THE HUNGARIAN LABOUR MARKET, 2012
IN FOCUS:
THE EVALUATION OF ACTIVE
LABOUR MARKET PROGRAMS

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FOREWORD BY THE EDITORS

The Hungarian Labour Market Yearbooks series was launched in 2000 with the support of the National Employment Foundation (OFA). The yearbook presents the main characteristics of Hungarian employment policy and features an in-depth analysis of a topical issue each year. The editorial board has striven from the beginning to provide up-to-date results of labour market research and useful information on the Hungarian labour market tendencies as well as the legislative and institutional background of the employment policy for the GO and NGO organizations of the public employment services, the local governments, the public administration, educational and research organisations and – last but not least – for both the press and the electronic media. This year we have also created a clearly structured and easily accessible volume that presents the main characteristics and trends of the Hungarian labour market on the basis of available statistics, theoretical research and empirical analysis. Continuing our previous editorial practice, we selected an area that we consider especially important for the effectiveness of Hungarian employment policy: the impact evaluation of active labour market policies. Its characteristics and results are discussed in detailed in the section *In Focus*. The book has four main sections

The Hungarian labour market in 2010–2011

After the economic recession in Hungary brought about by the crisis, the period between September 2010 and September 2011 was planned to be a year of recovery – although this was not successful in the light of recent data. Stagnation in domestic demand meant that the only driving force of the economy was export, which failed to improve the employment situation significantly. There were no positive shocks in the economy during this period, the only important effect on the labour market were export demand and public works.

However, the decline of the employment rate of 15–64 year olds was not a break in a previous growing trend. Hungary ranked among the worst performing countries in regional comparisons of GDP-growth and employment rates, and neither did this situation change in the current period – employment seems to have stabilised at a low level (55.4%), characteristic of the early 2000s. The private sector has been characterised by stagnating wages and declining employment, while the public sector was characterised by declining real wages and increasing employment; however, this was largely the impact of extended public work schemes. A favourable development was the decline in the number of inactive people, nevertheless this was more the result of the increase in the number of unemployed and public works participants rather than the growth in employment. There were

similar trends in unemployment as well. The rapid increase of the unemployment rate in 2009 – as a result of the crisis – reached its peak in the first quarter of 2010 at 11.9%, not dropping however under 11% ever since.

Meanwhile, labour demand in the private sector was characterised by sectoral heterogeneity and continuous fluctuations. The fact that the main mechanisms of adjustment in the private sector are layoffs and hiring and their timing: postponing the recruitment of regular workers companies can even achieve a two-digit decline in their workforce. Data suggest that with the recovery of export prospects in the manufacturing sector, companies started again hiring new workers.

At the height of the crisis, the share of part-time employees within the total workforce increased significantly. Although this trend continued throughout the year, its rate eased between the autumn of 2010 and 2011. Meanwhile the gender gap has widened and the number of female part-time workers increasingly exceeds that of men. This suggests that while part-time employment is only an adjustment strategy for men, the increasing trend of part-time employment among women might be longer term.

Policy changes and changes in taxation might have a direct as well as an indirect impact on labour demand. The number of participants in public works was growing rapidly during recent years but it only had a noticeable effect on the aggregate level of employment last year. Transition from subsidized employment to other employment states is minimal to date, which suggests that public works in their current forms are more of a short-term employment policy measure. From the indirect effects it is worth highlighting that the rate of corporation tax for an annual turnover of up to 500 million forints was reduced from 19% to 10%. This might have a positive impact on micro- and small enterprises through the reduction of the administrative burden. The extraordinary taxation ("crisis taxes") of larger companies, due to its timing and rate might force businesses to fire workers or postpone hiring to compensate for the loss of income.

The development of the labour supply was influenced by policy measures after January 1, 2011, most importantly the creation of a flat rate personal income tax system. From a theoretical perspective this is more likely to increase the labour supply of higher earners (thanks to a decrease of the tax burden) and reduce the labour supply of lower earners (due to the increase of the tax burden), however there were no sure signs of this in 2011.

Contrary to previous periods, the number of unemployed workers was influenced by movements inside the group of actives in 2010 and 2011, meanwhile 2008 and 2009 were characterised by the influx of the inactive into unemployment. The labour market attachment of the active thus remained fairly strong, and even the short term balance between unemployment and inactivity was positive. It is a cause for concern however, that long term unemployment is increasing. There is a very limited dynamic behind the high unemployment rate. The regional pattern of long term unemployment is still characteristic: over half

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of the long term unemployed (51.7%) lived in Northern Hungary (particularly Borsod-Abaúj-Zemplén county) or in the Northern Great Plain (Szabolcs-Szat-már-Bereg county). We expect that the new public work schemes will have a large impact in these regions.

In Focus

The *In Focus* section of the current volume addresses the impact evaluation of active labour market policies. The aim of active labour market measures is to provide long term employment to unemployed or other potential workers who have been excluded from the labour market. They provide services that help job search and develop skills and knowledge that will improve their employment prospects. If these programs are effective they might increase the level of employment. If they are ineffective they are an additional burden on taxpayers and use scarce resources that might have been used more effectively elsewhere. It may sound surprising but we rarely know the effects of active labour market programs on participants, and we know even less about potential side-effects.. *In Focus* provides an overview of program evaluations and offers a selection of the few Hungarian examples.

The first chapter (written by *Gábor Kézdi,* the editor of *In Focus)* introduces the reader to the methodology of program evaluation. It argues that experiments are the most valid and simplest program evaluation method. At the same time, non-experimental methods can also provide valid results if they use adequate methods and high quality data. The chapter by *Péter Hudomiet* and *Gábor Kézdi* summarises the international experiences of active labour market policies based on the most credible program evaluations. They show that the effectiveness of programs is more influenced by regulation and organisational factors than the type of the program and this is why truly valid program evaluations are important. International experience also highlights that even the most effective programs are not a panacea. We can expect decent positive results from these programs but we cannot expect them to solve the problem of structural unemployment and low employment.

Other chapters of *In Focus* summarise the results of some program evaluations in Hungary. These cover the most important active policy measures and were selected from the most valid Hungarian examples. None of them are based on experiments and the limited availability of data might compromise the validity of some of the studies. *Zsombor Cseres-Gergely* analysed the impact of the modernisation of the Public Employment Service on the employment chances of clients of selected job offices. The results show that modernisation had a moderate but positive effect on re-employment and thus shortening the duration of unemployment. *Judit Csoba* and *Zita Éva Nagy's* ambitious study examines the impact of three main active labour market policies – training, wage subsidy and public works – running in 2009 and 2010 using a single analytical framework. Their results show that public works participants were less likely to find non-subsidised

work than the control group, training participants were slightly more likely and wage subsidy recipients were significantly more likely to take up employment. *János Köllő* and *Ágota Scharle* examined the impact of changes in public works between 2003 and 2008 and showed that they did not reduce long term unemployment. *Nándor Németh* and *Gergely Kabai* present the small scale complex employment program *Life changing – Life Shaping* [*Sorsfordító – sorsformáló*] aiming to tackle long term unemployment in rural areas. Based on their qualitative assessment the program might be successful in this. The final chapter of *In Focus* reviews program evaluations of unemployment benefits ("passive labour market policy measures") and wage subsidy schemes in Hungary (the authors of this chapter are *Zsombor Cseres-Gergely* and *Ágota Scharle*). They also review the methodology of each study allowing the reader to judge their validity.

Valid program evaluations are relatively rare but their number is steadily increasing especially abroad. There are more and more experimental studies and non-experimental studies can also rely on better quality data. Hopefully this year's Labour Market Yearbook will provide a further impetus to this process and encourage high quality, valid program evaluations in the future. The most important aim is that, based on the results of valid impact evaluations, active labour market programs will receive an adequate role based on their true effect in Hungarian employment policy.

Institutional environment of the labour market between September 2010 and September 2011

This chapter continues the tradition of the Hungarian Labour Market Yearbook that has reviewed changes in the labour market institutions each year, however this time it is presented in a slightly different format. The authors of the chapter have created a structure that is closely related to the labour market and its forces and allows a clear distinction of measures according to whether they have an impact on wages, labour cost, labour supply or demand or labour market structure.

The components of the institutional system and changes were organised according to two criteria. First, a thematic framework was created by joining nomenclatures of the Eurostat and the European Commission that will help to structure current and future labour market policy interventions. This will also help to follow changes in the emphasis of policies over time. The chapter presents a large number of labour market policy and labour market related policy measures. The first group includes for example unemployment benefits or employment services for the unemployed. The latter group includes for example personal income tax. A promising future possibility might be the collation of financial data (expenditure) for the individual interventions considering that the European Union collects data in a structure similar to the one used in the chapter. Although the authors highlight analytical studies and evaluations for each measure, the chapter

does not aim to provide an evaluation. Readers who would like to do this will find guidance and information on previous studies.

Each area was considered from multiple perspectives. The possible labour market mechanism of each measure is presented briefly and any relevant Hungarian, or in their absence international research is highlighted. This is followed by the overview of the situation in August/September 2010 and the presentation of changes between September 2010 and September 2011. Given the scope of the review it is not possible to present changes in great detail and therefore we provide references to relevant legislation for each measure and also to on-line resources, where they exist.

We chose a thematic structure and explicit questions to facilitate policy analysis and evaluation, as opposed to another, simpler organising structure. Although a number of programs and institutions implement multiple measures, we focused on the main interventions and measures following the logic of decision makers and policy analysts. The efficiency and rationale of economic policy can only be judged if we know the full range of available measures, the effect of these measures and the specific policy choices. This chapter aims to support this type of analysis.

Three of the changes discussed in the chapter should be highlighted here: the reform of unemployment benefits, public works and personal income tax. The benefit period of unemployment insurance became considerably shorter than previously: as of September 1, 2011 job seeker's allowance is only paid for up to three months. After this most claimants must take part in public works or labour market programs if they want to qualify for financial assistance (now called *out-of-work assistance*). The only exceptions are people within five years of the state pension age who qualify for pre-retirement assistance and people claiming regular social assistance.

There were major changes in the system of public works as well. The previous three types were combined into a single scheme and the entitlement conditions were expanded. Apart from the state and local councils, churches and social co-operatives can also run public works projects. A new type of employment status was created for participants of public works programs that differs from regular employment statuses in various aspects, most importantly the possibility to pay less than the statutory minimum wage. Public works projects are supported through grants of various lengths and at various rates of co-financing. Special temporary agencies that employ public works participants and provide re-employment services are also eligible for these subsidies. Businesses do not qualify for public works subsidies, however they can claim a wage subsidy if they take on job seekers claiming out-of-work assistance.

The new personal income tax entered into force on January 1, 2011 and introduced two new changes. First, it is a flat rate system: the tax rate is 21.5% of the gross income. This favours high earners and the limitation of tax credits increases the tax burden on low earners. In addition, it also introduces significant tax

reliefs for working parents. As a result high earners with three or more children might not have to pay income tax at all.

Statistical data

This section gives detailed information on the main economic trends, population, labour market participation, employment, unemployment, inactivity, wages, education, labour demand, regional disparities, migration, labour relations and social welfare assistance as well as an international comparison of selected labour market indicators following the structure developed in previous years. Following our traditions tables reporting data on labour market programs related to the topic of this year's *In Focus* were added. All tables with labour market data published in the Hungarian Labour Market Yearbook since 2000 are available at the following website: http://adatbank.mtakti.hu/tukor.

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THE HUNGARIAN LABOUR MARKET
IN 2010–2011

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The Hungarian labour market between the summers of 2010 and 2011 can be characterised by the situation that evolved as the aftermath of the crisis of 2008 and in which economic activity was mainly triggered by export. Economic growth continued to remain moderate with a low level of employment combined with a high rate of unemployment, and the economy seems to have stabilized at a lower steady state than the preceding one. Accordingly, the labour market was unable to surpass its own former output levels or to exceed the performance of similar countries. In contrast to market processes, the increased government activity went through major changes. Policy measures such as the abolition of the former public work program or the radical restructuring of the unemployment benefit system can have a direct effect on the labour market. On the other hand, the restructuring of the tax system, the introduction of the new public work program or the institutional reforms might also exert their influence in an indirect way. The exact effect of the numerous provisions can only be analysed next year when in full possession of the corresponding data.

THE ECONOMIC ENVIRONMENT AND EMPLOYMENT[1]

The recession, brought about by the global financial crisis hitting Hungary in the second half of 2008, touched bottom in the middle of 2009. The period following is marked by a constant recovery, which is generally observable in the countries of the region (*Figure 1*). This rise can mainly be attributed to the instant economic stimulus measures implemented by the national governments (*MNB,* 2010*a*). However, the effects of the programs proved to be temporary as shown by the stagnant growth rates of the last one and a half years. Apart from this, growth was heavily supported by the dynamic growth of the developing – mainly Asian – countries. The expansion of their demand for import had a positive effect on the countries of the European Union, especially on the growth of the German economy. The German growth indirectly provoked the rise of orders in manufacturing sectors in the countries of the region (*MNB,* 2011).

In contrast to the rest of the region, whose higher growth rates at the beginning of 2011 still have not achieved the former levels of 5 to 7 percent, the annual 1–2 percent growth rate of Hungary last year roughly corresponds to its performance prior to the crisis. The GDP growth of Poland during the crisis was unparalleled in the European Union and its growth rate of 3.5–4 percent continued to be the highest in the region during the last year. The possible reasons for this include the relatively low level of residential debt (even in the case

1 The manuscript was closed on 15th of October, 2011.

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of debt denominated in foreign currencies) and public debt, and the comparatively low exposure to export (*NBP,* 2010).

Figure 1: The development of real GDP in the Visegrád countries by quarter (per cent)
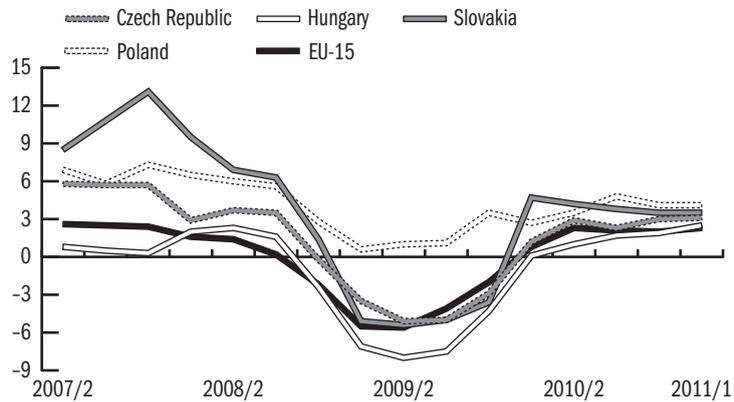
Note: Percentage changes relative to the corresponding period of the previous year.
Source: *Eurostat* on-line database (teina011).

The slowdown was greatest in the second quarter of 2009 in Hungary, with a drop of 8 percent compared to its previous value for the same period in the previous year. Considering the annual growth rates over the entire period, Hungary was not only below the other Visegrád countries, but the EU-15 average as well. The figures of 2010 at the same time show that a slow recovery process is observable compared to the EU-15 average.

The upturn, however, still displays a dual structure. While the export oriented manufacturing industry has been growing steadily since 2009 due to the strength of international demand, the domestic demand is only capable of a slow recovery, which still induces weak performance in the service industries. The scarce internal demand originates from the stagnant household consumption and the weak credit market activity that can be traced back to the declining investment activity of the private sector. The latter was able to increase after two years in the first quarter of 2011, which growth, however, can mostly be attributed to a few major manufacturing enterprises such as Mercedes or Hankook (*MNB,* 2011).

The shock hitting the real economy exerted its influence rather quickly on the labour market; the relative upsurge on the other hand didn't appear at such a speed. Even though the fall in employment in Hungary did not differ significantly either in extent or in tendency from other European countries, the absolute numbers show remarkable differences (*Figure 2*). Whilst the current employment levels of other countries approximate the 2006 values, in the case of Hungary the current level of 55 percent is below both the 2008 and 2006

values. As a result, the level difference compared to the EU-27 average grew from 7 percent to a current level of 9 percent over the last four years. Another significant achievement of Poland in this regard is that, in spite of the crisis, it was able to retain the employment advantage acquired earlier.

Figure 2: Employment rates in the Visegrád countries by quarter, 15–64 year-old population (per cent)
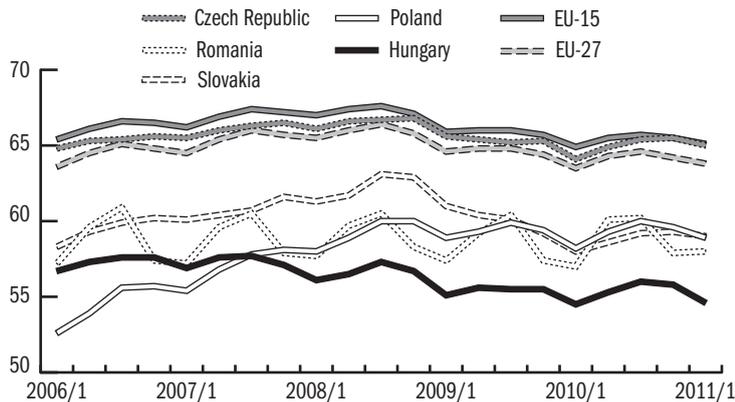
Source: *Eurostat* online database (lfsq_ergan).

The fall in employment might partly be attenuated by the accommodation of wages, which was indeed implemented both in the public and private sectors. The wage advantage of approximately 40 percent present from 2006 onwards in the public sector was decreasing gradually over the period, and after its disappearance in 2009–2010, it turned into a wage disadvantage compared to the wages of the private sector (*Figure 3*). This phenomenon was mainly triggered by the distinct way in which the two sectors reacted to the crisis. The adjustment in the private sector took place via the employment channel, while in the public sector the adjustment was predominantly through the moderation of wages (*Köllő*, 2011). The fall in employment was the largest among workers with primary level education or less in the private sector (a total of 5.4 percentage points between the third quarters of 2008 and 2010), while the fall was much smaller among employees in jobs requiring higher levels of education. The employment of workers having vocational education in the same period decreased by 1.9 percentage points, of employees with upper secondary education by 4.4 percentage points, and with higher education by 3.2 percentage points. In the meantime, employment in the public sector grew by 2.7 percentage points among the less qualified, and decreased by 1.1, 0.3 and 0.2 percentage points respectively among the three categories of higher education.

On the whole, stagnant wages and a decrease in employment can be observed in the private sector, and decreasing real wages with an increase in employment are present in the public sector until the first quarter of 2011 (*Figures*

3 and *4*). The extended public work schemes however played a crucial role in the adaptation of the public sector by employing mostly unskilled labour force with low wages, and thus this might have been pushing the average real wage of the sector downwards through the composition effect. This phenomenon is indicated by the fact that in the first three quarters of 2010 the employment of workers having primary education or less grew by 3.5, 0.6 and 0.8 percentage points respectively compared to the same period in the previous year. On the other hand, in the case of employees in jobs requiring a vocational or general secondary education the observable tendency was regressive. At the same time, it is also worth mentioning that the growth in the employment of higher education graduates proved to be more stable as, contrary to the growth in unskilled employment, it continued at the end of 2010 and the beginning of 2011 (approximately 0.5 percentage points).

Figure 3: Major economic indicators in Hungary by quarter from 2006 (per cent)
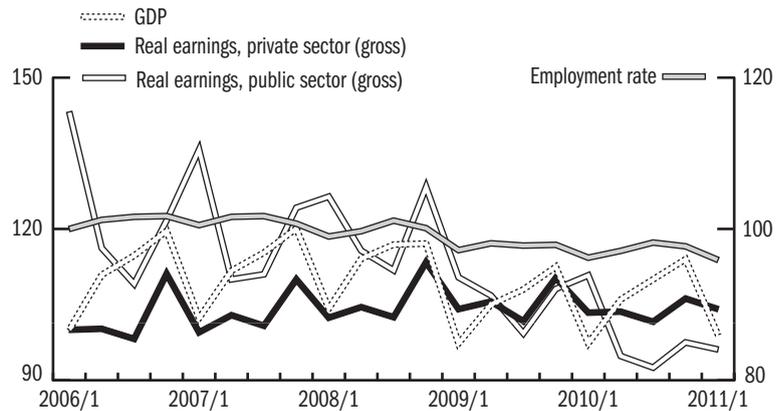
Note: Employment rate shown on the y axis on the right. GDP volume: Q1 2006 = 100, GDP production at average prices in 2000.

Earnings: average gross earnings in private sector in Q1 2006 = 100, real earnings deflated by the Consumer Price Index.

Source: GDP, earnings: authors' calculations based on HCSO Stadat; level of employment: authors' calculation based on the Hungarian Central Statistical Office (HSCO) Labour Force Survey.

The employment rate has decreased from its former equilibrium level by 4 percent (approximately 2 percentage points) since the beginning of 2009 and seems to have stabilized at this level. Similar processes have taken place with regard to unemployment as well. The unemployment rate, which was rising, from 2009 onwards, as a result of the crisis reached its peak at 11.9 percent in the first quarter of 2010 and has not fallen below 11 percent ever since, even reaching 11.7 percent again in the first quarter of 2011.[2] Due to the lack of radical changes, the post-crisis equilibrium level is set 3–4 percentage points higher than earlier. This process is further facilitated by the fact that parallel

2 This effect can partly be attributed to the seasonality of the indicator, and partly to the impact of the public work schemes observable in connection with inactivity (see also *Figures 5, 6* and *18*).

to the fall in employment, economic activity has risen by 4 percent since the first quarter of 2009, a tendency which might continue to persist due to government measures aimed at increasing the labour supply. Due to the strict credit conditions and the labour hoarding observed during the crisis, the continually rising labour supply can be trailed only slowly by demand, thus leading to a higher unemployment rate in the long run as well (*MNB*, 2011).

