67	68	68	69	69	70	71	71	72	72	73	74	75
1950	59	60	61	62	63	64	64	65	65	66	67	67	68	68	69	70	70	71	71	72	73	74
1951	58	59	60	61	62	63	63	64	64	65	66	66	67	67	68	69	69	70	70	71	72	73
1952 I.	57	58	59	60	61	62	62.5	63	63.5	64	65	65.5	66	66.5	67	68	68.5	69	69.5	70	71	72
1952 II.	57	58	59	60	61	61.5	62	62.5	63	64	64.5	65	65.5	66	67	67.5	68	68.5	69	70	71	72
1953	56	57	58	59	60	61	61	62	62	63	64	64	65	65	66	67	67	68	68	69	70	71
1954 I.	55	56	57	58	59	60	60	61	61.5	62	63	63.5	64	64.5	65	66	66.5	67	67.5	68	69	70
1954 II.	55	56	57	58	59	59.5	60	60.5	61	62	62.5	63	63.5	64	65	65.5	66	66.5	67	68	69	70
1955	54	55	56	57	58	59	59	60	60	61	61	62	63	63	64	65	65	66	66	67	68	69
1956 I.	53	54	55	56	57	58	58.5	59	59.5	60	61	61.5	62	62.5	63	64	64.5	65	65.5	66	67	68
1956 II.	53	54	55	56	57	57.5	58	58.5	59	60	60.5	61	61.5	62	63	63.5	64	64.5	65	66	67	68
1957	52	53	54	55	56	57	57	58	58	59	60	60	61	61	62	63	63	64	64	65	66	67
1958	51	52	53	54	55	56	56	57	57	58	59	59	60	60	61	62	62	63	63	64	65	66
1959	50	51	52	53	54	55	55	56	56	57	58	58	59	59	60	61	61	62	62	63	64	65
1960	49	50	51	52	53	54	54	55	55	56	57	57	58	58	59	60	60	61	61	62	63	64

Those persons are entitled to receive an old age pension who are at least of the age of the old age pension threshold indicated in the legislature – marked grey in the table – relevant to them (uniform for men and women), who have fulfilled the required number of years of service, and who are not insured. In the case of old age pension, the minimum service time is 15 years. The table displays the old age pension age threshold in the case of a "representative person". The cells show the age, based on the calendar year, of a person born in the given year.

Women who have accumulated at least 40 accrual years are entitled to a full old age pension, regardless of their age. Following December 31, 2011 (legislature number CLXVII/2011) no pension can be granted prior to the old-age threshold. At the same time, the legislature continues to provide previously determined allowances under different legal titles (pre-retirement age provision, service salary, allotments for miners and ballet dancers).

Prior to 2012, early retirement pensions included the following allowances : early and reduced-amount early retirement pensions, pensions with age preference, miner's pension, artist's pension, pre-retirement age old age pension of Hungarian and EU MPs and mayors, pre-pension, service pension of professional members of the armed forces.

Source: 1997. legislature number LXXXI.; 2011. legislature number CLXVII., http://www.ado.hu/rovatok/tb-nyugdij/nyudijkorhatar-elotti-ellatasok.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent11_08

Table 12.1: The mean, minimum, and maximum value of the personal income tax rate, per cent

Year	Mean tax burden, per cent	The personal income tax rate projected on the gross wage	
		minimum	maximum
1988	..	0	60
1989	..	0	56
1990	..	0	50
1991	..	0	50
1992	..	0	40
1993	..	0	40
1994	..	0	44
1995	..	0	44
1996	..	20	48
1997	..	20	42
1998	..	20	42
1999	..	20	40
2000	..	20	40
2001	..	20	40
2002	..	20	40
2003	..	20	40
2004	..	18	38
2005	18.89	18	38
2006	19.03	18	36
2007	18.63	18	36
2008	18.86	18	36
2009	18.10	18	36
2010[a]	16.34	21.59	40.64
2011[a]	13.78	20.32	20.32
2012[b]	14.90	16	20.32
2013	..	16	16
2014	..	16	16
2015	..	16	16
2016	..	15	15

[a] In 2010 the nominal tax rate was 17% for annual incomes lower than 5,000,000 HUF. For incomes higher than 5,000,001 HUF it was 850,000 HUF plus 32% of the amount exceeding 5,000,000 HUF. In 2011, the nominal tax rate was 16%. The joint tax base is the amount of income appended with the tax base supplement (equal to 27%).

[b] In 2012 the nominal tax rate was 16%. The joint tax base is the amount of income appended with the tax base supplement.

The amount of the tax base supplement:

– does not need to be determined for the part of the income included in the joint tax base that does not surpass 2 million 424 thousand HUF,

– should be determined as 27 % of the part of the income included in the joint tax base that is over 2 million 424 thousand HUF.