Figure 4: Major labour market indicators by quarter, 2006–2011
(2006 Q1 = 100, unemployment rate in percentages)
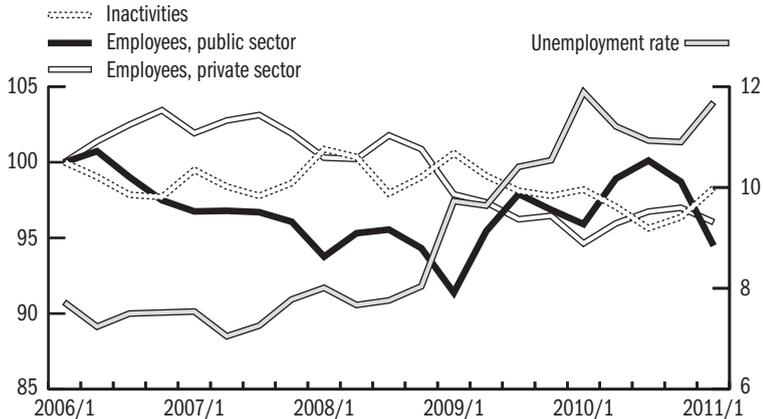
Note: Unemployment rate shown on the y axis on the right.
Source: Authors' calculation based on HCSO Labour Force Survey data, 15–64 year-old population.

Based on experience from previous years, the decrease in inactivity is a positive phenomenon on the whole, but the decrease must be complemented by the fact that the underlying mechanism is rather growing unemployment and not a rise in employment (*Figure 4*). *Figures 5* and *6* display stock-flow consistent calculations of labour-market status transitions based on Cseres-Gergely (2011). In this paper, unsubsidised employment or subsidised private sector employment (hereafter: unsubsidised), and subsidised public sector employment (hereafter: subsidised) are discussed separately.[3]

According to the figures, the dynamics of status transitions that shifted in 2009 seems to be resettling. We find a significantly increased flow from unsubsidised employment to unemployment compared to the previous year in the first quarter of 2010, which was balanced during the following quarters by the (unusually) high number of new entrants onto the labour market. The dynamics of the first quarter of 2011 however resemble the period before 2007: the remarkable increase in unemployment that characterised the winters of 2009 and 2010 didn't arise in 2011. On the other hand, subsidised employment, which includes participants in public work schemes, shows signs of drastic changes (*Figure 6*). As a joint result of the decreasing inflow and increasing outflow of

3 Cseres-Gergely (2011) discusses in detail the advantages and disadvantages of the method applied herein. Still, three features should certainly be emphasised. First of all, the reported stock-flow data are consistent with stock changes, yet they are to be handled as estimations and not as facts. Secondly, analyses tend to omit flows related to demographic changes, which are definitely needed to create consistency. Thirdly, we emphasise that subsidised employment includes workers in the public sector and the local government.

employment, the sharp rise in mid-2009 and mid-2010 turned into an abrupt fall in the first quarter of 2011 (reporting a loss of about 35.000 people). These changes were mainly attributed to the delay in public work schemes and roughly offset the rise in subsidised employment during the previous two years.

Figure 5: Quarter to quarter changes in unsubsidised employment, and its components: flows between employment and unemployment, inactivity (omitted direction: subsidised employment), 15–64 year-old population, 2007–2011
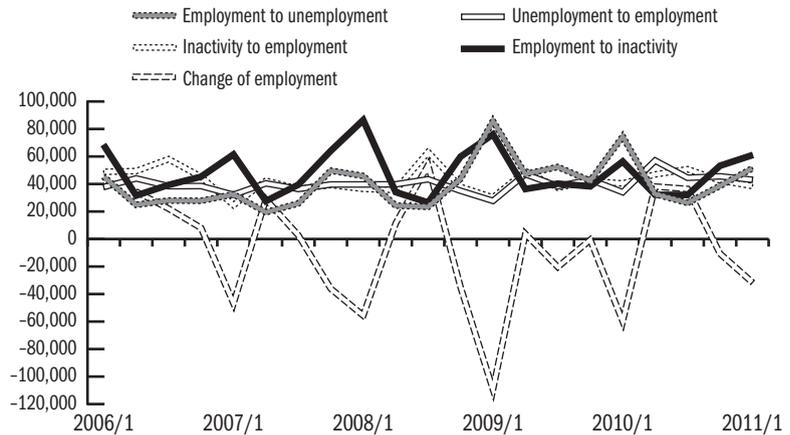
Note: Unemployed: registered unemployed.
Source: Authors' calculation based on HCSO Labour Force Survey micro-data, stock-flow consistent model.

Figure 6: Quarter to quarter changes in subsidised employment, and its components: flows between employment and unemployment, inactivity (omitted direction: unsubsidised employment), 15–64 year-old population, 2007–2011
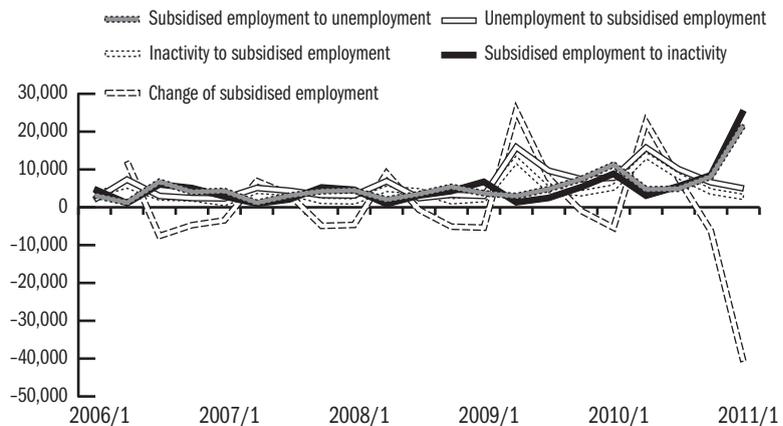
Note: Unemployed: registered unemployed.
Source: Authors' calculation based on HCSO Labour Force Survey micro-data, stock-flow consistent model.

In spite of the significant growth of the public sector, the transitions in employment are just narrowly influenced by it; *Figure 7* shows that it had a substantive impact on the aggregate level of employment only in the first half of the last couple of years. The figure also displays that the transition between the subsidised sector and other employment groups is extremely restricted; a topic which will be discussed later on.

Figure 7: Quarter to quarter changes in subsidised and unsubsidised employment and its components: flows between subsidised and unsubsidised employment (omitted directions: inactivity and unemployment), 15–64 year-old population, 2007–2011
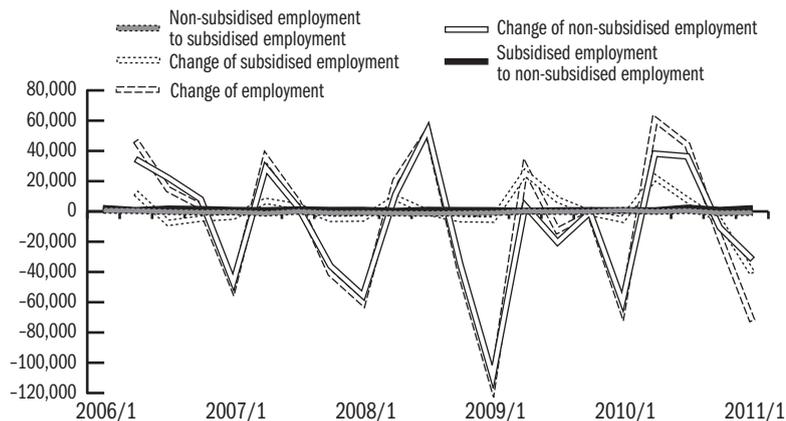
Note: Unemployed: registered unemployed.
Source: calculation based on HCSO Labour Force Survey micro-data, stock-flow consistent model.

Even though the latest statistics on employment (*KSH,* 2011) published by the Hungarian Central Statistical Office is not directly comparable to data from previous years, the tendencies derived might provide some valuable information. According to these figures, the relatively low employment rate of 56.1 per cent among the 15–64 year-old population in May-July 2011 was 0.6 percentage points higher than in the same period in the previous year. Another favourable development is that the activity rate reflects an increasing trend, accompanied by the decreasing number of unemployed people. Its value of 62.9 per cent was 0.5 percentage points higher between May and July 2011 than the previous year (representing an increase of 39,000 people). In the meantime the unemployment rate fell from 11.1 percent to 10.9 percent (a decrease of 3,900 people). All of the above might give grounds for optimism, albeit official HCSO data do not make it possible to distinguish between subsidised and unsubsidised employment.

Large-scale heterogeneity of worker groups accompanies the new lower level of aggregate employment. The population most heavily affected by job losses at

the onset of the crisis were skilled workers (*Cseres-Gergely and Scharle,* 2010). The same process seems to persist in 2010; the employment rate between the first quarters of 2007 and 2011 fell by a total of 6 percentage points from 68.7 to 62.6 percent, out of which 1 percentage point has arisen since 2009. The effects of the crisis became apparent among workers with primary level education or less with a slight delay, appearing only at the beginning of 2009. The drop in employment in their case is around a stable 1 percentage point (*Figure 8*). However, due to the lower initial level among this group, such a drop is still remarkable.

Figure 8: Employment rates among the 15–64 year-old population by education from Q1 2006 to Q1 2011 by quarter
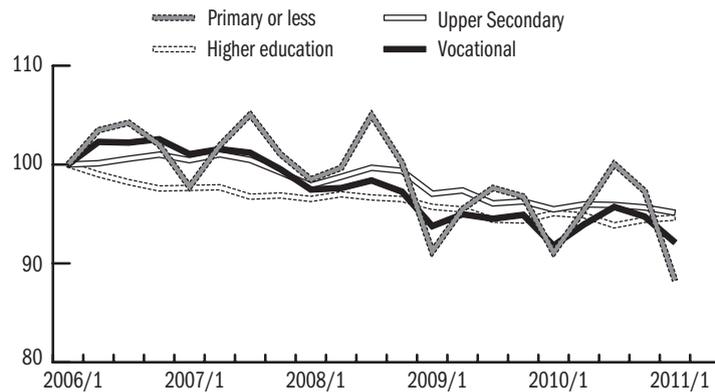
Note: Q1 2006 = 100.

Source*:* Authors' calculations based on HCSO Labour Force Survey micro-data.

Skilled workers, and especially higher education graduates, seem to be more resistant to the effects of the crisis. Among these groups, the decrease in employment had already begun before the onset of the crisis and can largely be attributed to the mass layoffs in the public sector after 2006. The corresponding employment rate in the public sector fell by a total of 6.7 percentage points between the first quarters of 2006 and 2009. The private sector started to show the same tendency from the second half of 2008 onwards: the period between the first quarters of 2008 and 2011 saw a decline of about 3 percentage points.

During a period of falling demand, restrictions put on labour expansion by entrepreneurs hit the employment of young cohorts most heavily. The substantial drop in men's employment as the direct effect of the crisis seems to be overturned in the case of the new labour market entrants (left panel of *Figure 9*), whose situation (that is the relative difference between employment rates) has clearly been improving in the past two years compared to non-new labour market participants, with the exception of the 20–24 year-old cohort (*Figure 9*). However, the fall in employment is still most severe in the youngest cohort, both among new entrants and non-new labour market participants.

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Figure 9: Employment rates among younger cohorts by gender and new entrant status
in the first quarter of 2008, 2009, 2010 and 2011
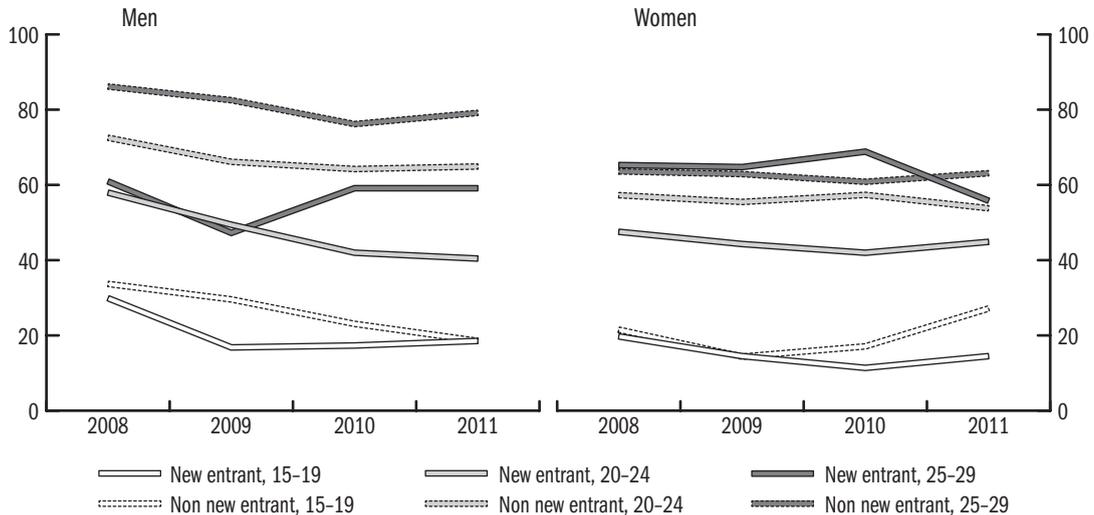
Note: A new employment entrant is defined as a worker in employment and not in full-time education who was a student a year before data collection. A new labour market entrant is defined as a person not in full-time education who was a student preceding data collection. The non-new employed are those in employment and not in full-time education who were not students one year before data collection. Non-new labour market participants are those not in full-time education who were not students preceding data collection. The figures for 30–34 year-old new labour market entrants are omitted because of the large error margin associated with low cell counts.

Source: Authors' calculations based on HCSO Labour Force Survey micro-data.

Looking at women, the employment rates are invariably lower than among men in all cohorts and statuses. On the other hand, the effect of the crisis on their employment was less substantial and there have been favourable processes taking place ever since (right panel of *Figure 9*). The employment rate of 27.1 percent among the cohort of 15–19 year-old non-new entrants was 13 percentage points higher at the beginning of 2011 than at its lowest level in 2009. However, it must be taken into consideration that this cohort is relatively small and that the spectacular growth can rather be ascribed to a decrease in the denominator of the calculated ratio.[4]

LABOUR DEMAND

The crisis and the ensuing recovery process affected the different sectors of the economy in a distinct way. The changes in labour demand further intensified the already existing heterogeneity. The general setback of 2008–2009 was followed by an upsurge only in the industrial sector, especially in the heavily export oriented manufacturing industry (*Figure 10*). The contraction of the manufacturing industry that had commenced before the crisis contin-

4 The number of non-new entrant women in the 15–19 year-old cohort fell from 13,500 to 9,500 between 2009 and 2011.

ued, although at a slower pace. As a result of the decline of the domestic demand, the performance of the service industry fell during the crisis, and has been stagnant ever since. The only industry that was able to grow extensively within the service sector is the transportation industry, whose performance is heavily correlated with industrial production. At the same time, retail sales didn't proliferate as they were expected to as the income tax reduction failed to provoke a satisfactory growth in consumption. The moderate lending activity in Hungary continues to create barriers to the further expansion of the service sector (*MNB*, 2011).

Figure 10: Quarterly real output by industry, 2006–2011
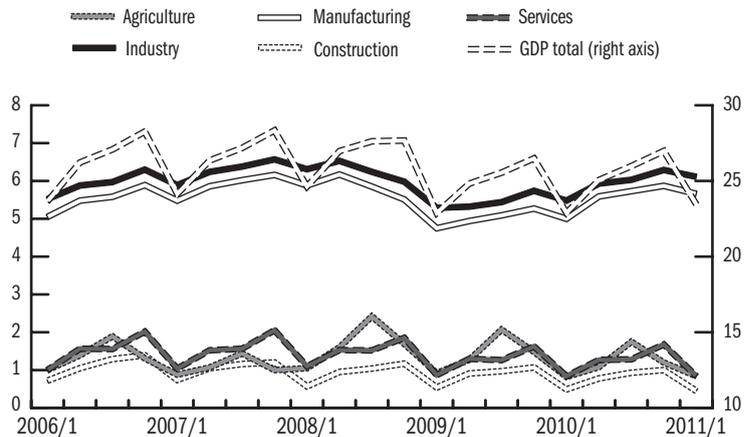
Note: At constant prices (base year: 2000), agriculture GDP in Q1, 2006 = 100. The GDP contributions shown in the figure are relative to the contribution of agriculture, e.g., in the first quarter of 2006 services contributed more than ten times, and manufacturing contributed more than four times the contribution of agriculture.
Source: Authors' calculations based on HCSO Stadat.

The boom in the different industries had its influence upon the evolution of the labour demand as well, but the reactions evoked may differ by industries due to the heterogeneity of the production elasticities (*Kőrösi,* 2005). The fall provoked by the crisis was the largest in the industrial sector, and as a result of its relatively high production elasticity, it also induced a significant decline in employment (*Figure 11*). Employment has expanded rapidly in the manufacturing industry, increasing by 2.7 percent between the first quarters of 2010 and 2011, yet it could not reach pre-crisis levels. Meanwhile, employment in the construction industry continued to decrease (a total change of –2.4 percent between the first quarters of 2010 and 2011). It is worth mentioning that in spite of its weak performance, employment in service industries rose steadily to its 2006 level during 2010. This can primarily be ascribed to the expansion of employment in administrative, engineering and catering services (*MNB*, 2010b).

Figure 11: Employment by sector (Q1 2006 = 100)
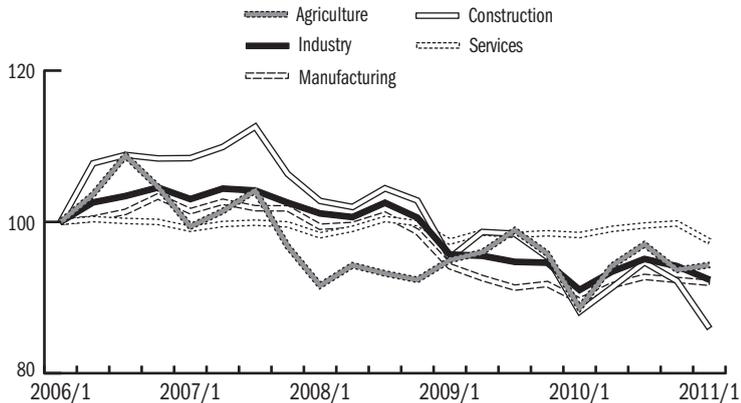
Source: Authors' calculations based on HCSO Labour Force Survey.

The deflections might have been caused to a great extent by the low flexibility of the Hungarian labour market, meaning that the firm adjustment happens mainly at the extensive margin. However, this does not necessarily mean mass layoffs as the regular hiring of new labour may result in a decrease of the magnitude of two-digits and the corresponding data seem to confirm that the same has been happening in the Hungarian labour market (see *Köllő*, 2011 and *Cseres-Gergely*, 2010). The available data suggest that the expansion of hiring started at manufacturing firms as a response to the improvement of export perspectives. Similar to the decomposition of changes in the case of the employment as a whole, the effect of the creation and destruction of jobs on labour demand should be examined properly. Unfortunately, there is no direct data available on the destruction of jobs, while the main (but not entirely satisfactory) indicator of job creation is the reported number of empty jobs at the National Employment Service.[5] The former seasonality of the reported number of jobs changed dramatically in 2009 and its volatility rose considerably (*Figure 12*). The decrease in the number of unsubsidised jobs at the end of 2008 was soon followed by stabilization at a lower level and later on, at the beginning of 2010 by a slight increase that resulted in being only temporary. The majority of registered new jobs at the beginning of 2011 were subsidised, clearly indicating that the tendency starting at the bottom of the crisis still persists. According to this, the number of reported new jobs is influenced principally by the number of subsidised jobs, especially by jobs created within public work schemes.

Another, perhaps more refined adjustment strategy of labour demand is through working time reduction, which is indicated by the growing amount of part-time employment during the crisis. Though the same process seemed to persist between the first quarters of 2010 and 2011 with the further 0.5 percentage point increase of the rate, the degree of the growth is far less than it was

5 The Public Employment Service was renamed as the National Employment Service in 2011.

in 2009. The observed differences by gender have been growing steadily since the beginning of 2010; still, the share of part-time employment among women continues to be higher and is growing even further (*Figure 13*). Between the same periods of 2010 and 2011, part-time employment among women grew by 1 percentage point, while considering men the corresponding rate is only 0.4 percentage points. This might mean that while part-time employment is only an adjustment strategy for men, it is of a long-term increasing trend in the case of women. The majority of the growth might be attributed to the private sector, where the rate of part-time employment among women grew by 1.1 percentage points between 2010 and 2011, but the growth of 0.4 percentage points in the public sector is notable too. Bálint, Cseres-Gergely and Scharle (2011) attributed this effect to the introduction of obligatory part-time employment offered to mothers returning to the public sector from maternity leave since the 1st of January 2010. This hypothesis, however, is not supported by the data having become available.

Figure 12: Number of registered subsidised and non-subsidised vacancies
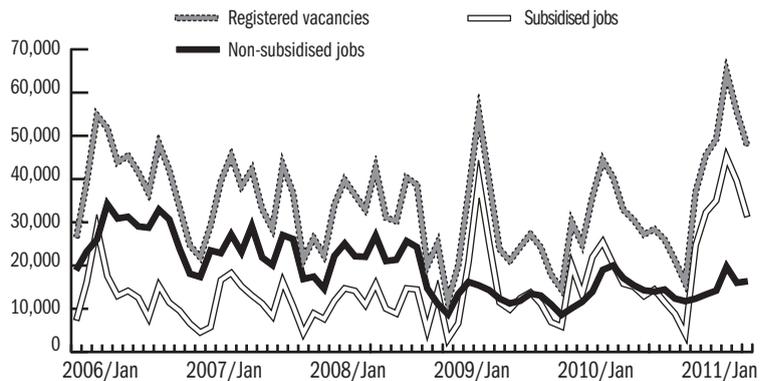
Source: National Employment Service.

Figure 13: Share of part-timers in total employment, 2006–2011
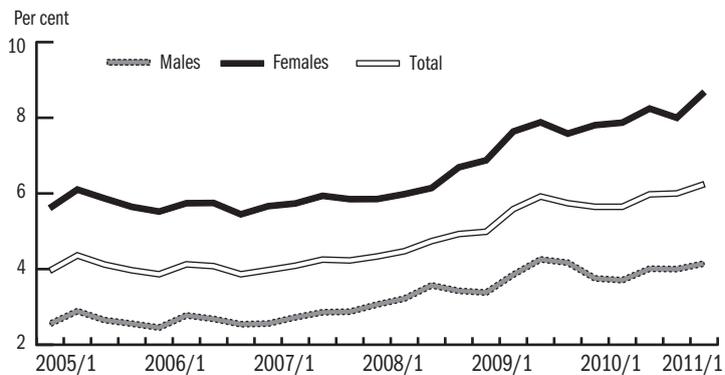
Source: CSHO Labour Force Survey.

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We have examined the motives of the expansion of part-time employment using several simple methods. Looking at part-time employment by gender and age (15–24, 25–44, 44+), we find that its rate has increased most heavily among the 15–24 year-old cohort of women and the 25–44 year-old cohort of men. The former saw an increase from 4.2 to 14.2 percent between 2006 and 2011, while the latter from 1.4 to 2.9 percent. Based solely on this, the decisive importance of returning from maternity leave cannot be excluded just yet, thus we examined transitions between the fourth quarters of 2006, 2007, 2008 and the first quarters of the following year. If the scope of employment statuses consisting of employed, unemployed and inactive is complemented by the fourth category of inactive due to maternity leave, the ratio of entrants from the latter group into part-time employment did not rise significantly among either of the cohorts. As a result, two different processes had been taking place during the examined period.

The first pair of years reflects the influence of the crisis. During this period, the stability of part-time employment under the age of 24 has somewhat risen (the rate of workers who were part-time employees in earlier periods grew from 87 to 91 percent in the category of part-time employment). However, this might also refer to the slowing integration to full-time employment of this employment group. A similar process has been taking place for those above the age of 45 where the rate of 89 percent rose to 94 percent. Based on the magnitude of the changes, the first process seems to be more robust: part-time employment increased most among the younger cohort with primary level education or less and in the public sector. The direction of the changes was the opposite between the ages of 35 and 45, where transitions from full employment increased substantially. As a result, the rate of new entrants arriving from full-time employment grew from 3 to 7 percent. Extensive change was observable only among the younger and older population between 2009 and 2011: the ratio of entrants from inactivity but not on maternity leave rose considerably.

A possible conclusion might be that the above transitions are mainly the results of the different public work schemes. Nevertheless, the data calculated from the HCSO Labour Force Survey disprove this theory by revealing that the share of part-time employment in subsidised public sector employment does not exceed 10 percent among any of the age or gender groups. Accordingly, the roots of this effect do not lie in regulation, supply-demand changes or public work schemes, but is rather evoked by a market mechanism that requires further thorough examination.

Besides the quantitative adjusments in labour, the price adjustments, namely the changes in wages, should be emphasised as well, being a crucial determinant of labour demand. As a consequence of the measures provoked by the crisis, the wage advantage of the public sector melted completely in 2009 and even turned into a wage disadvantage during 2010 (*Figure 14*). Apart from the

already mentioned distinctions in the adjusment of the two sectors, another dominant factor might have been that the layoffs in the private sector mainly affected the blue-collar workers. Therefore, the so called composition effect in itself resulted in higher average wages.

Figure 14: Gross real wages in the public and the private sector by quarter, 2006–2011 (Q1, 2006 prices)
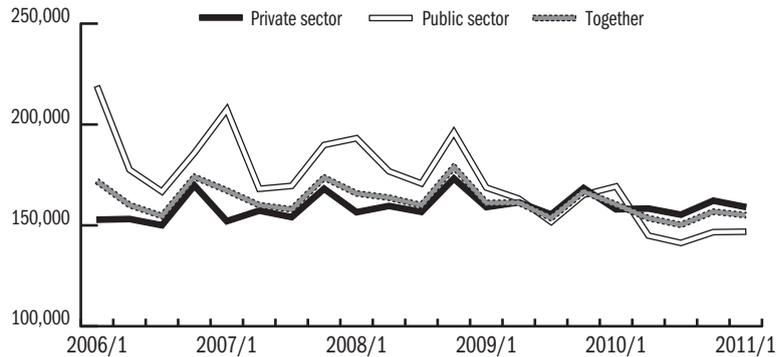
Note: Monthly wages in Hungarian forints (HUF). 100,000HUF ≈ 379EUR (calcu-lated on 2006 yearly average rates, 1EUR = 264HUF).
Source: Authors' calculation based on *HCSO Stadat*.

Policies affecting labour demand

Labour demand was heavily shaped by government measures including public work schemes, development programs and the transformation of the tax system (further details in Chapter IV of *In Focus*). As we have already mentioned, the first months of 2010 saw a considerable drop in public employment; more precisely, the falling number of public jobs offered as part of the *Pathway to Work* program. The regime of public employment was reshaped in two steps by the government during 2011, the first of which mostly affects the part related to social security benefits, thus having no direct effect on labour demand. Detailed information on the progress of development programs in the framework of the Széchenyi-plan is not available, thus no estimate can be given on its short-term effects on the economy and on labour demand.

Two major effects prevail among taxes levied on businesses. Firstly, the tax rate on profits has been changed automatically to 10 percent instead of the general rate of 19 percent after the 1st of July 2010 (consequently in 2011 as well) for firms with revenues less than HUF 500 million. As there are no further conditions for obtaining this allowance, the decrease of administrative burdens might have a positive effect on micro- and small businesses.

Secondly, the government laid claims to revenue from additional taxes (so called "crisis taxes") during the whole period under discussion, levied on large companies in financial, telecom, energy and trade sectors. By diminishing the

profitability of these firms, and especially due to its degree and timing, this extra tax might oblige firms in the private sector to compensate for the losses with layoffs or the delay of regular labour expansion. In absence of detailed analysis, the extent of this effect cannot be determined.

Notable changes took place in the wage and tax policies during the last one and a half years. Among these, one of the most important is the introduction of the flat-rate personal income tax instead of the progressive personal taxation system from the 1st of January 2011. However, the effect on labour demand could be realised only indirectly, through the change of the wage costs, if the employees were ready to give up the increase in their gross wages in return for a decrease in tax burdens. Even though *Figure 14* displays the moderation of wage dynamics, we cannot be sure about the permanence of this effect, especially as the only sector reporting significant changes in employment is the export-oriented manufacturing industry.

According to the analysis of the *OECD* (2011), the extent to which average tax wedge was reduced in Hungary was one of the largest during the last ten years: the drop was approximately 6–8 percentage points among worker groups with different marital and income statuses (54.5 percent to 46.4 percent between 2000 and 2010 in the case of single workers with average wages, for example). However, its average value was still 9–13 percentage points higher than the OECD average in 2010 (which was 34.9 percent in the same category).

Figure 15: Tax wedge at the minimum wage and for an average wage in manufacturing, 2008–2011, bi-annual series (percent)
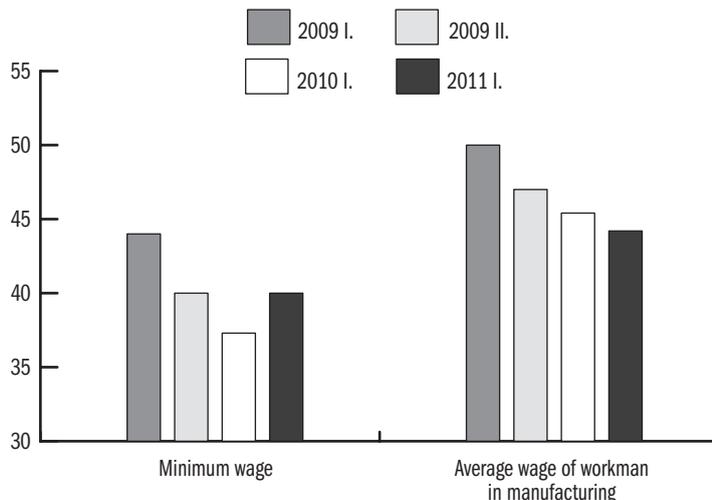
Note: The tax wedge is expressed as a percentage of the total wage cost.
Source: Taxes and contributions from Hungarian Tax Authority data; gross wages HCSO institutional statistics.

Figure 15 shows that the tax wedge of a worker in manufacturing with average wages decreased in 2011, primarily due to the moderation of the personal income tax. Meanwhile, the tax wedge has grew considerably for minimum wages (from 37.3 to 40.1 percent), which came about due to the phasing out of tax allowance and which elevated the figure to the former level of the second half of 2009. As a result of the higher wage elasticity of unskilled workers, this could reduce the demand for this group considerably.

The minimum wage and the skilled workers' wage minimum are instruments that affected wage costs to a smaller extent. Following their drop in real value on 2010 prices, the increase of both the minimum wage and the skilled workers' wage minimum exceeded the expected inflation of 3.9 percent in 2011, as a result of which the former rose approximately by 2 percent and the latter by 1 percent in real value (*Figure 16*). All these changes may encumber the adjustment in labour demand among unskilled workers even further.

Figure 16: The minimum wage and skilled workers' wage minimum
in real value, 1997–2011
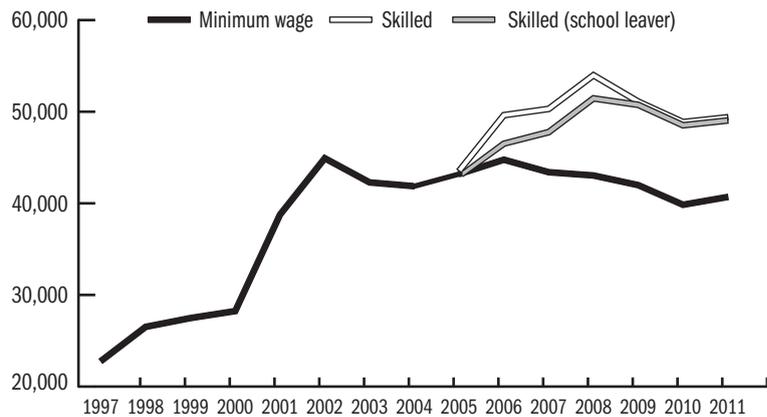
Note: HUF at 1997 level, in 2011 using the Hungarian National Bank's 3.9 per cent inflation projection (*MNB*, 2011). The values for 2009 were weighted with reference to changes in employer contributions during the year. The skilled workers' wage minimum is the lowest wage payable to employees in jobs requiring general or vocational secondary education (before July 2009 the pay could be slightly lower if the employee had less than two years' experience). 100,000HUF ≈ 463EUR (calculated on 1997 yearly average rates, 1EUR = 211HUF).

LABOUR SUPPLY

As opposed to the massive negative effects of the demand shock that has already been alluded to, the crisis emerged in a more temperate way on the supply side of the labour market (*Bálint, Cseres-Gergely and Scharle*, 2011). The changes arose mostly as intended or unintended consequences of policy measures.

As has already been shown, the labour activity of the population did not change considerably after the crisis. The principal reason for this is that the government did not open the way that could have helped the passing to inactivity, and moreover, the *Pathway to Work* program activated a large part of the inactive, long-term unemployed population for a certain period. The labour market dynamics of the inactive population changed during this time, as the typical cyclic fluctuations of earlier periods turned into a continuous fall until the end of 2010 (*Figure 17*). A possible explanation is the retarded influence of the elevated statutory retirement age and the aggravation on the conditions of the disability pension (*Kátay and Nobilis*, 2009).

Figure 17: Quarter to quarter changes in inactivity, and its components: flows between unsubsidised employment and unemployment, 15–64 year-old population, 2007–2011 (omitted direction: subsidised employment)
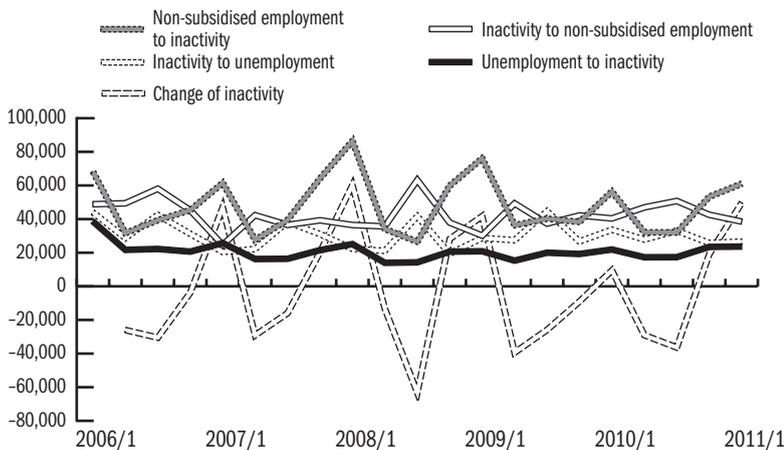
Note: Unemployed: Registered unemployed.
Source: Authors' calculations based on HCSO Labour Force Survey micro-data, stock-flow consistent model.

However, at the end of the period, a different influence becomes more powerful: the increased expansion of the public work schemes which activates a number of the long-term unemployed for a certain period. Consequently, the number of transitions from inactivity to subsidised employment increased in mid-2010. In the first quarter of 2011 inactivity unusually rose again, which could be attributed to the delay in the public work schemes appropriated for 2011 (*Figure 18*). Revisiting *Figure 7*, it can be seen that the public work schemes fulfil a primordial role in employment policy; however, they only facilitate temporary employment and not stable long-term work opportunities for the affected groups.

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Figure 18: Quarter to quarter changes in inactivity, and its components: flows between subsidised employment and unemployment, 15–64 year-old population, 2007–2011 (omitted direction: unsubsidised employment)
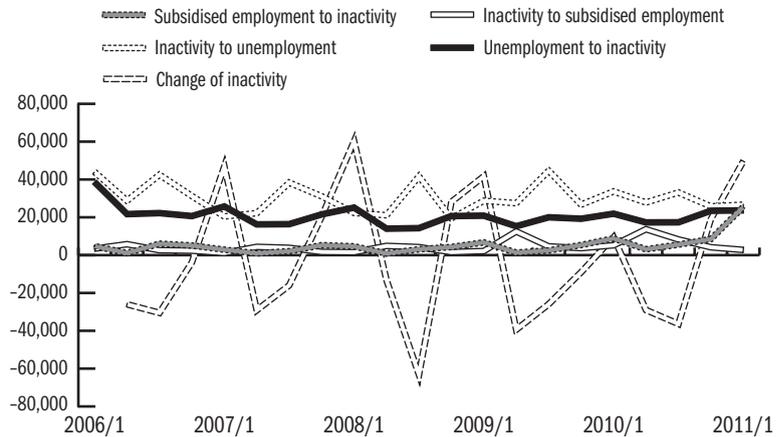
Note: *Unemployed*: Registered unemployed.

Source: Authors' calculations based on HCSO Labour Force Survey micro-data, stock-flow consistent model.

Policies affecting labour supply

One of the fundamental purposes of the government's economic policy is the expansion of the labour supply, and several policy measures were implemented during the second half of 2010 and the first half of 2011 to support this. Out of these, ushering beneficiaries of pre-retirement and disability pensions to the labour market had perhaps the most indirect and uncertain effects, given the relatively low education of those affected. The case of disability pensioners is discussed in detail in the paper of the Hungarian National Bank (*MNB*, 2011, p. 76–79). According to their analysis, among the returners with higher education, approximately every second person has a chance of becoming employed. However, a remarkable part of this returning group, about 40%, is of lower educational level (primary education or less), and they are expected to contribute to a smaller extent to the expansion of employment in the private sector. Even though the rehabilitation of this group is feasible (*Scharle*, 2011), the majority of people with changed workability do not find employment in this way. Whether the activated people become employed or unemployed depends on the possible solutions of this situation in the future.

Another significant change was the restructuring of the tax system to a flat-rate personal income tax system from 2011. There are no detailed empirical analyses available on the labour market effects of this measure, and there are no demonstrable signs of short-term effects among the limited data at our disposal (data of the first quarter of 2011 from the HCSO Labour Force Survey). Based on preliminary research, however, a few consequences can be drawn. The

adjustment could be realised either through working time or by bringing to work people who were not employed earlier. In addition, no identical effect is expected among groups with different educational or income levels. According to *Bakos et al.* (2008), the adjustment through working time is negligible in the case of income levels under the average wage level, while above this level it equates to the strong sensitivity usually experienced in the international literature.[6] Possibilities of adjustment through entering the labour market are discussed in *Galasi* (2003), showing that the elasticity both on wages and non-labour income is small. *MNB* (2010a) recites related results which state that the change of the average tax wedge has only a moderate impact on entering and quitting [a drop of 1 percentage point implicates an increase of approximately 0.1 percentage point (p. 49)], but the effect is somewhat greater among the unskilled than the skilled workers.

Given that higher earners are most affected by the tax changes (*Cseres-Gergely and Simonovits*, 2011 and *Tóth*, 2011), the already employed skilled workers are expected to work more (in number of hours worked). The opposite is expected on the extensive margin, as the sensitivity of unskilled lower income groups is higher; however, due to the fact that the new tax system affected them in a negative way, their labour supply is expected to decrease.

UNEMPLOYMENT

The unemployment rate as defined by the ILO[7] increased sharply from the stable pre-crisis level of 7–8 percent to 11 percent in 2010 and seems to have stabilized at this new higher equilibrium level. The share of jobseekers registered with the National Employment Service among the 15–64 year-old population has been continuously moving above the rate of unemployment. However, the co-movement of the two figures experienced during previous years broke up in 2010 (*Figure 19*).

The split between the statuses of unemployment and registered unemployment is mainly the result of the timing of the public work schemes, which raise the possibility of entering employment from the status of registered unemployment in the second quarter of the year. This powerful effect can be observed in 2010 (which was present in previous years as well, but less powerfully), but not yet seen in 2011 (*Figure 20*). As a result of a delay in the programs, the number of unemployed not seeking jobs even increased in this period. This is also shown by the fact that based upon the ILO definition, the number of registered unemployed is continuously increasing among the unemployed, while the ratio of job seekers among registered unemployed has been sharply falling since the winter of 2010. In the light of previous results, this can be ascribed to the effect of the inactive registered unemployed who are waiting for the public work schemes.

6 A 1 percent change of the marginal tax rate increases the taxable income by approximately 0.3–0.4 percentage points.
7 This is the general definition of unemployment rate. We try to emphasize the source of the definition to clarify the difference between unemployment rate and registered unemployment.

Figure 19: Non-employed subpopulations (partially overlapping)
among the 15–64 year old population after 2006 by quarter
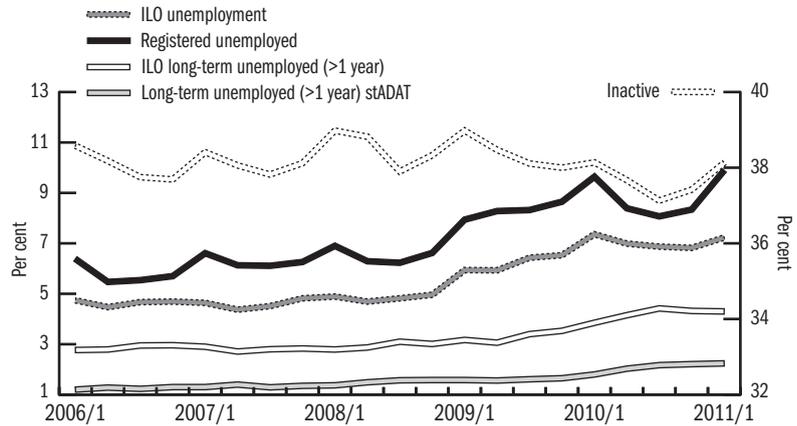
Source: ILO-unemployed, long-term unemployed, inactive: authors' calculations
based on HCSO Labour Force Survey; registered job seekers: authors' calculations
based on Office for Employment and Social Affairs data.