Source: Mean tax burden: http://nav.gov.hu/nav/szolgaltatasok/adostatisztikak/szemelyi_jovedelemado/szemelyijovedelemado_adostatiszika.html. Other data: http://nav.gov.hu/nav/szolgaltatasok/adokulcsok_jarulekmertekek/adotablak.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent12_01

Table 12.2: Changes in the magnitude of the tax wedge in the case of minimum wage and the temporary work booklet (AMK)

Year	Minimum wage				Total wage cost in the case of minimum wage		Minimum wage tax wedge, %	AMK public burden[a], HUF/day		Total wage cost[a], HUF/day		AMK tax wedge, %[a]	
	gross, HUF/ month	gross, HUF/day	net, HUF/ month	net, HUF/day	HUF/ month	HUF/day		general	registered unemployed	general	registered unemployed	general	registered unemployed
1998	19,500	899	17,258	795	30,297	1,369	43.0	500	500	1,295	1,295	38.6	38.6
1999	22,500	1,037	18,188	838	34,538	1,546	47.3	500	500	1,338	1,338	37.4	37.4
2000	25,500	1,175	20,213	931	38,963	1,746	48.1	800	800	1,731	1,731	46.2	46.2
2001	40,000	1,843	30,000	1,382	58,400	2,638	48.6	1,600	1,600	2,982	2,982	53.6	53.6
2002	50,000	2,304	36,750	1,694	71,250	3,226	48.4	1,000	500	2,694	2,194	37.1	22.8
2003	50,000	2,304	42,750	1,970	70,200	3,191	39.1	1,000	500	2,970	2,470	33.7	20.2
2004	53,000	2,442	45,845	2,113	74,205	3,376	38.2	1,000	500	3,113	2,613	32.1	19.1
2005	57,000	2,627	49,305	2,272	79,295	3,572	37.8	700	500	2,972	2,772	23.6	18.0
2006	62,500	2,880	54,063	2,491	85,388	3,910	36.7	700	700	3,191	3,191	21.9	21.9
2007	65,500	3,018	53,915	2,485	89,393	4,095	39.7	700	700	3,185	3,185	22.0	22.0
2008	69,000	3,180	56,190	2,589	94,065	4,310	40.3	900	900	3,489	3,489	25.8	25.8
2009	71,500	3,295	57,815	2,664	97,403[b]	4,464	40.6	900	900	3,564	3,564	25.3	25.3
2010	73,500	3,387	60,236	2,776	94,448	4,352	36.2	900	900	3,676	3,676	24.5	24.5
	Minimum wage				Total wage cost in the case of minimum wage		Minimum wage tax wedge, %	Simplified employment[c], Ft/day		Total wage cost, HUF/day		Tax wedge, simplified employment, %	
	gross, HUF/ month	gross, HUF/day	net, HUF/ month	net, HUF/day	HUF/ month	HUF/day		temporary work	seasonal agricultural/ tourism work	temporary work	seasonal agricultural/ tourism work	temporary work	seasonal agricultural/ tourism work
2011	78,000	3,594	60,600	2,793	100,230	4,619	39.5	1,000	500	3,793	3,293	26.4	15.2
2012	93,000	4,280	60,915	2,803	119,505	5,500	49.0	1,000	500	3,383	2,883	29.6	17.3
2013	98,000	4,510	64,190	2,954	125,930	5,795	49.0	1,000	500	3,511	3,011	28.5	16.6
2014	101,500	4,670	66,483	3,059	130,428	6,001	49.0	1,000	500	3,600	3,100	27.8	16.1
2015	105,000	4,830	68,775	3,164	134,925	6,207	49.0	1,000	500	3,689	3,189	27.1	15.7
2016	111,000	5,110	73,815	3,398	142,635	6,566	48.2	1,000	500	3,888	3,388	25.7	14.8

[a] Wage paid at the amount in accordance with the gross daily minimum wage column and in the case of work performed with a temporary work booklet. The basis for the comparison with the minimum wage is the assumption that employers pay temporary workers the smallest possible amount.

[b] According to regulations pertaining to the first half of 2009.

[c] From April 1st, 2010. the temporary work booklets and the public contribution tickets were discontinued, these were replaced by simplified employment.

Note: The tax wedge is the quotient of the total public burden (tax and contribution) and the total wage cost, it is calculated as: tax wedge = (total wage cost – net wage)/total wage cost.