Figure 20: Quarter to quarter changes in unemployment, and its components:
flows between employment and inactivity, 15–64 year-old population, 2006–2011
(including subsidised and unsubsidised employment)
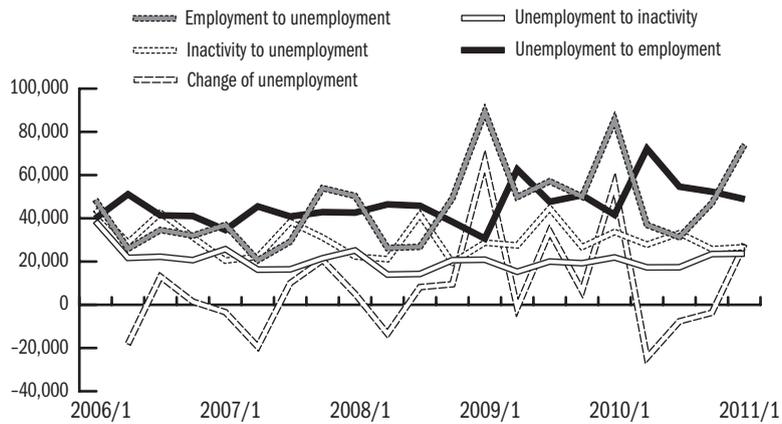
Note: Unemployed: Registered unemployed.
Source: Authors' calculations based on HCSO Labour Force Survey micro-data, stock-
flow consistent model.

Contrary to earlier periods, the number of unemployed is shaped by movements
inside the group of actives and not by the flow from inactivity to unemploy-
ment as in the spring of 2008 and 2009. The considerable quarter to quarter
changes have been persistent since the onset of the crisis, induced by the flow
between (unsubsidised) employment and unemployment, both of which are
at a continuously high level. Accordingly, the attachment of active workers to

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the labour market remained strong and, what is more, in the case of unemployment and inactivity the balance is positive in the short run.

The situation is more alarming among the most sensitive groups such as the young labour market entrants. According to the data of the National Employment Service (2011), the number of long-term job seekers (registered for more than one year) was 11,500 among the new labour market entrants in 2010, which represents 21.9 percent of the whole registered stock of new entrants. Though this figure is smaller than the overall ratio of 28.3 percent of long-term job seekers among the totality of the registered, taking into account that the affected group is of people who have not yet been able to integrate to the labour market, the rate seems to be extremely large.

The growth in long-term unemployment did not localize to unskilled workers with a low level of education. Comparing the monthly average values of 2009 and 2010, it appears that the largest growth of 38.2 percent was among higher education graduates, while the increase among workers with secondary education was 32.4 percent, with vocational education 21.7 percent, and with primary education or less 1.9 percent. Due to the differing number of the groups, the percentage changes might be misleading; the corresponding absolute changes are 1.6, 7.7, 9 and 1.4 thousand people.

The regional distribution of long-term unemployment is representative: half of the long-term job seekers in 2010 (51.7 percent) lived in the north of Hungary (especially in the county of Borsod-Abaúj-Zemplém) and in the northern part of the Great Plain (Szabolcs-Szatmár-Bereg county). The number of registered long-term job seekers in these two counties separately was 21,630 and 18,222, while the third place is occupied by the South-Transdanubian region with 11,133 people (*NFSZ*, 2011).

Policy measures

We have already mentioned that the restructuring of the public work schemes was presumably the main reason for the changes that can be observed in the number of registered unemployed. In the meantime, no policy measures have been taken that could have substantially affected the changes in the number of unemployed in the short run. There are various changes, however, that are expected to exert influence on the size and structure of unemployment in the following year. Such changes are the radical reduction in unemployment benefits; the cutback in active labour market programs, alongside with the expansion of public work schemes to a much larger scale than earlier; and the fact that half of the human resources of the National Employment Service will be devoted to the handling of the public work schemes. The details of these changes are further discussed later in this volume which deals with institutional changes.

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IN FOCUS

EVALUATION OF ACTIVE
LABOUR MARKET PROGRAMS

Edited by
GÁBOR KÉZDI

INTRODUCTION

GÁBOR KÉZDI

The employment rate has been very low in Hungary over the past 20 years. In 2010, it lagged behind the OECD average by ten percentage points. The lag had already been of the same magnitude in 1994. While most countries saw their place change between these two years in the ranking, Hungary has been a stubborn laggard for the entire period, being fourth-to-last in 1994 and second-to-last in 2010. *Figure 1* shows the employment rate statistics in the OECD countries.

Figure 1: Employment rate (employment over population excluding full-time students) among the 15 to 64 year age group in the OECD countries; 1994 and 2010
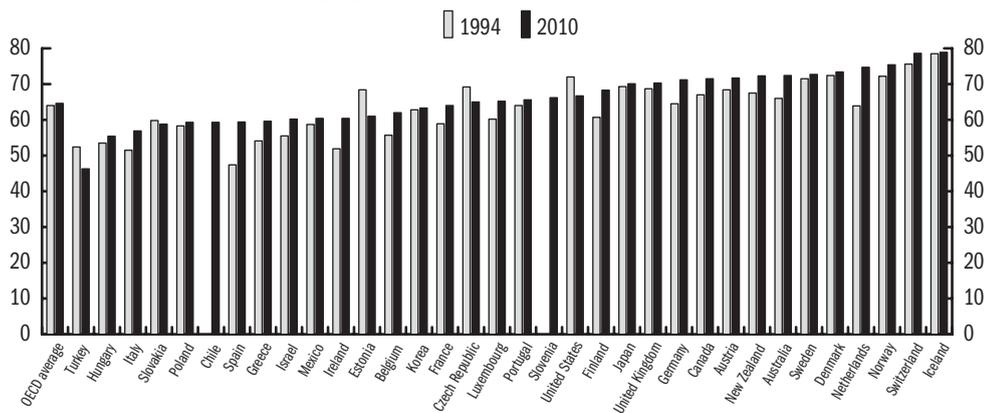
Source: OECD Employment Outlook, 2011. Online Statistical Annex, Tables B.

Many factors may explain the low performance of Hungary, see, for example *Commander–Köllő* (2008) and *Chapter 5* in this *In Focus* by *János Köllő* and *Ágota Scharle*. Active labour market policies are often viewed as potential remedies. However, it is not obvious whether that view is warranted. Active labour market policies may or may not increase aggregate employment, and even if they do, the magnitude of their effect may or may not be substantial. Appropriate evidence is needed to understand more about those effects.

Active labour market policies aim at helping the unemployed find long-term employment. These policies offer services that are supposed to help people

search for jobs or acquire skills and knowledge that make them more valuable employees. If effective, these programs can increase aggregate employment and thus decrease the lag of Hungarian employment. If not effective, these programs may be harmful by posing an extra burden on taxpayers (even if financed in part from outside Hungary) and using resources and creative energy that could be used for more productive purposes.

Active labour market policies can be classified the following way by the content of their services.

– Job search help (consulting).
– Public works programs (organized typically by government agencies or municipalities).
– Employment subsidy programs (also known as wage subsidy programs, public subsidies to private firms for employing people from the target population) and programs helping self-employment.
– Training programs (in-class or firm-based training for general or specific skills).
– Complex programs (usually small and narrowly targeted programs that include elements from the above four program types).

Countries differ a lot in their use of active labour market policies (see *Figure 2*). Active labour market policies are relatively small in the Anglo-Saxon countries and they are substantially larger in continental Europe. Post-communist countries are spread out in the rankings but most are in the lower half. Hungary is below the OECD average both in terms of costs (relative to GDP) and participation (relative to labour force), but it is above most of the Anglo-Saxon countries.

Figure 2: Size of the active labour market programs in the OECD countries, 2009
(costs as a percentage of GDP and the number of participants as a percentage of the labour force)
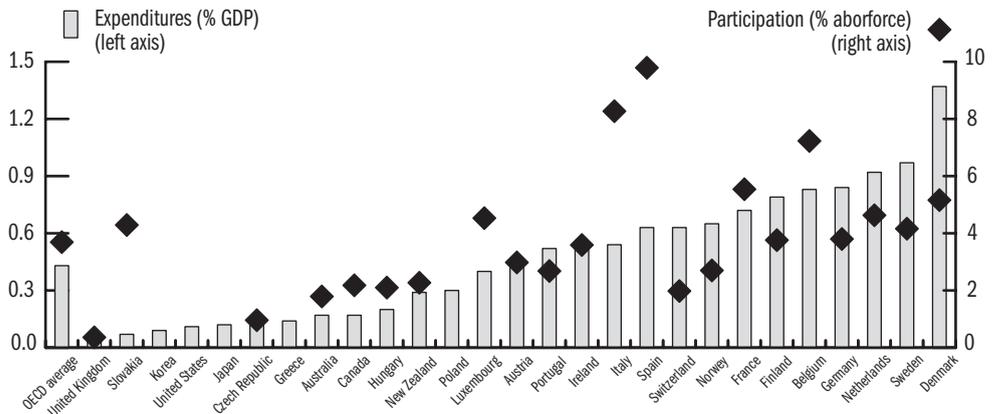
Source: OECD Employment Outlook, 2011. Online Statistical Annex, Tables K.

It may sound surprising but we rarely know the effects of active labour market programs on participants, and we know even less about potential side-effects.

Few programs are followed by impact evaluation studies, few of such studies are accessible to the public, and even fewer provide credible results. As we shall see (*Chapter 2* in this *In Focus*), organizational details, incentives or selection of participants are important determinants of the effects of any particular program. As a result, programs of similar type implemented in different countries at different times in different ways may produce very different results. It would therefore be essential to know about the effects of individual programs.

One reason for the shortage of credible analyses is the lack of adequate data. Experimental evaluations are still rare everywhere, and they are all but non-existent in Hungary. Data that can meet the strict requirements for informative non-experimental evaluations are also rarely available. Another reason is the often low quality of the evaluation methods. Whether due to inadequate data or inadequate expertise, the ultimate reason for the shortage of credible evaluations is on the demand side. If potential users of evaluation studies want to have credible evaluations, they could get them a lot more often than they may think. Many programs can be evaluated by credible experimental methods, and the data and expertise requirements for informative non-experimental evaluations can also be met for many programs. Most of the time it is a question of resources and priorities. Public access by the scientific community, combined with peer reviews is arguably the best way to impose appropriate quality control over the evaluation studies. Ensuring public access and hiring high-quality reviews are also under the control of potential users of the evaluation studies.

Only credible evaluations are valuable if one is genuinely interested in learning the effects of a program. Using a somewhat strong analogy, we can think of the evaluation of program impacts as similar to learning about the effects of medical treatments. If we were to choose from alternative treatments for our sick child, would we want advice that relies on credible evidence (from, say, proper experiments) on the effects and side-effects? Or would we be comfortable with advice based on "expert opinion" without such evidence? And, would we be fine with opinion affected by the doctor's personal incentives to choose one treatment over the rest?

The effects and side-effects of active labour market programs may not be matters of life and death. But they are important, too. As we shall see (in *Chapter 1* below), the methods of program evaluation are not trivially simple but are not extremely complicated either. There is enough expertise to carry out well-designed experiments and informative non-experimental evaluations even in Hungary. Of course, credible evaluations are costly. Setting up experiments takes time and money, and data collection and expert analysis are costly too. However, in most cases, these costs are negligible relative to the total costs of the programs or their potential effects and side effects. In light of this, it is very surprising to hear the all too often repeated excuse of too little money and time available for proper evaluations. Instead, the right question is why it

makes sense to spend vast sums of money and energy on programs with completely unknown effects?

It is a very positive development that credible evaluations are becoming more common in many countries. Experimental evaluations gain ground, and non-experimental evaluations can use better and better data, often from high-quality administrative sources. These trends signal not only positive developments within the evaluation community and improvements in data quality but the increased demand from stakeholders for credible evidence. There are signs for positive developments within Hungary, too. Only one randomized experiment was conducted in Hungary, and that looked at the effects of changes within the benefit system as opposed to active labour market policies (*Micklewright–Nagy*, 2010, looked at the effect of increased control over unemployment benefit recipients). Large and high quality administrative data are still not accessible in Hungary. Nevertheless, we start to see studies published and reviewed by the scientific community that are based on high quality analyses within the constraints of the data at hand. Most importantly, there are signs that indicate increased demand for credible evaluations by important stakeholders. Sponsoring this volume is a proof in case.

We hope that, by publishing this chapter in the Hungarian labour Market volume of 2012, we can contribute to the positive developments described above. Our goal is to facilitate credible evaluations of Hungarian labour market programs. The ultimate goal of such studies is to make sure that active labour market programs are used in line with their benefits.

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The *In Focus* consists of seven chapters. *Chapter 1* covers the methodology of program evaluation without technical details. *Chapter 2* gives a review of the international evidence on the effects of labour market programs, focusing on the most credible evaluations. *Chapters 3* to *5* show the results of recent Hungarian evaluation studies. *Chapter 6* presents a small complex program and discusses the possibilities of evaluating it. Finally, *Chapter 7* reviews the evaluation studies of the unemployment benefit system and the employment subsidy programs in Hungary.

The chapter covers Hungarian evaluations of all major program types, from job search help through public works programs and complex programs. As the results of *Chapter 7* point out, evaluations of Hungarian active labour policies are rare even compared to studies on the Hungarian unemployment benefit system. As a result, we could select from a very limited set of studies. Nevertheless, all studies presented in this chapter represent high quality analyses given the data at hand, and all provide important information on the effects of the Hungarian programs.

The effect of a program can be understood as the outcomes following the program compared to the outcomes that would have occurred in the absence of the program. The effect is therefore defined as the difference between actual outcomes (measured after the program) and hypothetical outcomes, also called "counterfactual" outcomes that would have occurred had the program not taken place. *Chapter 1,* written by *Gábor Kézdi,* points out that collecting data from participants alone is never enough to measure the effects of a program. Measuring the counterfactual outcomes is equally important, and that measurement is the fundamental challenge of evaluation studies. Statistical evaluations measure counterfactual outcomes with the help of control groups. Outcomes measured in control groups are supposed to represent outcomes that participants would have achieved in the absence of the program. Qualitative evaluations do not make use of control groups, but they too have to make assumptions, even if very implicitly, about counterfactual outcomes. Comparing to counterfactual outcomes is essential because of the definition of the effects of a program.

The most credible and simplest evaluation method is the randomized controlled experiment. The decision of participation is controlled by the evaluation, and the assignment procedure is independent of any relevant characteristic of potential participants, including their potential outcomes. The inevitable advantages of experimental evaluation are often offset by its practical infeasibility. However, recent examples show that experiments can be designed in more situations than we may think. As a result, experimental evaluations of labour market programs, while still rare, are gaining ground.

Of the non-experimental evaluations, regression-discontinuity can lead to credible estimates of the program effects for part of the target group (individuals around the discontinuity point). Under suitable assumptions, matching and regression methods can estimate the program effects for everyone and specific subgroups as well. In reality, however, those assumptions are often unlikely to be met and thus these results are less credible, in general, than either experimental or regression-discontinuity estimates. It is a shared view within the profession that matching and regression methods are better used in combination, and they lead to more credible results the more successful they are at controlling for pre-program labour market histories, program eligibility criteria and local labour market conditions for control as well as treated individuals.

Chapter 2 reviews credible evaluations to present international evidence on the effect of active labour market programs (authors are *Péter Hudomiet* and *Gábor Kézdi*). The evidence suggests that job search programs are often effective (albeit not always), public work programs are very rarely effective (but there are exceptions), and complex and well-targeted programs can be effective even in situations where traditional programs are ineffective. Perhaps the most important conclusion from the literature is that organizational details are more

important determinants of success than the type of program. This highlights the importance of appropriate evaluation of each and every program in order to give feedback for subsequent modifications or termination of the program.

The international evidence shows that even when effective, active labour market programs are not a panacea to aggregate employment problems. The National Supported Work program, a complex employment subsidy program in the U.S. in the 1970's, increased participants' employment rate from 30 per cent to 40 per cent. This is a significant increase, but it is very far from making all participants employed. Active labour market programs can improve considerably in Hungary if the institutional background develops further, programs are designed by incorporating international evidence, and the effects of implemented programs are measured by credible evaluations for providing feedback for further improvements. We can expect positive effects from programs under such conditions. On the other hand, even if done in the best ways, active labour market programs cannot be the stand-alone solution to the problem of the low employment rate in Hungary.

Chapter 3, written by *Zsombor Cseres-Gergely*, evaluates the effect of the modernization of the Public Employment Services in Hungary that took place between 2005 and 2008. The intervention included national elements (e.g., development of the informational infrastructure), but many elements targeted local offices, including quality assurance systems, staff training, office reconstructions and the introduction of a new model of service. The improvements aimed at making local offices help job search of the unemployed. The evaluation study uses panel data on unemployment offices and a difference-in-differences methodology to look at whether employment probabilities increased in participant offices relative to non-participant offices. The results imply a modest increase in employment probabilities, and the effects are most pronounced among the 20 to 50 year old unskilled unemployed with some labour market experience. Simple back-of-the envelope calculations with the estimates suggest that , as a result of the modernization program, unemployment duration decreased by one to two months (5 to 10 per cent) in this most affected group.

The ambitious study of *Judit Csoba* and *Zita Éva Nagy*, in *Chapter 4,* looks at the effect of three major labour market programs in a single framework. The evaluated programs include, in principle, all training, employment subsidy and public work programs in Hungary between 2009 and 2010. The authors use administrative data on a sample of registered unemployed people, supplemented with their own questionnaire. They compare participants of the programs to a non-participant but eligible unemployed control group, and they use regression methods to control for observed differences. The administrative data does not provide enough information on pre-program labour market histories, and the treated groups differ from each other and from the control group in terms of many important observable characteristics. These problems limit the

credibility of the estimated effects, but the results are nevertheless informative. The longer-term results indicate that, six to twelve months after the end of the program, participants of public work programs were significantly less likely to find jobs than members of the control group, participants of the training program had a slightly higher success rate, and participants of employment subsidy programs were significantly more likely to find jobs.

The survey data used in the study contained additional interesting information. Members of the control group feel less healthy on average, they are more likely to think that they lack the skills demanded on the labour market, and they are less willing to work in occupations that demand long hours or working in public areas. These differences highlight the limits to comparing participants to members of the control group. These limitations are likely to be relevant beyond this particular study, as they suggest that controlling for "hard" characteristics observable in administrative data are unlikely to capture important aspects of self-selection. Another important result from the supplementary data suggests that at least one third of the jobs created by the employment subsidy program would have been created in the absence of the program as well.

In *Chapter 5, János Köllő* and *Ágota Scharle* analyse the effect of public works programs between 2003 and 2008. The effects of these programs can show the expected effects of the "Road to jobs" ["Út a munkához"] program introduced in 2009. In essence, the Road to jobs program is a scaled up version of the previous public works programs. Data from the program indicate that targeting was adequate but the take-up was larger than expected due to incentives built in for municipalities to use money in the central budget to finance public work locally.

The analysis uses administrative data and panel regressions at the level of municipalities to uncover the effects of year-to-year changes in participation in public work programs on subsequent changes in long-term unemployment. The results suggest that public work programs between 2003 and 2008 did not lead to a decrease in long-term unemployment. These results are in line with international evidence as well as previous Hungarian studies on the effects of public work programs. Therefore, while its targeting is adequate, the new Road to work program is unlikely to achieve its goals in decreasing long-term unemployment.

Chapter 6, written by *Nándor Németh* and *Gergely Kabai,* describes the "Change of destiny, forming of destiny" program, a small complex program targeting long-term unemployed in small villages in Hungary. In contrast to the other chapters in this *In focu*s, *Chapter 6* is not based on a statistical evaluation study. Instead, it is a descriptive study with qualitative evaluations. At the same time, the study follows the spirit of the chapter by asking questions relative to counterfactuals, that is, by contrasting outcomes after the program to outcomes that would have happened in the absence of the program.

The program was launched by the Labour Office of Southern Transdanubia (Dél-dunántúli Regionális Munkaügyi Központ), in 40 villages of three counties, with 200 participants. Program participants took part in an eight-month personalized training and are then employed in subsidized agricultural jobs for a year or two. This is a complex program with elements of training, subsidized employment, and consulting with goals of personality development. The results show that participants of subsidized employment stayed employed after the employment subsidies ran out, and participants formed local communities with purpose. The qualitative analysis indicates positive effects of the program, which would be interesting to evaluate with statistical methods as well.

Chapter 7, the last one in this chapter, reviews the evaluation studies of the unemployment benefit system ("passive labour market policies") and employment subsidy programs in Hungary. The paper, written by *Zsombor Cseres-Gergely* and *Ágota Scharle,* lists all evaluation studies and their references, and it classifies them in many dimensions. These dimensions include methodological criteria and thus help the reader judge the credibility of each study separately.

1. METHODS FOR ASSESSING THE IMPACT OF ACTIVE LABOUR MARKET PROGRAMS

GÁBOR KÉZDI

Introduction

Impact assessment studies[1] use statistical methods to assess the impacts of social programs on a few well-defined outcomes. For labour market programs, the most common outcome variables are employment, earnings and unemployment duration. Impact assessment studies are important in their own right, and their results are essential ingredients of further analyses. It is natural to ask whether programs have the impact they promise, what the magnitude of that impact is, and whether they have negative or positive side-effects. Results of impact assessment studies are used in cost-benefit analyses, which convert the estimated impacts into monetary value and contrast that with the costs of the program.

This chapter gives a short overview of the methods of impact assessment. It introduces the methods without many technical details and Greek letters. The discussion is kept short, but it covers the most often used methods, the conditions of their use, and I discuss their advantages and disadvantages.

Most impact assessment studies focus on direct impacts on program participants. These participants are often named as the "treated" group. In some cases, indirect effects may be important as well. Perhaps the most widely considered potential indirect effects are displacement effects, also known as program substitution effects. These can occur, for example, in an employment subsidy program if program participants are hired instead of non-participants, but the number of jobs remains fixed, and, as a result, non-participants are less likely to find jobs as a result of the program. Other indirect effects may include labour market equilibrium effects that operate through wages (a large employment increase due to a program may put downward pressure on wages) or general equilibrium effects that affect other markets as well (if large programs use resources which would otherwise be used elsewhere). Indirect effects are relatively rarely investigated. The larger part of this methodological chapter focuses on the measurement issues of direct effects, and it covers indirect effects in less detail in a separate section.

The effect of a program is defined as the difference between outcomes following the program and outcomes that would have been realized in the absence of the program. The effect to measure is therefore the difference between actual outcomes and so-called counterfactual outcomes. These counterfactuals are not observable by definition. As a result, it is impossible to assess the effects of a program by looking at the participants only. Take the example of a program that wants to help unemployed people find a job. Suppose that we find that 30

1 The economics literature uses the "program evaluation" label for such studies. For many people, evaluations may include analyses that do not make a serious attempt at assessing impacts, and, at the same time, some people restrict evaluations to studies that talk about the costs and benefits of the program as well. In this paper I use program evaluation in the economics terminology, synonymous with impact assessment.

per cent of the participants find a job within six months after the end of the program. This number tells us nothing about the impact of the program. It is possible that this 30 per cent would have found a job without the program as well, in which case the effect of the program is zero. It is also possible that, without the program, no participant would have found a job, in which case the effect of the program is a 30 percentage point increase in the job finding rate. In principle, it is also possible that even more people would have found a job without the program, in which case the effect of the program is negative.

Assessing the impact of a program is impossible without the counterfactual outcomes. These counterfactual outcomes are not observable though. Unfortunately, there is no way to know what would have happened to participants in the absence of the program. One can think of this problem as the unfeasibility of a thought experiment. The thought experiment would make people participate in the program, record their outcomes, roll back time, and then make the same people not participate in the program and record their outcomes.

Statistical impact assessment studies measure counterfactual outcomes by looking at the outcomes of a control group. Members of the control group are supposed to substitute for the participants in the unobservable state of the world in which they would be non-participants. Qualitative program evaluations do not examine control groups. Because of the low number of the cases they look at, statistical analysis of a control group would, in any event, be problematic. On the other hand, qualitative studies make assumptions about the counterfactual outcomes, too, if only in implicit ways. It is important to make those assumptions explicit, because the effect of a program can be understood only in comparison with counterfactual outcomes. The need for counterfactual comparisons is not specific to the method of the impact assessment study. It follows from the definition of the impact of a program.

Statistical impact assessment studies can be distinguished along two dimensions. 1. How is the control group selected? 2. What is the method of comparison between the treatment group and the control group? It turns out that the better the control group (i.e. the more credible the assumption that the control group represents the counterfactual outcomes of the treatment group), the simpler the methods needed for comparing the outcomes.

The design closest to the ideal is the randomized experiment (also known as randomized controlled trial). In these experiments a random rule is used to decide who participates in a program and who does not. Randomized experiments used to be relatively rare in program evaluation for practical reasons. At the same time, their results are exceptionally credible and widely accepted. For this reason, as stakeholders have started demanding credible results, randomized experiments have seen a recent increase in impact assessment studies worldwide.

All other methods are labelled together as non-experimental methods. The so-called natural experiments do not use an explicit random rule for deciding

who participates in the program and who does not, but they assume that there is some factor in the determinants of participation that can be viewed as random. The essence of natural experimental evaluations is finding and isolating that factor and comparing the outcomes of the participants to control group members whose participation is decided upon that particular factor. Another method is regression-discontinuity design that makes use of specificities of the assignment rule. Regression-discontinuity can be used if there is a threshold value of some variable (say, age), that leads to a jump in participation (because, say, nobody can participate above the threshold). Matching evaluations and regression analyses compare the outcomes of treated and control individuals that are similar in their observable characteristics. Matching methods explicitly pair people for comparison, while regression methods attempt to do the same in a more implicit fashion. An important subset of the matching and regression analyses is the difference-in-differences (diff-in-diffs) method that uses information on the outcome variables from before the program.

There are several excellent papers on the methods of statistical program evaluation. Most of these are more technical than this introduction. The most widely known of the papers are *Heckman*, *LaLonde and Smith* (1999), *Imbens and Wooldridge* (2009) and *DiNardo and Lee* (forthcoming).

Randomized experiments

Randomized experiments, also known as randomized controlled trials, start with a pool of potential participants and split this pool into a treatment group and a control group. The rule that assigns potential participants into the two groups is random. The meaning of randomness is sometimes the subject of rather abstract discussion, but the practical requirement here is simple: the rule should be completely independent of outcomes of the individuals. There are more complicated designs with more groups or certain overlaps, but they are not covered here.

In many randomized experiments, not everybody ends up participating in the program from the group that was selected to be treated. Some of the people that were selected to participate may decide not to participate or drop out during the program. In such cases comparing the outcomes of the original treatment group and the control group does not measure the effect of the treatment itself because part of the original treatment group ended up not receiving the full treatment. Instead of the treatment effect, such comparisons measure the effect of being assigned to the treatment group. This effect is called the "intention to treat effect" in contrast to the "treatment effect" itself. Actually, intention to treat effects are more relevant for program cost-benefit analyses than the treatment effects themselves. Incomplete participation in the treatment in the randomized experiment shows that incomplete participation is a feature of the program itself that should be taken into account in the cost-benefit analyses. At

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the same time, the effect of the treatment itself is often an interesting question in its own right. Incomplete participation makes the eventual treatment group systematically different from the control group, even if the original treatment group was very similar to the control group because of randomized assignment. As a result, a simple comparison of the eventually treated group to the control group leads to biased estimates of the treatment effect. Fortunately, the treatment effect can be estimated in such cases using the econometric technique of instrumental variables, under certain assumptions.

Randomized experiments are the standard methods of scientific inquiry from physics through medical research to psychology. Besides its sound methodological credibility, a major advantage of the experimental method is its simplicity. Simplicity helps in communicating the results to the stakeholders and the general public and leaves less room for manipulating the results. Their disadvantage is that randomization has to be built into the design of the program itself, which requires close collaboration between researchers and program administrators. Program administrators often resist accommodating the needs of program evaluation in general and randomized selection in particular. However, the needs of credible evaluation are necessary to take into account if one is genuinely interested in the impact of a program. The most successful demonstration programs (programs that are implemented in order to show the impacts for present and future stakeholders) are all evaluated by randomized experiments. There are powerful movements in the research community that advocate randomized program evaluations, such as the J-PAL group (http://www.povertyactionlab.org).

Natural experiments

In principle, natural experiments are similar to randomized experiments, with the important distinction that assignment to treatment group and control group is not the result of a randomized algorithm but some other mechanism. That mechanism qualifies for natural experiment if the researcher assumes that the assignment mechanism is practically random from the viewpoint of the outcome variables. Typically, though, the mechanism that is assumed random is only one of the many factors that influence participation in the program. Simple comparison of the treatment group to the control group is therefore not appropriate. Instead, the researcher has to isolate the effect of this particular mechanism on the outcome variable. The econometric technique used for this isolation is the method of instrumental variables. While instrumental variable estimations based on natural experiments have produced important results in labour economics, their practical applicability has been limited in impact assessment studies.

Regression-discontinuity

Discontinuity means a sudden increase or decrease in a variable at a particular point. In impact assessment studies, the regression-discontinuity design is ap-

plicable if the likelihood of participation shows a sudden increase or decrease at a threshold value of a variable. In the so-called "sharp" case there is a threshold that completely determines participation in the program: everybody participates from one side of the threshold value and nobody participates from the other side. Frequent examples include compulsory programs with age or income thresholds or restrictions on the length of unemployment (the program is restricted to a group defined by the thresholds but everybody in that group participates).

The basic idea is the following. People on the two sides of the threshold are very similar if they are close to the threshold value (e.g., those who just turned 25 are very similar to those who will be 25 within a short time). Their outcomes would also be very similar in the absence of the program. Importantly, this is true even if the underlying variable itself (e.g., age) is strongly related to the outcome variable (e.g., employment). The requirement here is one of "continuity": age can have a strong effect on employment, but, in the absence of the program, there should be no sudden increase or decrease in the employment probability at the particular threshold value (age 25). As a result, the employment prospects of those who have just turned 25 and those who will be 25 within a few months should be very close in the absence of the program. If, therefore, we observe significant difference in the outcomes at the age threshold, we can safely attribute that to the program. The method can identify the effect of the program for those who are in the immediate neighbourhood of the threshold value. The effect may of course be different for people far away from the threshold value, but the regression-discontinuity design cannot identify the effect for them.

In a sharp regression-discontinuity design, the probability of participation changes from zero to one as one passes the threshold. In more complicated cases the change in the participation probability is smaller. Frequently, the age threshold is a requirement but the participation is not compulsory among the age-eligible people: in this case the jump in the participation probability is from zero to a non-zero number less than one. It may also happen that the threshold is not prohibitive so that people from both sides can participate, but there is a sudden significant change in the probability (the fraction of people who participate). These are called "fuzzy" regression-discontinuity designs. Fuzzy designs require instrumental variable methods to identify the effect of the program. These methods can isolate the effect of the threshold on program participation and then on the outcome. The identified effect is local in one more sense compared to the case of sharp design. The fuzzy regression-discontinuity design allows for measuring the effect for people that are around the threshold and would change their participation status if they crossed the threshold.

Figure 1.1 shows a hypothetical sharp regression-discontinuity design with an age threshold. In this setup nobody participates in the program if above

the threshold and everybody participates if below the threshold. The outcome variable is earnings. The continuous line shows the observable average of earnings as a function of age, while the dashed line shows the counterfactual average that would be observable in the absence of the program. Average earnings and age are positively related in a continuous fashion in the absence of the program. The sudden jump at the age threshold indicates that the effect of the program is positive and significant. We can estimate this effect by comparing the average earnings of those who are just below the age threshold and those who are just above.

Figure 1.1: A hypothetical example for the logic of sharp regression-discontinuity design
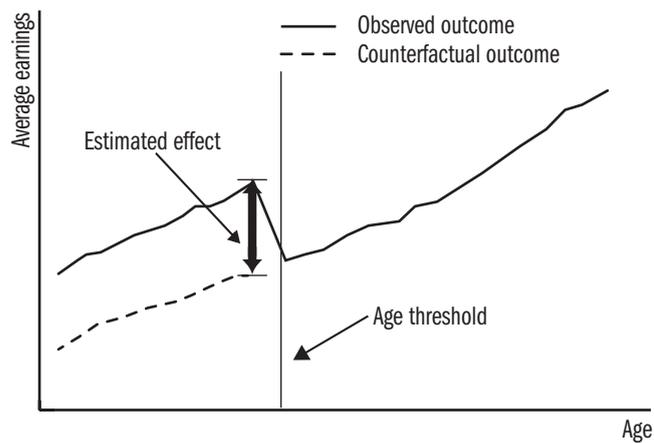
Many researchers argue that regression-discontinuity design gives the most credible assessment of program impacts from among the non-experimental methods. The logic of the method is simple and intuitive, but the practical implementation is not without difficulties. The analysis has to balance two opposite problems when deciding whom to compare with whom. On the one hand, the closer the compared individuals are to the threshold value the more credible the comparison. On the other hand, the more we restrict the comparison groups the smaller the number of observations that we can use for the comparison, which decreases the precision of the results. The other caveat is that regression-discontinuity identifies the effects locally as described above.

Despite those caveats, regression-discontinuity is a powerful method to give credible results for at least a subset of the potential program participants. It has become very popular not only in impact assessment studies but in other areas of labour and education economics. The method was first used by *Thistlewaite and Campbell* (1960), but *Angristand and Levy* (1999) was perhaps the most influential study that popularized the method. The most important questions of identification and estimation are covered by *Hahn, Todd and Van*

der Klauuw (2001), and the most recent methodological surveys are *Imbens and Lemieux* (2008) and *Lee and Lemieux* (2010).

Matching and regressions

Matching and regression are the most widely used non-experimental methods in impact assessment studies. They attempt at handling potential biases due to non-random program participation by "controlling" for "confounding" factors. Controlling means restricting the treated versus control comparisons to individuals that are the same in terms of those factors. Confounding factors are variables that are thought to affect program participation and may be related to program outcomes in their own right, too. Comparing the outcomes of treatment and control individuals that are different in those variables would not identify the effect of the program because the differences in outcomes may be due to their differences in the confounding factors as well as the effect of the program. For example, if more motivated people are more likely to participate in the program, but more motivated people would be more likely to find jobs in the absence of the program, then comparing the job finding rates of program participants to non-participants cannot tell us the effect of the program. (More precisely, the comparison gives an "upward biased estimate" of the effect of the program, meaning that the true effect is smaller than the estimated effect.) The example highlights the major problem with these methods: Motivation is one of those potential confounding variables that are hard to measure, but it is necessary to control for all confounding variables, including hart-to-measure ones like motivation, in order to avoid bias.

In order to focus on the more technical questions, assume for now that all potential confounders are measured appropriately and can be used as control variables. Also assume that within groups of people that share the same control variables we find both participants and non-participants. In this case, within those groups, program participation can be considered random for the purpose of impact assessment analysis. Within those groups, therefore, simple treatment-control comparisons identify the effect of the program just as in the case of randomized experiments. The assumption that all potential confounding factors are observed and controlled for is called "unconfoundedness" or "ignorable treatment". The assumption that we can find both participants and non-participants within groups of people that are identical in terms of the confounders is called the "overlap" or the "common support" assumption.

Matching methods carry out the comparisons in a very intuitive way. They take one or more program participants and match them with one or more non-participants that have the same control variables. The treatment versus control comparison then is carried out within these matched pairs or groups. If the overlap assumption is satisfied, the comparison is always feasible. If the unconfoundedness assumption is satisfied, the outcomes of the matched con-

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trol person or persons can be used as the counterfactual outcomes for the treated person or persons. There are various matching methods that differ in the way they use the control variables and the algorithm they use to find matched pairs or groups.

There are two ways to use the control variables in matching. The first one is "exact" matching, simple in principle but rarely used in practice. It looks for matches that have the exact same control variables. Exact matching is feasible if we have relatively few variables that are categorical in nature, and we have a large enough sample. One can also make categories out of continuous variables and do exact matching on those categories. However, exact matching suffers from the "curse of dimensionality", the problem that it is extremely difficult to find exact matches when the number of control variables is large (high-dimensional). That is a serious problem because the number of potential confounding variables is large in most applications, and thus many variables have to be controlled for in order to satisfy the unconfoundedness assumption.

Matching on the "propensity score" offers a solution to the curse of dimensionality. The propensity score, introduced by *Rosenbaum and Rubin* (1983), (1984), is the probability of program participation as a function of all the control variables, estimated for each individual (participants and non-participants). The method uses the one-dimensional propensity score in place of the many control variables. Obviously, two people with the same control variables have the same propensity score. But people can have the same propensity score with different combinations of the control variables. Less obvious but also true is that, from the point of view of program evaluation, comparing two people with the same propensity score is practically the same as comparing two people with exactly the same control variables even if they actually differ in those variables. As a result, matching on the propensity score yields the same results as exact matching, at least in theory. The reason is that the propensity score contains all the information in the control variables that are relevant for program participation. Any remaining differences in the control variables are irrelevant from the point of view of program participation and thus do not cause any problems for estimating the effect of the program.

Matching on the propensity score solves the curse of dimensionality because it reduces the potentially high-dimensional set of confounding variables to a single-dimensional variable that is also bounded (it is a probability and is thus between zero and one). When implemented, the propensity score is the predicted left hand-side variable in a probability model (typically probit or logit). Perhaps more intuitively, it is a combination of the control variables, like some kind of a weighted average. In a sense, variables that are more important in predicting program participation receive larger weights, and those that are less important receive smaller weights. Higher values on some variable can compensate for lower values on other variables and yield the same propensity score.

The propensity score is a continuous variable in principle. Two people are unlikely to have the exact same propensity score if the dimension of underlying control variables is high. Matching on the propensity score therefore means finding matches with a similar but not necessarily the same score. Various methods are used to find matches with a similar propensity score.

The most intuitive method is nearest neighbour matching. It takes treated individuals one by one and pairs them with the control individual with the closest value propensity score. This is a one-to-one matching. Typically, matching is done "with replacement", which means that control individuals can be used to match with multiple treated individuals (controls are replaced to the pool of potential matches after they are matched to the treated individual). It is also common to specify a maximum distance and leave treated individuals unmatched if no match is found within that interval.

In many cases, the control group is many times larger than the treatment group. In such cases nearest neighbour matching is inefficient because it leaves a lot of potentially useful control individuals unused. Many-to-one methods may be more efficient in such cases. One of them specifies an interval around the propensity score of each treated individual and matched all control individuals that fall within that interval. A symmetric procedure, applicable if the treatment group is larger than the control group, matches treated individuals within an interval around each control. The fourth group of methods yields many-to-many matches. One such method specifies intervals of the propensity score and compares average outcomes of all treated individuals in the interval to the average outcome of all control individuals within the interval.

In ideal circumstances and infinitely large samples, the different matching methods should yield very similar results. In small samples and if the unconfoundedness assumption is invalid, they can be very different. Choosing among the matching methods is not easy therefore if they yield different results. In such cases there is always a danger of manipulation, conscious or unconscious: Researchers may favour results that confirm their prior expectations ("nice" or "meaningful" results). The problem is obvious: it is very possible that the unexpected estimates are the ones that are closer to the truth. The problem is aggravated by the many modelling choices some matching methods allow for (size of the intervals, potential weighting within intervals etc.). In order to minimize the role for manipulation, the profession treats matching results as credible only if results from many different matching methods are presented and they all yield similar results.

Regression methods are alternatives to matching. They use some additional technical assumptions, but they are easier to estimate and are somewhat less subject to potential manipulation. The unconfoundedness assumption is needed for the regression, too. In regression models, in contrast to matching models, we have to specify a functional relationship between the expected value of

the outcome variable and the confounder variables. The usual choice is a linear relationship. That is less restrictive than generally thought as it allows for nonlinear transformations of the control variables (higher-order polynomials, interactions, splines etc.). However, the choice of functional form introduces flexibility that can lead to manipulation of the results similarly to the choice of the details of the matching methods.

The other difference is that regression models do not explicitly require the overlap assumption (the assumption that for any combination of confounding factors that are observed for treated individuals we can find control individuals with the same confounding factors). Regressions can be estimated without technical problems even if there is a range of the value of the right hand-side variables that correspond to treated or control individuals only. Matching would not be able to compare such individuals to anyone and thus they would be left out. But they may influence the regression estimates. That is not a problem in principle if the functional form assumption behind the regression is correct. However, since the functional form is an assumption that is hard to test, the influence of those observations may very well bias the results.

It is therefore advised to restrict the regression analysis to treatment and control observations that share the same value range of the control variables. With such preparations and using flexible functional forms, regression estimates for the effect of the program yield similar results to matching estimates in general. Matching models are surveyed by *Imbens* (2004), *Caliendo and Kopeinig* (2008) and *Imbens and Wooldridge* (2009), the latter covering regression models in great detail as well.

Matching and regression methods have been the choice of the vast majority of ex-post program evaluations. Randomized experiments require close collaboration with the program administrators, and regression-discontinuity design is applicable under rare and lucky situations. Matching and regression methods are feasible in many more situations. Unfortunately, however, matching and regression methods do not necessarily yield credible estimates for the effect of programs. The profession is therefore sceptical of the results of such methods (*LaLonde,* 1986, contributed significantly to that scepticism). In order to circumvent scepticism, evaluations that use regression or matching methods have to provide many robustness checks and extra evidence to support their analysis.

In principle, the condition for credible results from matching or regression analyses is simple: we have to control for all confounding variables that affect program participation and program outcomes at the same time. That is, of course, easier said than done. But decades of experience in evaluating active labour market programs produced some general guidelines for the kinds of information that always needs to be controlled for (see, for example, *Heckman, LaLonde and Smith,* 1999). We can summarize those guidelines in three rules. 1. Control and treated individuals should belong to the same labour market. 2. Members of the control

group have to satisfy all the eligibility criteria of the program, in a similar way to participants. 3. The analysis should control for detailed individual labour market histories. In the end, evaluations using matching or regression methods have to say something about why it is that some individuals participate in the programs while others not even though they share the same characteristics. This last requirement is often referred to as the need for "exogenous variation" in participation.

The importance of labour market history and difference-in-differences analysis

Controlling for labour market histories is important because they contain the most important information about individuals' productivity and labour supply characteristics, which are in turn the most important determinants of the outcome variables. These labour market histories should contain past values of the outcome variable (employment, earnings, employment durations), as far back in the past as possible.

The simplest method to control for pre-program labour market histories is the difference-in-differences (diff-in-diffs or DID) method. In its simplest form, diff-in-diffs means measuring the change in the outcome variable from before the program to after the program for each individual (the "diffs"), and then comparing the average of these changes in the treatment group to the average of the changes in the control group (the "diff" in the diffs). This simple method meets the unconfoundedness assumption if treatment and control individuals who have the same previous value of the outcome variable would end up with the same outcome variable later, on average, in the absence of the program. If this assumption is true, evidence for significant difference between treated and control outcomes after the program are evidence for the effect of the program.