Source: Minimum wage: 1990-91: http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_qli041.html. Public contribution ticket: 1997. legislation number LXXIV. Simplified employment: 2010. legislation number LXXV. Data for 2014-2015: http://www.afsz.hu/engine.aspx?page=allaskeresoknek_ellatasok_osszegei_es_kozterhei, http://officina.hu/gazdasag/93-minimalber-2015, http://nav.gov.hu. Based on calculations of Ágota Scharle.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent12_02

Table 12.3: The monthly amount of the minimum wage, the guaranteed wage minimum, and the minimum pension, in thousands of current-year HUF

Date	Monthly amount of the minimum wage, HUF	As a percentage of mean gross earnings	As a ratio of APW, %	Guaranteed skilled workers minimum wage, HUF	Minimum pension, HUF
1990. II. 1.	4,800	..	40.9	–	4,300
1991. IV.1.	7,000	..	..	–	5,200
1992. I. 1.	8,000	35.8	41.4	–	5,800
1993. II. 1.	9,000	33.1	39.7	–	6,400
1994. II. 1.	10,500	30.9	37.8	–	7,367
1995. III. 1.	12,200	31.4	37.0	–	8,400
1996. II. 1.	14,500	31.0	35.8	–	9,600
1997. I. 1.	17,000	29.7	35.1	–	11,500
1998. I. 1.	19,500	28.8	34.4	–	13,700
1999. I. 1.	22,500	29.1	34.6	–	15,350
2000. I. 1.	25,500	29.1	35.0	–	16,600
2001. I. 1.	40,000	38.6	48.3	–	18,310
2002. I. 1.	50,000	40.8	54.5	–	20,100
2003. I. 1.	50,000	36.4	51.5	–	21,800
2004. I. 1.	53,000	37.2	50.7	–	23,200
2005. I. 1.	57,000	33.6	49.2	–	24,700
2006. I. 1.	62,500	36.5	52.3	68,000	25,800
2007. I. 1.	65,500	35.4	49.3	75,400	27,130
2008. I. 1.	69,000	34.7	49.5	86,300	28,500
2009. I. 1.	71,500	35.8	50.0	87,500	28,500
2010. I. I.	73,500	36.3	48.6	89,500	28,500
2011. I. I.	78,000	36.6	49.8	94,000	28,500
2012. I. I.	93,000	41.7	54.3	108,000	28,500
2013. I. I.	98,000	42.5	55.1	114,000	28,500
2014. I. I.	101,500	42.7	57.7	118,000	28,500
2015. I. I.	105,000	42.4	..	122,000	28,500
2016. I. I.	111,000	..	..	129,000	28,500

Notes: Up to the year 1999, sectors employing unskilled labour usually received an extension of a few months for introducing the new minimum wage.
The guaranteed wage minimum applies to skilled employees, the minimum wage and the skilled workers minimum wage are gross amounts.
The minimum wage is exempt from the personal income tax from September 2002. This policy resulted in a 15.9% increase in the net minimum wage.
APW: mean wage of workers in the processing industry, based on the NFSZ BT. In 1990, the data is the previous year's data, indexed (since there was no NFSZ BT conducted in 1990).
Source: Minimum wage: 1990–91: http://www.mszosz.hu/files/1/64/345.pdf, 1992–: CSO. Guaranteed wage minimum: http://www.nav.gov.hu/nav/szolgaltatasok/adokulcsok_jarulekmertekek/minimalber_garantalt. Minimum pension: http://www.ksh.hu/docs/hun/xtabla/nyugdij/tablny11_03.html. APW: NFSZ BT.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent12_03

Table 12.4: The tax burden on work as a ratio of tax revenue and earnings

Year	Tax burden on work as a ratio of tax revenue[a], %	Implicit tax rate[b]	Tax wedge on 67% level of mean earnings	Tax wedge on the minimum wage[c]
1990		..	..	38.2
1991	52.4	..	..	40.4
1992	54.8	..	..	40.9
1993	54.4	..	..	42.3
1994	53.7	..	..	41.2
1995	52.1	42.3	..	44.2
1996	52.5	42.1	..	41.8
1997	54.2	42.5	..	43.1
1998	53.1	41.8	..	43.0
1999	51.5	41.9	..	47.3
2000	48.7	41.4	51.4	48.1
2001	49.8	40.9	50.9	48.6
2002	50.3	41.2	48.2	48.4
2003	48.8	39.3	44.6	39.1
2004	47.8	38.3	44.8	38.2
2005	48.9	38.4	43.1	37.8
2006	49.1	38.9	43.3	36.7
2007	49.7	41.0	46.1	39.7
2008	51.4	42.3	46.8	40.3
2009	48.2	40.2	46.2	40.6[d]
2010	47.3	38.4	43.8	36.2
2011	47.3	38.2	45.2	39.5
2012	46.4	39.8	47.9	49.0
2013	..	..	49.0	49.0
2014	..	..	49.0	49.0
2015	..	..	..	49.0
2016	..	..	..	48.2