It is of course unlikely that the assumption behind the simplest diff-in-diffs model is satisfied. Longer labour market histories and other potential confounder variables may also be necessary to control for. If we think that we have all those confounding variables observed, we can easily embed the diff-in-diffs logic in a matching or a regression context. All that is needed is to include past value (or, even better, a series of the past values) of the outcome variable among the control variables. Matching on the propensity score uses those control variables in the estimation of the propensity score, while regressions use them directly. *Heckman et al* (1997) provide a convincing argument for the need of combining the diff-in-diffs approach with matching.

If the other conditions in the guidelines are not met (same labour market and every individual meeting the eligibility criteria), the diff-in-diffs logic can increase extra bias in the analysis if it is based on short labour market history. The reason is a phenomenon that is called Ashenfelter's dip after its discoverer (*Ashenfelter,* 1978). The typical active labour market program aims at helping

people with labour market disadvantages. Being unemployed during a reference period before the program is usually required in order to be eligible for the program. As a result of the eligibility rule, all participants were unemployed during the reference period. However, if we do not restrict members of the control group to those that were unemployed during the same reference period, diff-in-diffs can lead to a severe overestimation of the employment effect of a program.

In order to see this, assume that members of the control group are from the same target group of disadvantaged people as members of the treatment group, but control group members do not satisfy the program eligibility criteria. Because they are from a disadvantaged group, many of them were unemployed during the reference period, but some were probably employed (say, 20 per cent). If nothing significant happens to the labour market, the fraction of employed people would remain the same among them (20 per cent). The participants are from the same target group, but none of them were employed during the reference period. If the program had no effect, the employment rate among them would converge to the employment rate of the entire group in the long run (20 per cent). If the diff-in-diffs comparison compares long-run outcomes to before-program outcomes measured in the reference period, it would show a positive increase (from 0 per cent to 20 per cent) in the treatment group, compared to a zero increase in the employment rate in the control group. A simple diff-in-diffs comparison would attribute this increase in the employment probability of 20 per cent to the effect of the program, even though the program had no effect.

In the jargon of econometrics, the problem is that the eligibility criteria make the group of participants a selected sample of the target group. The target group has a low but non-zero employment probability. The selected sample has zero employment probability at baseline by construction. *Figures 1.2* and *1.3* show examples for Ashenfelter's dip.

Figure 1.2: Ashenfelter's dip for the treatment group in a standard training program (reproduced from Ashenfelter, 1978)
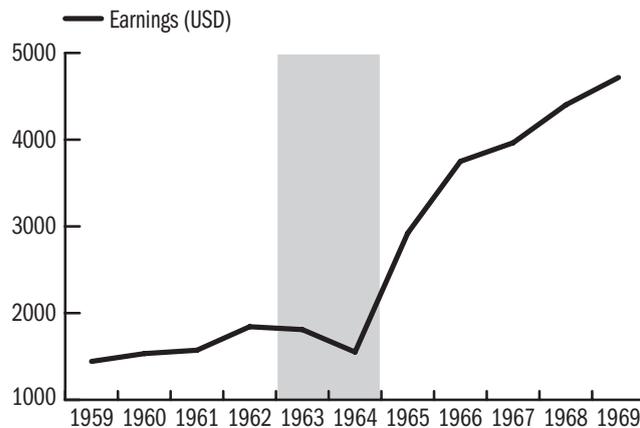
Figure 1.3: Ashenfelter's dip for the experimental control group in a program
that combines training with employment subsidies
(reproduced from Heckman and Smith, 1998)
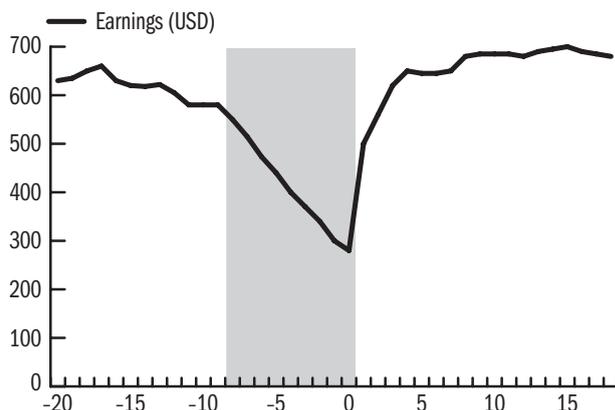
The first of the two figures, reproduced from *Ashenfelter* (1978), shows yearly nominal earnings of participants of a standard training program. The program started in 1964 and participants had to be unemployed at the starting date. The program ended in 1965. There is a significant increase in earnings from that point. The dip is in there right before the program, with a break in the trend and even a slight decrease in nominal earnings.

The second example is more striking. It shows the dip for an experimental control group. The outcome variable is again nominal earnings, monthly earnings in this case. Members of this experimental control group satisfied all the eligibility criteria for the program, that is why they show the dip. Month zero on the figure denotes the start date of the program, and the eligibility criteria included unemployment in the previous six months.

Ashenfelter's dip is a rather general phenomenon for active labour market programs. It is problematic for program evaluation if it affects the treatment group but not the control group. There are two kinds of "remedies" to this problem. One trivial way out is making sure that members in the control group are subject to the same eligibility criteria as members of the treatment group. The other one is avoiding diff-in-diffs-type comparisons to recent outcome variables and, instead, taking significantly longer labour market histories into account.

Indirect effects

The question analysed so far was the effect of the program on its participants. The social benefits and costs of programs include the effects on non-participants too. Take the example of an active labour market program that increases the employment prospects of its participants. From a social point of view, it is important whether that increase is due to creation of new jobs or filling a fixed number of jobs with program participants instead of non-participants.

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Indirect effects are the effects of a program on non-participants. Potential indirect effects include so-called displacement or substitution effects, when program participants take jobs that would otherwise be filled with other people, thereby displacing them. Partial equilibrium effects occur when the direct effect of the program leads to a significant increase of effective labour supply in a labour market. Such an increased labour supply can affect wages (a large increase in employment may put downward pressure on wages), which may feed back to the labour supply of other people, etc., until a new equilibrium is reached. General equilibrium effects occur when the program affects other markets as well, for example, by using resources that would be used elsewhere otherwise.

Indirect effects cannot be measured by simply comparing outcomes of participants and non-participants even in randomized experiments. Moreover, indirect effects may distort the proper measurement of the direct effects. Take the example of an employment subsidy program that increases the probability of employment of participants by ten percentage points. Assume, however, the worst: All of that increase was achieved by displacing other people without any new job creation. The net employment effect is therefore zero per cent in the society. Take an experimental control group that would be ideal for any impact assessment study. It may be, however, that the control group includes people who were displaced by the program participants, i.e. who would have found a job in the absence of the program but did not find one because of it. If the program or the control group is large enough, we can expect many such people to be included in the control group. The effect of the program on the average employment probability in the control group is, therefore negative. If we compare the employment of the treatment group to the employment of the control group, the estimated effect of the program would be more than 10 per cent.

This latter problem is not easy to handle. If the treatment and control groups are small relative to the size of the labour market, the bias is likely to be insignificant. Ignoring potential indirect effects when estimating the direct effects is not a grave mistake in such cases, and most studies do just that. If the program is very large, though one has to deal with the problem, and that's not easy. One solution is comparing treated and control people across labour markets when estimating the direct effect in order to avoid the bias outlined in the previous paragraph. But that may introduce other problems, as it fails to satisfy the requirement for comparing people within the same labour market in the case of non-experimental evaluations. One strategy that circumvents all these problems would randomize treatment not across individuals but across labour markets. In such a design, the program is implemented in randomly selected local labour markets, and outcomes from control labour markets are used to evaluate the net effects of the program. *Blundell et al.* (2004) use a similar, although non-experimental design to evaluate the direct and indirect effects of a comprehensive job search program in the U.K. Their evidence clearly shows the lack of indirect effects.

That finding is not uncommon in the literature: however worrisome indirect effects may be in principle, they may be less of a problem in practice. But that is not always the case. Employment subsidy programs are sometimes prone to produce displacement effects. Large programs can affect equilibrium wages, which may create partial equilibrium effects.

There are programs that, by their sheer magnitude, are very likely to exert indirect effects on other markets, creating general equilibrium consequences. Unfortunately, statistical methods are not useful to measure such effects. The thought experiment to measure would require recording outcomes on various markets in an economy in the absence of the program and compare them to outcomes after the program. This thought experiment cannot be made operational in any way (except for fundamentally problematic cross-country comparisons). The fact that they are impossible to measure does not mean that one should not think about such effects when the programs are very large. Albrecht, van der Berg and Vroman (2004) analyse the equilibrium effects of an ambitious Swedish training program using a calibrated macro-model, and they present qualitative evidence on effects on other markets (the demand for teachers in the program is likely to have led to a decrease in high quality schoolteachers in public education).

Conclusion

This chapter gave a brief and not very technical introduction to the methods of impact assessment studies, with a special focus on the evaluation of active labour market programs. Much of the chapter focused on direct effects on program participants and it covered indirect effects briefly in a separate section. Besides introducing the methods, the chapter highlighted that not all methods are equally credible.

Randomized controlled experiments are the most credible for assessing the impact of a social program. They are also the simplest to analyse, leaving less room for ex post manipulation than other methods. In the context of evaluating social programs, randomized experiments have been somewhat rare, in part because of practical problems. However, those problems can be more often overcome than many researchers and program administrators think. Randomized controlled experiments have been applied in the most successful demonstration studies, and they are becoming more and more common for testing new programs and assessing older programs worldwide.

Of the non-experimental methods, regression-discontinuity design offers the most credible identification when it is applicable. An important disadvantage of regression-discontinuity is that it identifies the effect for a subset of the participants (those who are around the threshold). But, for that subset, the identification is credible.

In principle, matching and regression methods are more flexible non-experimental methods, and they can identify the effects for many groups of par-

ticipants and non-participants. However, their application rests on the un-confoundedness assumption, which is fundamentally untestable. Of the two, matching has the advantage of being free of any functional form assumption. On the other hand, they often require large samples, and they offer many mod-elling choices that may lead to publication biases. Regression models are sim-pler to estimate, but they are not free from modelling choices either, and they require functional form assumptions that are hard to test. An important ad-vantage to matching models relative to regressions is that they make the need for comparable individuals explicit. When evaluating active labour market programs with results that need to make the unconfoundedness assumption, guidelines help for informing as to which factors one should control for. Econo-mists also converged to the view that it makes a lot of sense to combine match-ing and regression methods, especially if pre-program outcomes are also taken into account as in diff-in-diffs models.

As it should be clear for the reader at this point, the methodological require-ments for statistical impact evaluation studies are rather strict. One often hears opinions stating that statistical studies that want to meet these strict meth-odological criteria are ones from the many possible approaches, and they may be substituted by more qualitative analyses that could produce equally valu-able results.

Such statements confuse two arguments, one of which is true and one, as I will argue, is false and dangerous. Statistical impact assessment studies that want to meet the strict methodological criteria cannot uncover all the evidence that may be useful in understanding the impact of a program. Qualitative evi-dence is very often needed to complement statistical analyses. Quite often, sta-tistical evaluations cannot be carried out in a sound way. In those cases some qualitative evidence is usually more informative than nothing.

Not all methods are created equal, however. Strict scientific criteria are nec-essary to differentiate between sound analysis and opinion. Without methodo-logical criteria, how could we tell which result is credible and which is not? By the authority of the analyst? Or whether the results match the prior opinion of administrators or whoever commissioned the study? The essence of scientific inquiry is to set up rules that need to be met in order for results to be credible. The fact that most program evaluation studies cannot meet all the rules does not mean that they should not aspire to do that.

It is important to know the effects of social programs that spend taxpayers' money on people in need for help. The methods outlined above require statisti-cal training, but they are not extremely complicated. While the most credible evaluations require substantial amounts of money and organizational input, these resources are negligible in comparison to the budget of the programs and their potential social impact. There is little excuse not to aim for sound impact assessment studies.

2. INTERNATIONAL EVIDENCE ON THE IMPACT OF ACTIVE LABOUR MARKET PROGRAMS

PÉTER HUDOMIET & GÁBOR KÉZDI

Introduction

This chapter provides an international overview of the impact of labour market programs. We emphasize the results of evaluation studies that use credible identification strategies. We show examples of the four program types (training, wage subsidy, employment services and public works) and we compare their effectiveness to each other.

First, we analyse three complex and targeted programs, the Job Corps and the National Supported Work programs from the United States and the New Deal for Young People from Britain. Then we describe the large scale national programs of Sweden, Denmark and Switzerland. We present evidence from training programs in a separate section. We describe the labour market programs of post-socialist countries in the last section.

This chapter builds on a previous paper of ours (*Hudomiet and Kézdi,* 2008) published in the online journal "Kormányzás, Közpénzügyek, Szabályozás" [Governance, Public Finance and Regulation] in Hungarian. In that paper, we overview more evaluation studies and more programs, and we describe them in more detail. The conclusions of that paper are, of course, the same.

Well-designed complex programs

First, we analyse three programs that combine multiple program types and add additional elements to them, such as stipends, counselling, etc. These programs are typically well organized, small and relatively expensive. All three programs are designed in a way that facilitates their evaluation. Partly for this reason and partly because of the quality of the evaluation studies, we have a good understanding of their impacts.

Job Corps (United States)

The Job Corps program was launched in 1964, and it continues to this day. Its target group is 16–24 year old young people, typically high school dropouts, who are unemployed or employed at low wages. The Job Corps is a six month intensive training program. One part of the curriculum focuses on general skills, while the other part is flexible. Counselling and placement assistance are essential parts of the program. These build on the established network of Job Corps. Participation in the program is free of charge, and the majority of the participants live in dormitories where they are provided with additional benefits such as meals and sports facilities. Practically, participants in the dormitories are also under 24 hours of supervision.

The Job Corps is a federally initiated and federally financed program. The first extensive studies in the eighties found the program largely successful (*La-Londe,* 1995). The success led to a large increase of the budget that turned Job Corps into a rather large scale program. It covers 60.000 young Americans per year, with an overall budget of about $1.5 billion.

More recent evaluations use data from a randomized controlled experiment called the National Job Corps Study. The data collection started in the mid-nineties, and the first results were published between 2001 and 2003. The results created a lively discussion both among academics (mostly economists) and policy makers. The data covers 9000 participants and a randomized control group of 6000. Individuals were followed for four years following the completion of the program. Attrition from the survey is not negligible, which, as we shall see, may distort the results.

Using the survey data, *Gritz and Johnson* (2001) found that program participants' weekly earnings were $20–$25 higher four years after the program than earnings of the control group. They found that participants of vocational training earned $40–$50 more in a week than the control group, while those who finished high-school during the program earned $60–$70 more than the control group. They also found that earnings of other groups did not change significantly due to the program. Using the same data, *McConnell and Glazerman* (2001) made a cost-benefit analysis. The benefit part included increased earnings of the participants, decreased receipt of transfers and other social expenditures and decreasing involvement in crime. The preferred estimate of the study suggests that the social benefit of the program exceeded its cost, but a large part of the benefit was non-monetary. The analysis is based on the assumption that the earnings premium of participants would never decline. In a specification where the authors assume that the earning premium would drop to zero after four years, the estimated rate of return of the program is zero.

Schochet, Burghardt and McConnell (2006) show that the early evaluations based on the National Job Corps Study overestimated the benefits of the program. Instead of survey data, they used more reliable administrative data from the Social Security Administration. This data also covers a longer time horizon and it does not suffer from survey attrition. The results show that the earnings premium of program participants was much smaller than indicated by the previous studies, in large part because the premium strongly declined after four years. The preferred estimates of the study indicate a net positive effect on participants but a net negative effect on society. They also indicate that the program was most beneficial for the older 20–24 year old group where the net social benefit was positive, too.

Important reasons for the initial success of the Job Corps program may have been its small scale and careful targeting. It makes perfect political sense that, after the early successes, the program was enlarged to offer opportunities to

more and more people. It seems, however, that as the program grew in size, targeting became less successful and the program lost efficiency. In this light, it is remarkable that the program is still socially beneficial for a subset of the target group.

National Supported Work (United States)

The National Supported Work (NSW) program is perhaps the most widely analysed among the active labour market programs. The NSW was designed for demonstrative purposes. The goal of the program was to equip hard-to-employ people to obtain and hold normal, unsubsidized jobs. The target groups were AFDC recipient women (poor single mothers), former drug users, ex-inmates, high school dropouts and the very-long term unemployed. Joblessness for a certain amount of time was a criterion in all cases.

The NSW was an employment subsidy program with additional elements. Participants were guaranteed a job for 9–18 months with a private employer. During this time the program covered all labour costs. The program followed the individuals throughout their participation in the program and held weekly group meetings with them. Initial wages paid to participants were lower than the market rate, but they rose relatively rapidly. The job was guaranteed during the program, but once the program was over, participants were left on their own to keep their jobs, now as regular employment, or find a new job. Women were typically employed in unskilled clerical jobs in services while men typically worked in construction.

The demonstration feature of the program meant that the criteria for credible evaluation were built into the design of the program. Applicants were randomly selected into a treated group and into a control group, and detailed information was collected about them.

The impact of the program was a significant increase in employment prospects. *LaLonde* (1986) showed that average earnings of treated women exceeded average earnings of the control group by $850 a year after the program, and the difference prevailed for subsequent years. The mean effect for men was similar, $880, but higher heterogeneity of wages made the point estimate less reliable. The differences between participants and the control group were mostly due to differences in the employment rates (non-employed individuals were entered with zero earnings into the figures above). *Figure 2.1* shows the evolution of employment rates on a monthly basis.

Employment rates were the same (and very low) before the program. 90 per cent of the treatment group started employment with the program. Their employment rate declined throughout the program, and it reached 65 per cent at the end of the subsidized period. Once the program was over, employment of the treatment group fell to 40 per cent. In the 24th month, that is, 12 months after the program ended, the employment rate of the treatment group was rough-

ly 10 percentage points higher than the employment rate of the control group. The medium-run effect of the program, thus, was about a 10 percentage point increase (almost a third in relative terms) in the probability of employment.

Figure 2.1: Employment rates among treated and control women in the NSW before the experiment (months –12–0), during the experiment (months 0–12) and after the experiment (months 12–26)
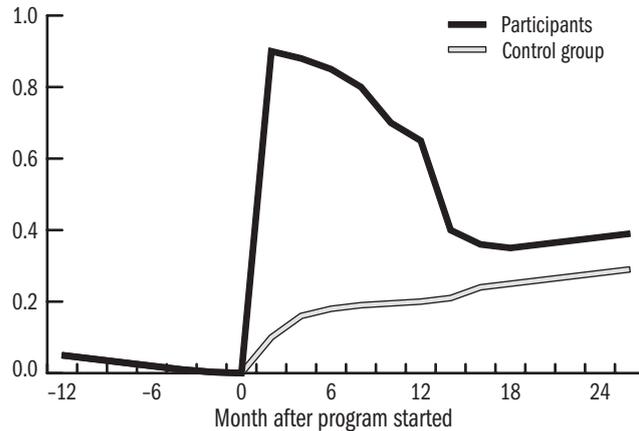
Source: Replication of Figure 1 of *Ham and LaLonde* (1996) p. 182.

Figure 2.1 points at three other issues that are interesting. First, the employment rate was zero only at the beginning of the program and a couple of months earlier. It was positive before and after this period even in the control group. This is a nice illustration of Ashenfelter's dip that has already been introduced in the first chapter. In order to be eligible for the program, individuals had to be out of work for a couple of months. The same was not required for the preceding time periods, and some people from the target group were indeed then employed. It is thus natural that some people in the control group, after realizing that they would not participate in subsidized employment, find regular non-subsidized jobs. Their non-zero employment rate is analogous to the non-zero employment rate long before the program. Zero employment at the beginning of the program creates a "dip". By this argument, the dip should be symmetric in the experimental control group, and in many cases it is indeed symmetric. That is obviously not the case here.

The second remarkable feature of the figure is the strong asymmetry in Ashenfelter's dip. The employment rate of the control group jumps to significantly higher than its pre-program level: to 15 per cent four months following the start of the program and 20 per cent in the 12th month at the termination of the program, compared to the 5 per cent level 12 months before the start of the program. Many factors may explain this significant increase. Most likely among them is a general improvement in economic conditions. That can also

explain the fact that employment in the control group kept increasing after the end of the program. Due to this trend in economic conditions the employment prospects of the target group would have improved significantly even in the absence of the program. Changes in the economic conditions do not invalidate the analysis here because the target and the control groups were affected by the same conditions. On the other hand, such potential changes highlight the need for a properly chosen control group.

The third interesting feature of the figure is a drop in the employment rate of the treatment group after the end of the program, a further decrease and then a moderate increase. The reason for the drop is that many program participants were not offered the option of staying with the employer they were assigned to, and they could not immediately find alternative jobs for themselves. Some of them, though, eventually managed to return to employment.

The results of the NSW program evaluation are quite optimistic. The program positively affected the employment prospects of the participants, especially for AFDC recipient women. According to the estimates of *Ham and LaLonde* (1996), the program increased the duration of employment spells, indicating that the increased employment prospects were due to increased skills that could lead to more stable jobs for many participants. The results also highlight what a successful program can do. The estimated impact is a 10 percentage point increase of a baseline 30 per cent employment probability. This is a significant increase but far from what full employment would require.