[a] Tax burden on work and contributions as a ratio of tax revenue from all tax forms.
[b] The implicit tax rate is the quotient of the revenue from taxes and contributions pertaining to work and the income derived from work.
[c] The tax wedge is the quotient of the total public burden (tax and contribution) and the total wage cost, it is calculated as: tax wedge = (total wage cost – net wage)/total wage cost.
[d] The tax wedge of the minimum wage is the 2009 annual mean (the contributions decreased in June).
Source: 1991–1995: estimate of Ágota Scharle based on Ministry of Finance (PM) balance sheet data. 1996–2009: http://ec.europa.eu/taxation_customs/taxation/gen_info/economic_analysis/tax_structures/index_en.htm. 2010: Eurostat online database. Implicit tax rate: Eurostat online database (gov_a_tax_itr). Tax wedge on the 67 percent level of the mean wage: OECD: Taxing wages 2010, Paris 2011, tax wedge at the level of the minimum wage: calculations of Ágota Scharle.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent12_04

Table 13.1: Employment and unemployment rate of population aged 15–64 by gender in the EU, 2015

	Employment rate			Unemployment rate		
Country	males	females	together	males	females	together
Austria	75.1	67.1	71.1	6.1	5.3	5.7
Belgium	65.5	58.0	61.8	9.1	7.8	8.5
Bulgaria	65.9	59.8	62.9	9.8	8.4	9.2
Cyprus	66.2	58.9	62.4	15.2	14.9	15.1
Czech Republic	77.9	62.4	70.2	4.2	6.1	5.1
Denmark	76.6	70.4	73.5	5.9	6.4	6.2
United Kingdom	77.6	68.0	72.7	5.5	5.1	5.3
Estonia	75.3	68.5	71.9	6.2	6.1	6.2
Finland	69.3	67.7	68.5	9.9	8.8	9.4
France	67.1	60.6	63.8	10.8	9.9	10.4
Greece	59.3	42.5	50.8	21.8	28.9	24.9
Netherlands	79.0	69.2	74.1	6.5	7.3	6.9
Croatia	60.1	51.5	55.8	15.7	17.0	16.3
Ireland	68.7	57.9	63.3	10.9	7.7	9.4
Poland	69.3	56.6	62.9	7.3	7.7	7.5
Latvia	69.9	66.4	68.1	11.1	8.6	9.9
Lithuania	68.0	66.5	67.2	10.1	8.2	9.1
Luxembourg	71.3	60.8	66.1	6.1	7.4	6.7
Hungary	70.3	57.8	63.9	6.6	7.0	6.8
Malta	76.2	51.0	63.9	5.5	5.2	5.4
Germany	78.0	69.9	74.0	5.0	4.2	4.6
Italy	65.5	47.2	56.3	11.4	12.7	11.9
Portugal	66.9	61.1	63.9	12.4	12.8	12.6
Romania	69.5	53.2	61.4	7.5	5.8	6.8
Spain	62.9	52.7	57.8	20.8	23.6	22.1
Sweden	77.0	74.0	75.5	7.6	7.3	7.4
Slovakia	69.5	55.9	62.7	10.3	12.9	11.5
Slovenia	69.2	61.0	65.2	8.1	10.1	9.0
EU-28	70.8	60.4	65.6	9.3	9.5	9.4

Source: Eurostat http://epp.eurostat.ec.europa.eu.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent13_01

Table 13.2: Employment composition of the countries in the EU[a], 2015

Country	Self employed[b]	Part time	Fixed term contract	Agriculture	Industry	Market services	Non market services[c]
Austria	11.0	27.3	9.1	4.0	26.1	41.0	28.9
Belgium	13.8	24.3	9.0	1.1	21.5	40.2	37.1
Bulgaria	11.1	2.2	4.4	6.7	30.1	40.9	22.3
Cyprus	12.9	13.0	18.5	3.5	16.2	48.8	31.5
Czech Republic	16.3	5.3	10.0	2.9	38.4	35.2	23.5
Denmark	7.8	24.7	8.7	2.4	19.4	40.7	37.6
United Kingdom	13.6	25.2	6.1	1.0	18.8	44.4	35.8
Estonia	9.3	9.5	3.4	3.9	31.2	38.9	26.0
Finland	12.7	14.1	15.1	3.8	21.9	39.8	34.5
France	10.8	18.4	16.7	2.7	20.5	39.7	37.1
Greece	29.9	9.4	11.9	12.3	15.1	45.0	27.6
Netherlands	15.3	50.0	20.0	2.2	16.6	46.1	35.2
Croatia	12.9	5.9	20.3	8.2	27.2	39.5	25.1
Ireland	14.9	22.2	8.7	4.6	19.4	44.8	31.2
Poland	17.9	6.8	28.0	11.4	30.8	34.6	23.2
Latvia	11.6	7.2	3.8	7.7	23.9	42.1	26.3
Lithuania	10.8	7.6	2.1	8.8	25.3	39.4	26.5
Luxembourg	8.6	18.5	10.2	1.0	12.5	44.4	42.1
Hungary	10.2	5.7	11.4	4.9	30.5	36.2	28.5
Malta	13.3	14.5	7.4	1.5	19.8	46.1	32.6
Germany	9.6	26.8	13.2	1.3	27.9	39.8	31.0
Italy	21.9	18.3	14.1	3.6	26.8	41.2	28.4
Portugal	14.5	9.8	22.0	4.8	25.3	38.6	31.3
Romania	17.6	8.8	1.4	23.1	29.4	30.3	17.2
Spain	16.4	15.6	25.2	4.1	20.0	45.9	30.0
Sweden	8.9	24.3	16.6	1.7	18.5	41.3	38.4
Slovakia	14.9	5.8	10.5	3.2	36.3	34.3	26.3
Slovenia	12.1	10.1	17.8	5.9	32.5	36.2	25.4
EU-28	14.1	19.6	14.2	4.2	24.3	40.5	30.9

[a] Per cent of employment, except for employees with fixed-term contracts: per cent of employees.
[b] Includes the members of cooperatives and business partnerships.
[c] One-digit industries O-U.
Source: *Eurostat* (Newcronos) Labour Force Survey.

Online data source in xls format: http://www.bpdata.eu/mpt/2016ent13_02

DESCRIPTION OF THE MAIN DATA SOURCES

The data have two main sources in terms of which office gathered them: the regular institutional and population surveys of the Hungarian Central Statistical Office (CSO, in Hungarian: Központi Statisztikai Hivatal, KSH), and the register and surveys of the National Employment Service (in Hungarian: Nemzeti Foglalkoztatási Szolgálat, NFSZ).

MAIN DATA SOURCES OF THE KSH

Labour Force Survey – KSH MEF

The KSH has been conducting a new statistical survey since January 1992 to obtain ongoing information on the labour force status of the Hungarian population. The MEF is a household survey which provides quarterly information on the non-institutional population aged 15–74. The aim of the survey is to observe employment and unemployment according to international statistical recommendations based on the concepts and definitions recommended by the International Labour Organization (ILO), independently from existing national labour regulations or their changes.

In international practice, the labour force survey is a widely used statistical tool to provide simultaneous, comprehensive, and systematic monitoring of employment, unemployment, and underemployment. The survey techniques minimise the subjective bias in classification (since people surveyed are classified by strict criteria), and provide freedom to also consider national characteristics.

In the MEF, the surveyed population is divided into two main groups according to the economic activity performed by them during the reference week (up to the year 2003, this was always on the week containing the 12th of the month): economically active persons (labour force), and economically inactive persons.

The group of economically active persons consists of those in the labour market either as employed or unemployed persons during the reference week.

The definitions used in the survey follow ILO recommendations. According to these, those designated employed are persons who, during the reference week worked one hour or more earning some form of income, or had a job from which they were only temporarily absent (on leave, illness, etc.).

Work providing income includes all activities that:
– result in monetary income, payment in kind, or
– that were carried out in the hopes of income realized in the future, or
– were performed without payment in a family business or on a farm (i.e. unpaid family workers).

From the survey's point of view the activities below are not considered as work:
– work done without payment for another household or institution (voluntary work),
– building or renovating of an own house or flat, internships tied to education (not even if it is compensated),
– housework, including work in the garden. Work on a person's own land is only considered to generate income if the results are sold in the market, not produced for self-consumption.

Persons on child-care leave are classified – based on the 1995 ILO recommendations for transitional countries determined in Prague – according to their activity during the survey week.

Since, according to the system of national accounting, defense activity contributes to the national product, conscripts are generally considered as economically active persons, any exceptions are marked in the footnotes of the table. The data regarding the number of conscripts comes from administrative sources. (The retrospective time-series based on CSO data exclude conscripted soldiers. This adjustment affects the data until 2003, when military conscription was abolished.)

Unemployed persons are persons aged 15–74 who:
– were without work, i.e. neither had a job nor were at work (for one hour or more) in paid employment or self-employment during the reference week,

– had actively looked for work at any time in the four weeks up to the end of the reference week,
– were available for work within two weeks following the reference week if they found an appropriate job.