New Deal for Young People (United Kingdom)

The United Kingdom has operated active labour market programs since the 1980s to reduce the unemployment rate of the young. The New Deal for Young People program was introduced in 1998 in order to help the disadvantaged youth find regular employment. It was built on the experience of the previous British programs as well as the Job Corps. The New Deal for Young People is a complex program. Participation is mandatory for every 18–24 year old who has been unemployed for six months (noncompliance leads to the withdrawal of other social transfers), but certain groups can join the program even earlier.

The program consists of three phases. The first phase is called the Gateway period. During its four months, everyone is linked to a personal consultant who tries to provide help and incentives to find a job. People can participate in short term training as well, in subjects such as computer usage. Those who fail to find a job during this period enter the second phase, in which they are offered four options: subsidized employment in the private sector, full time training, subsidized employment in the non-profit sector, and public work in environmental projects. In certain cases people can also stay in the first phase and continue searching for unsubsidized jobs. The second phase typically lasts

for six months, after which people enter the third phase. The third phase is similar to the first one, with job search help.

Because participation in the program is mandatory, it is not easy to find an appropriate control group for evaluation purposes. However, certain features of the program can help identify its impact. The first feature is the age restriction. The target group is the 18–24 year old population, and those who are 25 years old or older are excluded. It seems a reasonable assumption that the 24 and the 25 year old population are more or less similar, and a regression discontinuity design can exploit this characteristic of the program. The second feature is that while the program started in the country in April, 1998, it was launched three months earlier in 12 locations. With the help of some assumptions and appropriate matching methods, this three-month period can be used to estimate the effect of the early launches.

De Giorgi (2005) used the regression discontinuity design in his analysis with the threshold of age 25. It is a sharp design as participation in the program is mandatory for those below the age threshold and satisfying the eligibility criteria, while those who would be eligible otherwise but are 25 already cannot participate. The sharp feature of the regression-discontinuity lends itself to a quite simple and precise statistical method to analyse the local effect of the program on the 24 year old population. *De Giorgi* (2005) found that the program raised the employment rate by 6–7 percentage points, which is a quite remarkable increase for a large program. However, regression discontinuity can identify the effect on the 24 year old but not on other age groups. Moreover, the estimates are biased if there is a displacement effect of the program, i.e., if program participants found jobs at the expense of the 25 year-old population. If they are significant, displacement effects make estimated effects larger than the true situation because the employment chances of the 24 year old are compared to the decreased employment rate of the 25 year old instead of the appropriate counterfactual that would occur in the absence of the program. As we shall see later, there is no evidence that the New Deal for Young People program would have any displacement effects.

Blundell et al. (2004) and *Van Reenen* (2001) analysed both the direct and the indirect effects of the Gateway phase of the program. Both papers used the pilot program in which 12 regions started the program earlier than the rest of the U.K. Comparing early starter regions to appropriately chosen control regions can identify both the direct and the indirect effects of the program. These papers found that the Gateway phase lead to an increase in the employment rate in the target group by 4–5 percentage points. The indirect effect of the program, at least as measured for in 1998, was negligible. This finding reinforces the results of *De Giorgi* (2005).

In the second phase of the New Deal for Young People program, participants could choose from four options. *Dorsett* (2004) used administrative data and

propensity score matching to compare the effectiveness of these four different options. The study aimed at estimating the relative effect of the four New Deal options, i.e. how people who chose a particular option would have done had they chosen another option. He found that the private sector wage subsidy programs worked considerably better compared to the other three options that were otherwise quite similar to each other.

Beyond the quantitative evidence, the program seems successful and enjoyable based on the opinion surveys. The most successful part seems to be the first Gateway phase, which is also significantly cheaper than the second phase. In the second phase, the private sector wage subsidies seem to work the best, although due to the limited number of offers only a smaller fraction of the participants could choose this option.

Large national programs

While the active labour market programs in the United States and in the United Kingdom focus on specific problems or specific age groups, countries in continental Europe usually have large scale national programs. They contain a big set of program types and participation is relatively open. These national programs are not complex and the target groups typically receive only one type of treatment at any one time. These programs are usually not targeted and the treatment is not individual specific but general.

Sweden

The Swedish national programs are perhaps the best documented, this is our reason to describe them in detail. We will briefly talk about the programs in Denmark and in Switzerland afterwards.

By the end of the 1990s, active labour market programs of Sweden were among the largest in the world. In 1997 when the unemployment rate exceeded 10 per cent, 4.5 per cent of the population participated in various labour market programs, with monetary costs of 3 per cent of the GDP (*Sianesi,* 2002a). Since then these numbers have declined, but Sweden still spends more on these programs than most other European countries. Sweden provides a textbook example of the large scale national programs.

The registered unemployed are automatically and continuously assisted in job search. Besides giving information about vacancies at local employers, they are also provided with services to help job search and boost motivation. One feature of the Swedish system is that these services are not even considered to be labour market programs since they are part of the unemployment benefit system. As a consequence, all other labour market programs are compared to this reference program, unlike in other countries where the counterfactual state of a program does not involve official help in job search. The unemployed are also informed about training programs, employment subsidies and public

work programs. Another important feature of the Swedish system is that participation in these programs is monetarily incentivized in a way that makes them more beneficial than regular unemployment.

Larrson (2000) studied a typical Swedish training program for the 18–24 year old group. The program was very large with approximately 200,000 participants. The author argued that many people participated in the program because of the monetary benefits only, and this feature had negative effects on the success of the program. The evaluation method was a propensity score matching method with a large set of variables. Her results suggested that the training program actually decreased both the employment rate and the earnings of the training group in the short run (1 year), while the effect was zero in the long run (2 year). *Larrson* (2000) also looked at a wage subsidy program where her estimates were slightly positive but very imprecise so that the point estimates were not statistically significant.

Regner (2002) analysed the effect of vocational and general training programs using data from 1987–1992. He used a version of the difference-in-difference method. Similarly to *Larrson* (2000) he did not find a positive treatment effect. *Frederiksson and Johansson* (2003), using regression based methodology and data from 1993–1997, found negative effects: both the training and the employment subsidy programs decreased the chance of finding jobs later. They speculate that the negative effect is a consequence of decreasing geographical mobility of the treatment group.

Although the majority of the papers find zero or negative effects for the Swedish programs, the effects of some programs on some demographic groups may be positive. *Sianesi* (2001), using the propensity score matching method, looked at those who became unemployed for the first time in their careers. She found that the wage subsidy programs significantly increased the employment rate in this group (by as much as 25 percentage points). Similarly to other studies she found the other program types ineffective.

Most evaluation studies argue that the Swedish labour market programs are ineffective partly because of the incentives in the system. The main message is that if organizers provide monetary incentives for participants and anyone can join a program then the program can easily turn ineffective as people may not use the services in the right way. As we will see later, this mechanism is supported by findings from other countries as well. Another explanation for the failure of the Swedish programs is their lack of targeting.

Denmark

According to evaluation results, the Danish programs were more successful. Denmark is among the countries that spend the most on active labour market programs by international comparison. From the mid 1990's, the unemployed in Denmark had to participate in a labour market program every year (later

every half year) in order to remain eligible for UI benefits. *Jespersen et al.* (2004) analysed the effect of classroom training and on-the-job training programs on earnings and employment prospects. They followed the treatment group and a control group for six years after the program and they used a propensity score matching method with a large set of variables. According to their results, the most successful programs were the private on-the-job training programs that turned positive after one year and led to a 10 per cent wage increase for the treatment group after the third year. The second most successful programs were the classroom training programs that turned positive in the second year with an 8 per cent wage gain. The public on-the-job training program also had a positive effect after four years at a 5 per cent level.

Geerdsen and Holm (2004) analysed the employment effects of Danish training programs and employment subsidy programs. Using data from 1995–1998 and a regression based method they found that program participants increased their job search effort even before the programs started. They found that the success of these programs was partly coming from these early effects. An explanation for this is the mandatory nature of the programs. People who do not want to participate in labour market programs will increase their effort to find a job just to avoid participation. Similar effects have been documented in other mandatory programs in other countries as well. These results suggest that compulsory programs have an indirect but definitely positive effect on labour market outcomes.

Switzerland

Switzerland reformed its unemployment insurance system in 1997 and increased the importance of its active labour market programs. These programs are organized by individual cantons but the regulation is federal. Participation is mandatory for roughly 15 per cent of the unemployed. The largest programs are the training programs that are typically composed of short classroom training, but there are employment subsidy programs in both the private and the non-profit sector as well.

Lalive at al. (2002) used regressions to analyse the effect of the programs on the duration of unemployment spells. He found the programs largely ineffective. The only subgroup with partial success was the immigrants for whom the wage subsidy programs seemingly worked.

Frölich and Lechner (2004) used regression-discontinuity design to analyse the effects of employment subsidy programs at private and non-profit firms. Importantly for their analysis, participation in such programs is mandatory in some cantons but not in others. The identification strategy used discontinuity at canton borders: participation is mandatory for unemployed people living on one side of the border but it is voluntary for unemployed people on the other side. The method can identify the treatment effects for those living

close to canton borders and would participate in the program if it is mandatory but not if voluntary. The results suggest that the employment subsidy programs had a substantial effect (15 percentage points) on the employment rate. While these results are not entirely in line with the findings of *Lalive at al.* (2002), both studies find that the wage subsidy programs might work in Switzerland.

Training programs

Job Training Partnership Act (United States)

The United States has organized federal training programs since the 1960s. The literature usually refers to these programs by the law that enacted them. The first law was called Manpower Development and Training Act (MDTA) in 1962. This was replaced by the Economic Opportunity Act in 1964. The Job Corps program that we have been discussing earlier was initiated within this act. The next law was the Comprehensive Employment and Training Act (CETA) from 1973 to 1982, then the Job Training Partnership Act (JTPA) from 1982 to 1998. The most recent law is called the Workforce Investment Act (WIA) and has been in effect since 1998.

These laws determine the institutional framework and the goals of the different sub-programs. Although the programs are organized federally, the actual training and related services are provided by more than 600 private and public institutions locally. As a result, the programs show significant geographic heterogeneity. The programs can be differentiated by the type of service and by groups they target. Participation in the programs has been increasing; and at present one million Americans are involved.

Within the JTPA a controlled experiment was carried out involving 16 training centres between 1987 and 1989. This experiment was called the National JTPA Study. The long-run results of the experiment were published in a 1996 GAO report. The most important findings were the following. Overall, the programs had a short-run positive effect on both employment and earnings, but the long-run effects were smaller and not statistically different from zero. The effects were more positive for women, and there were little if any effects on young participants regardless of their gender.

Figures 2.2 and *2.3* show male and female earnings from three years before the program through the 5 years following the program. The earnings of the non-employed are counted as zeros. The figures show the short-run positive effects and their decrease over time. They also show a marked decrease before the program (especially among men) and marked increase after the program both for participants and the control group: this is Ashenfelter's dip discussed above. At the end of the 5th year the earnings difference between participants and the control groups is not statistically significant.

Figure 2.2: Yearly earnings of males in the treatment and the control groups in the JTPA program

Yearly earnings, USD
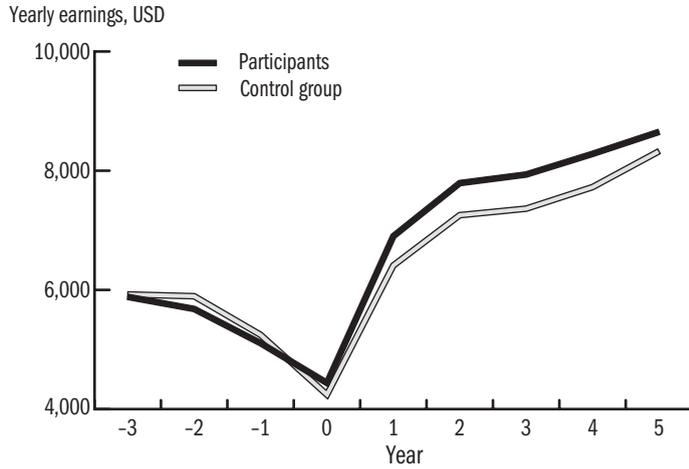
Source: *GAO* (1996), pp. 5, Figure 1.

Figure 2.3: Yearly earnings of females in the treatment and the control groups in the JTPA program

Yearly earnings, USD
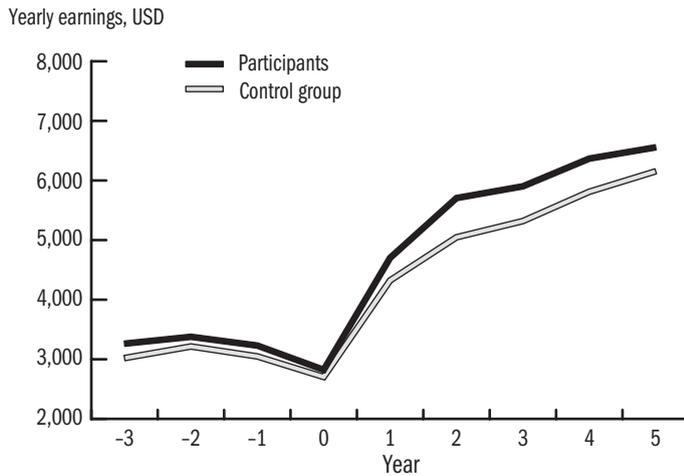
Source: *GAO* (1996), pp. 6, Figure 2.

Heckman et al. (2000), however, are critical about these conclusions. They point to important biases due to the program substitution and attrition from the program. The first means that some people in the control group actually received treatment through other programs. The second point means that some members of the randomly selected treatment group did not receive treatment in the end. For this reason the controlled experiment identifies the intent-to-treat effect and not the actual effect of the training on program participants. The authors claim that the effect of these two biases is substantial.

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According to their estimates, 27–40 per cent of the control group received some treatment. At the same time, only 49–60 per cent of the treatment group received the treatment. These numbers are very far from the theoretical 0 and 100 per cent. When the authors estimate the treatment effects using these treatment probabilities, they found substantially stronger positive impacts in all groups, young or adults, men or women.

Eberwein et al. (1997) aimed at uncovering the mechanism behind the positive employment effect of the programs. Their question was whether employment increased because employment spells became longer or unemployment spells became shorter. Longer employment spells would be evidence for increased productivity, while decreased unemployment spells would suggest more efficient search. They found that the duration of the employment spells did not increase significantly, but the length of the unemployment spells shortened. *Ham and Lalonde* (1996), using the same techniques, analysed the effect of the NSW program and found the opposite effect. According to their results, the NSW program increased the duration of the employment spells while it did not affect the unemployment spells. Taken together, these two studies suggest that the complex and targeted NSW program likely increased the productivity of the participants, but the JTPA training programs only helped people find jobs more easily and quickly.

Worker Profiling and Re-employment Services (United States)

Black et al. (2003) analysed the Worker Profiling and Re-employment Services (WPRS) program that has taken place in Kentucky since 1994. The program consisted of a 4 to 6 hours long counselling session and consequent training. The program started as a mandatory program for the long-term unemployed, but it soon turned out that they did not have enough capacities. For this reason the program become mandatory only for specific target groups. Based on *a priori* estimates the organizers profiled the unemployed into groups based on the expected duration of their unemployment. From these estimated durations a few groups were created, and the treatment groups were selected based on which group people belonged to (the group with the highest expected durations received treatment first, the second highest next, etc.). For those who were selected, participation was compulsory. The number of the groups was small, and selection to the program was often randomized in order to break ties. These randomized selection events created an experiment that helped identify the effect of the program.

The authors found that participants found jobs in a significantly faster way. This led to lower social costs and an increase in the employment rate of the target group. They also found a remarkable result: the majority of the increase in the employment rate could be attributed to those who left the program (by finding a job) before it actually started. The most important effect of the program, thus,

was not due to the enhanced job search skills of the participants. Instead, the program made some people look for a job in order to avoid participating in it.

Knowledge Lift (Sweden)

The Knowledge Lift, a program "unprecedented in its size and scope" (*Albrecht et al.,* 2004) was launched in 1997 by the dramatic extension of the existing Swedish training programs. It aimed at raising the general skill levels of the undereducated Swedish adults in Swedish and English languages, maths, etc. The program ran with more than 200,000 participants until 2002, a number that is remarkably high even in Sweden. As a comparison the total number of students in Swedish high schools is 300,000.

Albrecht et al. (2004) estimated the direct effect of the program by propensity score matching method, and they assessed the general equilibrium effect by a calibrated macroeconomic model. Because of the long history of labour market programs, most of the long-term unemployed had already participated in some of those programs before the Knowledge Lift. This fact made the evaluation difficult as the authors restricted the analysis to treated and control individuals without such history. The results of the study suggest that the Knowledge Lift did not increase the earnings of any age groups or any gender, but it helped the employment prospects of young (25–40 year old) males. According to the general equilibrium analysis, the program led to a shift in labour demand for skilled occupations. Another important effect is that the program created a large demand for teachers that led to significant shortages in high schools.

Evidence from post-communist countries

Active labour market programs are significant in most of the post-communist countries of Central and Eastern Europe. In terms of total spending relative to the total cost of unemployment benefits, they are comparable to other continental European countries. Relative to GDP, though, their active labour market programs are smaller. Programs in Central and Eastern Europe are typical examples of the large scale national programs. At the beginning of the 1990s they were mostly targeted to the unemployed who had lost their jobs due to the structural transformation of the former socialist economies. Later the programs started focusing on minorities, on the disabled, on the young and on other special groups. All types of active labour market programs have been widespread in post-communist countries, including general and vocational training programs, wage subsidies, assistance of the self-employed and public work programs.

An important conclusion of the program evaluation literature is that the effectiveness of the programs largely depends on details of the organization, incentives and other regulatory issues. Since unemployment was a new phe-

nomenon, it took a considerable amount of time to build up appropriate institutions and streamline procedures. Consequently, the early programs in the region were often even less effective than their Western European counterparts.

Unfortunately, similarly to most continental European countries, the active labour market programs in Central and Eastern Europe were not evaluated by credible studies in the 1990s. There are signs of progress after 2000 but randomised experiments are still very rare, and the quality of the available data is very weak for non-experimental evaluations. Nevertheless, we describe some studies not because of the credibility of the evaluations but because of the relevance of the programs for the Hungarian experience.

East Germany

Active labour market programs immediately appeared in East Germany after the unification of the country in 1990. The largest programs were the vocational training programs, but there existed general training programs, wage subsidy programs and public works programs as well. At the beginning of the 1990s, vocational training programs focused on retraining the unemployed for other occupations. Participants of these programs received a stipend that was larger than the unemployment benefit, and participation counted as employment for the renewal of unemployment benefits.

Bergemann at al. (2005) used a propensity score matching method with data including long labour market histories. They analysed programs that ran at the beginning and at the end of the 1990s. They found that training programs had zero or at most a marginally positive effect on employment rates. According to their results, the small positive effects on employment came from decreased duration of unemployment spells, without any effect on employment spells. In other words, participants could find jobs a little easier, but they could not hold on to their jobs longer. This suggests that the programs did not increase the skill level of the treatment group. Instead, it increased participants' efforts or efficacy in job search. At the end of the 1990s when programs shrank in size but became more complex and more costly, the analysis found a weak positive effect on the duration of employment spells as well.

Poland

The early Polish programs were described by *O'Leary* (1997) and *Puhani* (1998). Poland had all the major types of active labour market programs. At the beginning of the 1990s, retraining programs were the largest. Similarly to the early East German programs, participants in Poland received a stipend that was higher than the unemployment benefit. The wage subsidy programs subsidized all wage and social security costs of employment up to 150 per cent of the average wage in the country. Beyond training and wage subsidy, there were programs to assist the self-employed and public works as well.

Several studies analysed the effects of these programs, for example *O'Leary* (1998a), Puhani (1998) and *Kluve et al.* (2004). They all used non-experimental methods (propensity score matching method or regression models), but data quality in all cases was rather weak. The results of these studies are often contradictory, except that they all agree that the public works programs were ineffective in Poland. The more reliable papers found that the wage subsidy programs were also unsuccessful. Some of the evaluations showed short run positive effects for retraining programs, but medium and long-run effects were not analysed due to the unavailability of data.

A Hungarian study

O'Leary (1998b) analysed the labour market programs of Hungary in the mid-1990's. Hungary is also among the countries that have offered a wide range of program types. The popular retraining programs of the 90s, similarly to other countries in the region, offered a stipend that was higher than the unemployment benefits. The wage subsidy programs were less generous than elsewhere, with employers obliged to make up for at least half of the labour costs. Due to the quality of the available data the results of the evaluation study are not particularly credible. The study suggests that self-employment assistance increased the employment rate of the participants but it decreased their earnings. The training programs may have had some small positive effects, while the wage subsidy program decreased the employment rate but increased earnings.

Romania

Active labour market programs grew rapidly in Romania after a reform in 1997. The largest were the training programs, both general and vocational, but all other program types were offered as well.

Planas and Benus (2006) analysed programs between 1999 and 2002 using a propensity score matching method. Their data were richer than the Polish and Hungarian data, with information about the labour market histories of individuals. Unfortunately, their sample was rather small which made their estimates imprecise. They found that the programs assisting small businesses increased the employment rate of the participants but they did not influence their earnings. The results suggest that the employment and relocation services were also beneficial, the training programs had a small and statistically insignificant effect, and the public works programs were rather detrimental.

Slovakia

The most reliable analysis of the active labour market programs of Slovakia from the 1990s is by *Ours* (2000). Slovakia also used all the major program types, but their size distribution was different from other post-communist countries. The largest programs, both by the number of participants and by their costs,

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were the wage subsidy programs, followed by public works programs. Training programs were smaller than those.