Those who do not have a job, but are waiting to start a new job within 30 days (since 2003 within 90 days) make up a special group of the unemployed.

Active job search includes: contacting a public or private employment office to find a job, applying to an employer directly, inserting, reading, answering advertisements, asking friends, relatives or other methods.

The labour force (i.e. economically active population) comprises employed and unemployed persons.

Persons are defined economically inactive (i.e. not in the labour force) if they were neither employed in regular, income-earning jobs, nor searching for a job, or, if they had searched, had not yet started work. Passive unemployed are included here - those who would like a job, but have given up any active search for work, because they do not believe that they have a chance of finding any.

The MEF is based on a multi-stage stratified sample design. The stages of sampling are defined as follows: primary sampling units (PSUs) are enumeration districts (EDs) and secondary sampling units (SSUs) are dwellings in settlements with 15,000 or more inhabitants, while PSUs are settlements, SSUs are EDs and ultimate sampling units are dwellings in all other cases. In the MEF sample design strata are defined in terms of geographic units, size categories of settlements and area types such as city centres, outskirts, etc.

The size of the sample means that the main indicators of the labour market are representative in terms of regions (NUTS2) as well. The quarterly MEF sample includes a sample of three randomly selected dwellings, and labour market information is collected from one household each month. From 1998, the quarterly sample contains about 33,000 households and 66,000 persons. The sample has a simple rotation pattern: any household entering the sample at some time is expected to provide labour market information for six consecutive quarters, then leave the sample permanently. The intersection of the samples of two consecutive periods tend to be less than the 5/6th that would be obtained at a 100 per cent response rate.

Since 2003, the weights used to make the sample representative are based on the 2001 census population record base. At the same time, the 2001–2002 data was recalculated and replaced as well. The LFS-based time series published in this volume use the following weighting schemes: (i) in 1992-1997 the weights are based on the 1990 Census (ii) in 1998-2001 the weights based on the 1990 Census have been corrected using data of the 2001 Census (iii) in 2002-2005 the weights are based on the 2001 Census (iv) from 2006 onwards the weights based on the 2001 Census have been corrected using the 2011 Census.

Institution-Based Labour Statistics – KSH IMS

The source of the earnings data is the monthly (annual) institutional labour statistical survey. The sample frame covers enterprises with at least 5 employees, and public and social insurance and non-profit institutions irrespective of the staff numbers of employees.

The earnings data relate to the full-time employees on every occasion. The potential elements of the prevailing monthly average earnings are: base wage, allowances (including the miner's loyalty bonus, and the Széchenyi and Professor's scholarships), supplementary payments, bonuses, premiums, and wages and salaries for the 13th and further months.

Net average earnings are calculated by deducting from the institution's gross average earnings the employer's contributions, the personal income tax, according to the actual rates (i.e. taking into account the threshold concerning the social security contributions and employee deductions). The personal income tax is calculated based on the actual withholding rate applied by the employers when disbursing monthly earnings in the given year.

The size and direction of the difference between the gross and the net (after-tax) income indexes depends on actual annual changes in the tax table (tax brackets) and in the tax allowances. Thus the actual size of the differences are also influenced by the share of individuals at given firms that fall outside the bracket for employee allowances.

The indexes pertain to the comparable sample, taking changes in the definitions, and of the sample frame into account. The KSH traditionally publishes the main average index as the earnings growth measure. Thus the indicator of change in earnings reflects both the changes in the number of observations and the actual earnings changes simultaneously. The change of net real earnings is calculated from the ratio of net income index and the consumer price index in the same period.

Non-manual workers are persons with occupations classified by the standardized occupational

code (FEOR) in major groups 1–4., manual workers are persons with occupations classified in major groups 5–9.

KSH Strike statistics

The CSO data cover strikes with at least 10 participants and token strikes lasting for at least 2 hours.

Labour Force Accounting Census – KSH MEM

Before the publication of the MEF, the annual MEM gave account of the total labour force in the time period between the two censuses.

The MEM, as its name shows, is a balance-like account that compares the labour supply (human resources) to the labour demand at an ideal moment (1 January). Population is taken into account by economic activity, with a differentiation between statistical data of those of working age and the population outside of the working age. Source of data: Annual labour survey on employment since 1992 of enterprises and of all government institutions, labour force survey, census, national healthcare records, social security records, and company registry. Data on unemployment comes from the registration system of the NFSZ.

Other data sources

Census data were used for the estimation of the employment data in 1980 and 1990. The aggregate economic data are based on national account statistics, the consumer's and producer's price statistics and industrial surveys. A detailed description of the data sources are to be found in the relevant publications of the KSH.

MAIN NFSZ DATA SOURCES

Unemployment (Jobseekers') Register Database – NFSZ-REG

The other main source of unemployment data in Hungary – and in most of the developed countries – is the huge database containing so called administrative records which are collected monthly and include the individual data of the registered unemployed/jobseekers.

The register actually includes all jobseekers, but from these, at a given point of time, only those are regarded as registered unemployed/jobseekers, who:

– had themselves registered with a local office of the NFSZ as unemployed/jobseekers (i. e. he/she has no job but wishes to work, for which they seek assistance from the labour market organisation).
– at the time of the examination (on the final day of any month), the person is not a pensioner or a full-time student, does not receive any rehabilitation provision or benefit, and is ready to co-operate with the local employment office in order to become employed (i. e. he/she accepts the suitable job or training offered to him/her, and keeps the appointments made with the local employment office's placement officer/counsellor/benefit administrator).

If a person included in the register is working under any subsidised employment programme on the closing day, or is a participant of a labour market training programme, her/his unemployed/jobseeker status is suspended.

If the client is not willing to co-operate with the local office, he/she is removed from the register of the unemployed/ jobseekers.

The data – i. e. the administrative records of the register – allow not only for the identification of date-related stock data, but also for monitoring flows, inflows as well as outflows, within a period.

The database contains the number of decrees pertaining to the removal or suspension of jobseeking benefits, the number of those receiving monetary support based on accounting items, support transactions, the exact date of entry and exit and the reason for the exit (for example, job placement, the end of entitlement, disqualification, entry into a subsidized employment programme, etc.), as well as the financial data of jobseeking benefits (for example, average monthly amount, average support paid for the number of participants on the closing date, for exiters, and those who found placement).

The jobseeking benefit register can also monitor the average duration of the period of benefit allocation and the average monthly amount of the benefits allocated.

For the period between 1991 and 1996, the register also contains the stock and flow data of the recipients of new entrant's unemployment benefit. Between 1997–2005, the system also contained the recipients of pre-retirement unemployment benefit.

Jobseeking allowance recipients: from September 1, 2011 the conditions for determining and disbursing the jobseeking allowance changed. The two phases of the jobseeking allowance were discontinued and the period of entitlement decreased from 270 days to 90 days. Jobseekers needed to have at least 360 days of worktime counting towards entitlement in the 5 years prior to becoming a jobseeker (prior to September 1, 2011, this was 365 days in the previous 4 years). Its amount is 60% of

the allowance base, but maximum the amount of the smallest mandatory wage on the first day of the entitlement (allowance base: the monthly average amount from the four calendar quarters preceding the submission of the application).

Jobseeking assistance recipients: from September 1, 2011 the conditions for determining and disbursing the jobseeking assistance changed. The "a" and "b" type of benefit were discontinued, jobseekers can still request the "c" type of benefit under the title of pre-retirement jobseeking benefit, but the period of entitlement (and depletion) of at least 140 days decreased to 90 days.

Regular social assistance recipients: those from among the regular registered jobseekers who are of active age and are in a disadvantaged labour market position, and who receive social assistance to complement or substitute their income. From January 1, 2009, those receiving regular social assistance were included in two categories: regular social assistance recipients, and recipients of on call support. This support was replaced by a new type of assistance, the wage replacement support from January 1, 2011, then from September 1, 2011, the name was changed to employment substitution support. (Legislation III. of 1993 pertaining to social management and social assistance).

Based on the records of labour demand needs reported to the NFSZ, the stock and flow data of vacancies are also processed and published for each month.

Furthermore, detailed monthly statistics of participation in the different active programmes, number of participants, and their inflows and outflows are also prepared based on the assistance disbursed.

The very detailed monthly statistics – in a breakdown by country, region, county, local employment office service delivery area and community – build on the secondary processing of administrative records that are generated virtually as the rather important and useful "by-products" of the accomplishment of the NFSZ's main functions (such as placement services, payment of benefits, active programme support, etc.).

The NFSZ (and its predecessors, i. e. NMH, OMK – National Labour Centre, OMMK and OMKMK) has published the key figures of these statistics on a monthly basis since 1989. The denominators of the unemployment rates calculated for the registered unemployed/jobseekers are the economically active population data published by the KSH MEM.

The figures of the number of registered unemployed/jobseekers and the registered unemployment rate are obviously different from the figures based on the KSH MEF. It is mainly the different conceptual approach, definition, and the fundamentally different monitoring/measuring methods that account for this variance.

Short-Term Labour Market Projection Surveys – NFSZ PROG

At the initiative and under the coordination of the NFSZ (and its legal predecessors), the NFSZ PROG has been conducted since 1991, twice a year, in March and September, by interviewing over 7,500 employers. Since 2004 the survey is conducted once a year, in the month of September.

The interviews focus on the companies' projections of their material and financial processes, their development and human resource plans, and they are also asked about their concrete lay-off or recruitment plans, as well as their expected need for any active labour market programmes.

The surveys are processed from bottom up, from the service delivery areas, through counties, to the whole country, providing useful information at all levels for the planning activities of the NFSZ.

The survey provides an opportunity and possibility for the regions, the counties and Budapest to analyse in greater depth (also using information from other sources) the major trends in their respective labour markets, to make preparations for tackling problems that are likely to occur in the short term, and to effectively meet the ever-changing needs of their clients.

The forecast is only one of the outputs of the survey. Further very important "by-products" include regular and personal liaison with companies, the upgraded skills of the placement officers and other administrative personnel, enhanced awareness of the local circumstances, and the adequate orientation of labour market training programmes in view of the needs identified by the surveys.

The prognosis surveys are occasionally supplemented by supplementary questions and sets of questions to obtain some further useful information that can be used by researchers and the decision-makers of employment and education/ training policy.

From 2005, the surveys are conducted in cooperation with the Institute for Analyses of the Economy and Entrepreneurship of the Hungarian Chamber of Industry and Commerce (in Hungarian: Magyar Kereskedelmi és Iparkamara Gazdaság- és Vállalkozáskutató Intézet, MKIK GVI), with one additional benefit being that

with the help of the surveyors of the Institute, the sample size has increased to nearly 8,000.

Wage Survey Database – NFSZ BT

The NFSZ (and its legal predecessors) has conducted since 1992, once a year, a representative survey with a huge sample size to investigate individual wages and earnings, at the request of the Ministry of National Economy (and its legal predecessors).

The reference month of data collection is the month of May in each year, but for the calculation of the monthly average of irregularly paid benefits (beyond the base wage/salary), 1/12th of the total amount of such benefits received during the previous year is used.

In the competitive sector, the data collection only covered initially companies of over 20 persons; it was incumbent on all companies to provide information, but the sample includes only employees born on certain dates in any month of any year.

Data collection has also covered companies of 10–19 since 1995, and companies of 5–9 have been covered since 2000, where the companies actually involved in data collection are selected at random (ca. 20 per cent), and the selected ones have to provide information about all of their full-time employees.

Data on basic wages and earnings structure can only be retrieved from these surveys in Hungary, thus it is, in practice, these huge, annually generated databases that can serve as the basis of the wage reconciliation negotiations conducted by the social partners.

In the budgetary sector, all budgetary institutions provide information, regardless of their size, in such a way that the decisive majority of the local budgetary institutions – the ones that are included in the TAKEH central payroll accounting system – provide fully comprehensive information, and the remaining budgetary institutions provide information only about their employees who were born on certain days (regarded as the sample).

Data has only been collected on the professional members of the armed forces since 1999.

Prior to 1992, such data collection took place in every third year, thus we are in possession of an enormous database for the years of 1983, 1986 and also 1989.

Of the employees included in the sample, the following data are available:

– the sector the employer operates in, headcount, employer's local unit, type of entity, ownership structure
– employee's wage category, job occupation, gender, age, educational background.

Based on the huge databases which include the data by individual, the data is analysed every year in the following ways:

– Standard data analysis, as agreed upon by the social partners, used for wage reconciliation negotiations (which is received by every confederation participating in the negotiations).
– Model calculations to determine the expected impact of the rise of the minimum wage.
- Analyses to meet the needs of the Wage Policy Department, Ministry of National Resources, for the analysis and presentation of wage ratios
- Analyses for the four volume statistical yearbook (total national economy, competitive sector, budgetary sector, and regional volumes).

The entire database is adopted every year by the KSH, which enables the Office to also provide data for certain international organisations, (e. g. ILO and OECD). The NGM earlier the NMH also regularly provides special analyses for the OECD.

The database containing the data by individual allows for a) the analysis of data for groups of people determined by any combination of pre-set criteria, b) the comparison of basic wages and earnings, with special regard to the composition of the different groups analysed, as well as c) the analysis of the dispersion of the basic wages and earnings.

Since 2002, the survey of individual wages and earnings was substantially developed to fulfill all requirements of the EU, so from this time on it serves also for the purposes of the Structure of Earnings Survey (SES), which is obligatory for each member state in every fourth year. One important element of the changes was the inclusion of part-time employees in the sample since 2002.

SES 2002 was the first, and recently the databases of SES 2006 and 2010 were also sent to the Eurostat in anonymized form in accordance with EU regulations.

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HUNGARIAN LABOUR MARKET

IN FOCUS

STATISTICAL DATA

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