The wage subsidy programs commenced in 1991. They were open for the registered unemployed, and they supported employment in profit-oriented private firms. These criteria became less restrictive over time. In 1992 they eliminated the profit-seeking requirement and in 1994 fresh graduates from the schooling system were also let in. Public works programs, or as they were called, publicly useful jobs, were originally run by the public administration and the non-profit sector. In 1992 Slovakia reorganized this system. Public organizations were excluded from these programs, and private firms were allowed to enter as long as the subsidized jobs were considered publicly useful. The programs grew significantly after 1995, with many large-scale construction projects (highways, water dams etc.). Retraining programs in Slovakia were relatively small. They were also very short, with a duration of two months on average. Most training programs were organized by the private sector, and they focused on vocational training.

Ours (2000) analysed the effects of the programs on the duration of the employment and unemployment spells. Contrary to findings from other countries in the region, he found the public works programs quite effective. According to his results, these programs reduced the unemployment spells and they increased the length of the employment spells. It seems, therefore, that the Slovak model for public works programs worked, perhaps because of the participation of private firms. The results suggest that participants of these programs could acquire skills that were valued on the labour market, unlike in typical public works that do not increase participants' skills. *Ours* (2000) found that the most popular wage subsidy programs were ineffective, and the training programs were effective only by decreasing the length of the unemployment spells. The author is somewhat sceptical about this last result. According to his argument, the duration of unemployment may have dropped because some people joined the private sector training programs only when they were offered future employment to begin with.

Conclusion

This study gave an international overview of active labour market programs. Because credible identification of the effects of these programs is challenging, our overview was very selective by concentrating on the papers we judged the most credible. One of the most important results of our survey is that the quality of the organization and other details matter more for the effects of a program than the type of the program. Because details of any particular program are very important, it is important to evaluate each and every program to give feedback to policy makers and the general public.

The evidence suggests that complex and well-targeted programs, like the Job Corps, the New Deal for Young People or the NSW, can have positive results,

even for groups in which labour market programs usually do poorly. An example for this is the long-term unemployment of the young. The example of the Job Corps is also interesting because it demonstrates how a successful small scale program can lose efficiency when it grows very fast.

In continental Europe, however, complex and targeted programs are rare. Instead, these countries have large scale national programs that offer a wide range of program types to almost all unemployed. Participation in these programs is usually incentivized by stipends that are larger than the unemployment benefit. Our survey suggests that these programs have very little or zero impact on the employment and earnings of the participants.

We surveyed examples of ineffective programs where participation is helped by monetary incentives. There are reasons to believe that such incentives can be responsible for the negative results even if the content of the program is meaningful. Other examples showed that mandatory programs, when refusal of participation leads to the withdrawal of social benefits, can be very effective. The mandatory nature of programs can help even if the content of the program itself is not particularly useful because it gives strong incentives to people to search for jobs.

Training programs are relatively expensive and their effects are questionable if they are offered within the large scale national programs. The targeted American training programs are more successful to help finding jobs, although they may not enhance skill acquisition that could make participants more productive once employed. Mandatory training programs may be successful, but as we argued above, it may very well be because of the mandatory nature of the program that makes many people intensify their search effort in order to avoid participation.

Wage subsidy programs show mixed results, but the more successful ones increase the employment prospects of participants. Unfortunately we know very little about the indirect effects of these programs on other workers who might be crowded out of the labour market by the program participants. Public works programs are almost always ineffective and may be detrimental to participants' future employment by decreasing their search effort and locking them into geographic areas. The only one positive example we are aware of is from Slovakia, but those programs were run by private institutions and they were more similar to the wage subsidy programs than classic public work programs.

Overall, the results suggest that the active labour market programs in continental Europe, including the former socialist countries, are not effective. The effects can be improved with more careful design of the institutional details and the incentives, better targeting and complex solutions. Proper incentives for job search are essential, and credible evaluation of the programs is necessary for feedback for improvements. These improvements can make active labour market programs help the employment prospects of the long term unemployed. At the same time, even the best designed programs cannot produce miracles.

3. GREASING THE WHEELS OF THE LABOUR MARKET?

Impact estimation of modernising the public employment service (project HRDOP 1.2)[1]

ZSOMBOR CSERES-GERGELY

Introduction

The Public Employment Service (PES, in Hungary: *Állami Foglalkoztatási Szolgálat*) is an important player in the Hungarian labour market as well with a budget of around HUF 20 billion per year (of the GDP) and serving – depending on the labour market conditions – 450–600 thousand registered job-seekers (about 11–15% or the active population).[2] It has absorbed more than HUF 10 billion in order to modernise its operation, yet we know little about the effectiveness of its operations and none about the effect of this modernisation. The study in this chapter attempts to quantify this effect using econometric techniques.

The aim of a PES in general is to facilitate the match of the demand and supply side of the labour market using specific tools – in terms of the matching theory of (*Blanchard and Diamond,* 1989) and (*Pissarides* 2000), this amounts to helping the operation of the *matching technology*. Although the need for public funding in this area was supported since the post-second world war period (*Baldwin,* 1951) to today (*OECD,* 2006), the toolbox has undergone several changes. In industrialised countries and most importantly in Europe, the role of the PES is not limited to the mere matching of job seekers and job offers. The PES offices are the main vehicle of delivering labour market policy measures, the most important tools of activation (*OECD,* 2007), both a cause and result of the high proportion of the less educated among clients. The PES is thus a central institution in the so-called flexicurity framework as it greatly facilitates the transition between labour market states (*Wilthagen,* 2008).

The Hungarian PES (HPES) plays the role of both an authority and a supporting organisation. In line with its previous strategy, its latest articles of incorporation declare that its main role is the delivery of active and passive labour market measures. However, being the primary delivery network of employment policy with the potential of relatively rapid and direct intervention, it almost always had to attend different duties as well, such as the administration of temporary jobs, administering a large part of the rehabilitation process of disabled workers or assisting public employment (parts of these have been institutionalised by the new articles of incorporation in 2011). In addition to the diversity of duties, only limited resources are available to the HPES, barely

sufficient to run basic operations. As part of the austerity measures, the number of employees in local offices had already began to shrink in 2006 and neither did they increase following the onset of the 2008 crisis. While in 2006 one officer attended an average of 206 clients, this has increased to 273 by 2009 (figures from direct HPES communication).

The modernisation process started in 2002 and is still ongoing. Given its importance both in terms of employment policy and the size of the development effort, one might assume that its monitoring has attracted as much attention as did its delivery, but this is not so. The current paper aims at providing a quantitative assessment of the potential impact of the program, based on the best data available for analysis. The question I would like to answer here is a very simple one from the point of view of economics: did the modernisation project contribute to making the operation of the PES more efficient so that the chance of its clients finding jobs increases? In what follows, I use a difference-in-differences (DiD) strategy to estimate such a possible effect of the developments between 2004 and 2008 using aggregate data relating to the local PES offices. First I briefly describe the development program itself, then move on to the theoretical and methodological considerations and the data used for the analysis. Thirdly I describe the estimation results and finally put them in context and provide conclusions.

The modernisation of the Hungarian Public Employment Service – a summary

The EU-funded modernisation of the Hungarian PES started before Hungary joined the EU in 2002 and is still ongoing. Its main aim was to carry out a general reform of operations to boost its performance in improving clients' re-employment potential. At the end of the 1990s, the operation of local PES offices were characterised by neglected interiors, out-dated IT infrastructure, officers lacking a general overview of competency areas and clients being not only served by but also dependent on officers and interested mostly in collecting unemployment insurance and benefit payments. A Phare "twinning" project (with a budget of around HUF 1.2 billion) was started in 2002 to prepare accession to the European Union through improving upon these unfavourable circumstances, followed by the HRDOP 1.2 measure (with a budget of HUF 9.3 billion) and the still on-going SROP 1.3.1 project. These efforts have touched upon all mentioned areas in 20, 60 and another 60 local offices, respectively as well as in the National Employment Office, the methodological and coordination centre of the PES. Here I shall look at the middle of this process, the HRDOP 1.2 measure.

The aims of the development process are mapped onto projects – often overarching actual measures or programs – whose combined effect is what I con-

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sider here as the intervention to be analysed. The total of 89 projects in the HRDOP 1.2 measure consisted of the following elements:

– *Introduction of the new service model* (NSM) on the participating local offices, including profiling of the clients. The essence of the NSM is that clients are profiled and sorted[3] on the basis of their individual characteristics so that they can be served with personalised services. International experiences show that efficient profiling and a proper match of services can shorten the length of the unemployed status and thus be an effective device in lowering the unemployment rate as such.

– *Remodelling the participant local offices, installation of self-help terminals (M-points*) This development was based on the international experience that a more open, client-centred interior makes a less official impression and presents the place as a service provider rather than a rigid governmental office, which in itself facilitates the interaction with clients. Self-help terminals can be useful for all jobseekers, but after proper profiling, a large share of the services provided by the PES can be directed to this channel.

– *Introduction of a quality assurance system in the participating local offices.* The HRDOP 1.2 measure included the introduction of the *Common Assessment Framework*, CAF in order to support the operation of the NSM through the increase of overall efficiency of operations.

– *Training of staff at the participating local offices.* This part of the project connects to the NSM and CAF in order to educate staff members about their operation and enable them to successfully adopt them.

– *Introduction of an integrated IT system (IR).* This development is aimed at supporting the operation of the whole network of local offices by providing an integrated information backbone to services dependent on data managed or processed centrally. It supports administration, serves as a basis of a performance monitoring system and provides data for statistical analyses.

– *Other types of activities, such as research indirectly related to the operation of the PES.*

Given the above main interventions, we can expect effects in relation to all offices on the one hand (in the case of the IR) and in relation to participant offices on the other (such as the self-help terminals, remodelling, the introduction of NSM and CAF). Although the progress of the program can be monitored in the case of all projects, we can measure the effect on the re-employment chances of clients only in cases where the interventions were specific to participating local offices. The reason for this is that there is no good reference point for developments that affect all local offices uniformly and therefore an impact cannot be reliably estimated. Although not helpful for measurement, the presence of such interventions does not create a problem either: it has affected all offices uniformly and most importantly, it was completed only by the end of the period at which we are looking. We also have to note that given the

3 Profiling is essentially the prediction of the length of the unemployment spell. Unemployed persons with a longer and shorter expected unemployment spell might require very different assistance and be capable of very different levels of self-help.

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multiple links between interventions and that all of them were completed in the participating local offices, we cannot measure their individual effect, but only the totality of them.

The principle and model for impact estimation

The current analysis aims at estimating the program effect on the level of establishments using data on operation before and after the program period, in line with the suggestions of (*Nagy,* 2006). Being interested in the actual outcome of the program, I estimate the average treatment effect on the treated (ATT). Because the analysis is focussed on labour markets in which the PES offices are located, this measurement provides us with an estimate of the net effect of the program on the unemployed, that is the combined effect of direct effect and indirect effects. It does not include the possible displacement effects on people outside the unemployment registry or people in neighboring labor markets. Given however that the program effects are freely available to everyone and without extra obligations, those unaccounted indirect effects are likely to be modest.

In what follows, I estimate program effects in a difference-in-differences (DiD) framework corrected with linear regression, first applied directly to the affected groups of offices, then using matching to homogenise them. These total four versions of the estimates can be used as a cross-check on the one hand (similarly to the dated but comprehensive evaluation of active labour market programs in Hungary (*O'Leary,* 1998)), but on the other hand, they also deliver information on the contribution of other factors to the outcomes of the program.

In order to get rid of the time-invariant effects possibly correlated with program participation, I have written the estimating equation in differences-form:

$$\Delta Y_{it} = \tau + \delta p_i + \beta \Delta X_{it} + u_{it},$$

where p_i is an indicator of program participation, τ is a constant measuring the autonomous rate of change in this, X_{it} is a set of variables indicating relevant observable characteristics of the local offices, while u_{it} summarises characteristics that are not correlated with these observables. Y_{it} is an outcome indicator, which I chose to be the re-employment rate of clients. The relationship is defined over PES offices observed in different time-points, i being an index for an office, t being an index for a specific month. The difference (Δ) operator takes time-difference of a variable between the same month in both the "before" year and "after" year. For example, if Y_{it} is the re-employment rate of the registered unemployed at office i in January 2008, then ΔY_{it} is the difference between this and the re-employment rate in January 2004 at the same office. Our interest centres on δ, the coefficient on the p_i indicator for program-participation, which delivers the program effect in this context. One can show that

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the equation in this form is a direct implementation of the DiD idea, generalised to the multiple-regression case.

First I estimate this equation using OLS based on the assumption – supported by program design – that the participant and nonparticipant groups are similar. Variable ΔX_{it} ensures that we take into account the differences developing over time between the participant and non-participant group, and thus we do not confuse these with the effect attributable to the program. This estimation strategy runs into difficulties if there are differences between participant and non-participant groups that are correlated with the ΔX_{it} variables or with the indicator of participation. In order to treat this, I first perform propensity-score matching, which amounts to predicting program participation using such detailed set of pre-participation variables and use the predicted propensity to find observations for every program participant that is close to it in some way (*Rosenbaum and Rubin,* 1983). The individual program effect can be calculated from the difference of the differences in the actual and the counterfactual outcome: $(\Delta Y_{it} - \Delta Y_{it}^{*})$. Averaging office-level differences gives us a reliable DiD estimate of the ATT under the working assumptions (*Heckman, Ichimura, and Todd,* 1998). After calculating simple averages, I control for time-variation in characteristics as in the simple OLS case. Here I am not matching on original re-employment rates, but on residuals from a first-step regression similar to the one used in simple OLS estimation but without the program-participation indicator. Even though the estimation is not complicated, the matching introduces hidden nonlinearity, therefore the straightforward way of calculating standard errors for the estimator would be misleading. In order to handle this situation correctly, I calculate and present bootstrap standard error estimates.

The lack of correlation between observed and unobserved effects is an assumption that one cannot prove, only argue for. We shall see that although the arguments are valid, we have a reason to be careful and observe the possibility of selective sorting into the participant group. The amount of the inconsistency in such cases depends greatly on the size and direction of effects governing such selection.

Data, preliminary results and the estimation method

This study uses data primarily from the IR developed within the framework of the HRDOP 1.2 measure itself, which contains individual data on the registered unemployed from 2000-on. I was granted permission to use these data aggregated at the level of the local offices and this aggregation was performed within the Employment Office based on the required rules. Individual data on registered unemployed in the IR of the PES contains information on sex, age, education, the occupational code of the previous job as well as an indicator of disability. Aggregate indicators calculated from these data play the role

of X variables, characterising the PES offices (using levels of their post-program values) on the one hand as well as the role of controlling for initial observable differences between participant and non-participant groups (using levels and some interactions of levels of their pre-program values) in the matching process on the other. The indicators are all defined as the share of a particular type of registered client within all registered clients.

In the case of the registered unemployed staying in touch with the local PES office, we know the direction of exit at the end of the registered status – and we can base the measure of efficiency on this information. The possible directions are the following:

1. Employment (open market).
2. Public works.
3. Supported employment (various forms of wage subsidy).
4. Training.
5. Not known due to lack of cooperation with the PES.

We can use one of the above as the indicator of efficiency to look at the program effect from different angles. Given that the primary goal of the PES is facilitation labour market match, the most directly relevant measure of efficiency is the share of clients exiting the registry towards unsupported employment on the open labour market, the rate of re-employment. Exit rates were calculated not only for different directions but also for different subpopulations too, defined over individual characteristics such as age, education or disabled status. Looking at these exit rates too enables us to assess the heterogeneity in the impact of the program, if there is any.

A great advantage of the database I use is that it is coming from the administrative records of the PES and it is thus a complete account of the events happening to the registered unemployed. This nevertheless has drawbacks too. Even though contact and thus reporting is required in principle and loses the right for financial benefits administered by the PES without it, there is no real penalty if this is not the case either due to no initial eligibility in the first place or due to having exhausted such benefits (the punishment is that it is not possible to re-claim the benefit for 3 months). In relation to the current analysis, this means that we have reliable information on the direction of exit only for those eligible for benefit.[4] In terms of measurement, this means that we are able to measure the direction of exit and thus the aggregate outflow rate only with error. Moreover, this error can be correlated with the factors determining the chance of exit and I have no outside information to assess its size. If the measurement error is present, it lowers the outcome variable by not counting every successful exit to the open labour market, but we have no reason to suppose that the reverse can happen.

In order to apply the DiD strategy here, we have to chose an appropriate before and after period. Considering that the HRDOP 1.2 measure was rolled

4 Careful readers might have noticed that so far, I have talked about those eligible for financial aid, but switched to talking about those receiving it. The reason for this is that it is eligibility for which we have some idea about the factors motivating the selection, but it is the actual receipt that is connected to the availability of data on exit. I have no information on the connection between the two, but there is no reason that a person in contact with the PES would not take advantage of the benefit, hence the difference is possibly not that great.

out between the second half of 2004 and the first half of 2008 and also that the effects of the economic crisis were very apparent in the third quarter of 2008, I chose the first 6 months of 2004 to be the *before* and that of 2008 to be the *after* period. To assess the program effects fully – following the advice of (*Nagy,* 2006) and the evidence presented in (*Card, Kluve and Weber* 2010) – one should ideally follow and observe program participants for years after the end of the program. Unfortunately this is impossible due to both the very asymmetric impact of the economic crisis and the continuation of the development through the SROP 1.3.1 project, basically eliminating the control group.

There are 158 local PES offices in the analysis – only those present both in the first half of 2004 and 2008. I have omitted the one on Haller Street (specialising in helping homeless people) and the one on Andrássy Street (specialising in helping higher education graduates) in Budapest. I have omitted those two offices as well where all of the Phare developments were completed. If we are looking only at the formal definitions, we can consider offices modernised during the HRDOP 1.2 measure as participants and those not modernised in either during the Phare project or during the HRDOP 1.2 measure as non-participants. However, as only 7 offices[5] adopted the CAF during the Phare project and the rest (13) did so only during the HRDOP 1.2 measure, I also consider these as participants in this exercise. The end result is that out of the total 158 offices, I have 71 participants and 85 non-participants as their controls.

The information I obtained regarding the selection of participating offices was not free from controversy. On the one hand, we know on the basis of preliminary information that participants were selected from smaller and larger towns in every county, providing a degree of uniform randomness. On the other hand, interviews made during the evaluation exercise showed that participation was guided to some extent and offices in worse shape had a higher chance to become participants. Because it proved to be impossible to collect information on the condition of the buildings or anything similar, we can only use the characteristics of the clients as a proxy.

Figure 3.1 shows monthly exit rates from the unemployment register between 2004 and 2008. Based on this evidence, the two major exit paths are 1) unsupported employment, with around 4 percent rate by the end of the period, 2) Not known due to lack of cooperation with the PES, with an average of around 8 percent. Besides the slight increase in exit to unsupported employment, we can observe a much stronger decrease in the exit rate to a not known state (already present from 2000 on, not visible on the graph), highlighting the importance of autonomous changes. Exit rates towards all destinations appear to show seasonal cyclicality. Figure 1 shows that exit rates grow particularly strongly during the summer and decrease during the winter – the reason for this is partly that seasonal jobs are offered mostly during the summer and subsidies are made available during the spring, building up capacity by the summer.

5 These are located in Baja, Orosháza, Barcs, Ózd, Hatvan, Balassagyarmat and Esztergom.

Figure 3.1: Exit rates between 2004 and 2008 (average, all offices)
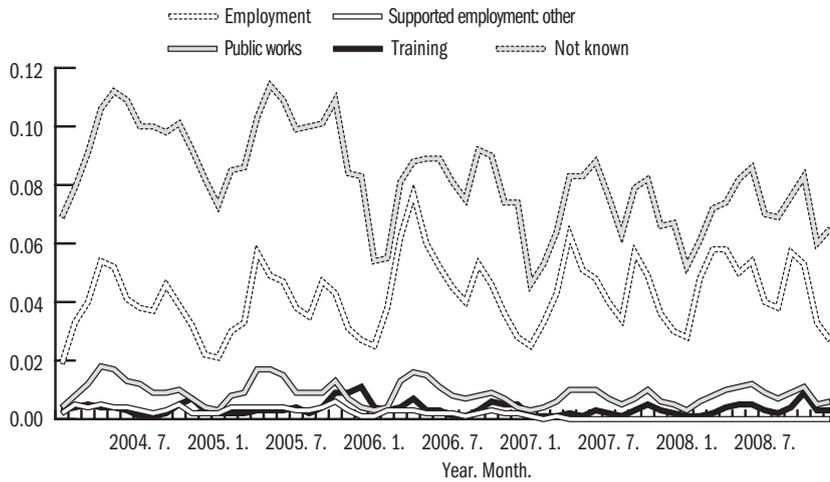
Source: Own calculation from the IR based on aggregated individual data.

The large and trending decrease in the rate of exit towards an unknown state makes it very likely that there is indeed measurement error present in the indicator of the exit route and so it also affects the aggregate variable created from it. Given that the modernisation is likely to have a positive effect on efficiency a negative correlation between participating in the modernisation program and the measurement error in the outflow rate is likely to arise, leading to the overestimation of the program effect (by usual omitted variable arguments). Although we can be sure that such a distortion exists, I suspect that its size is likely to be small.

Table 3.1 shows re-employment rates in the pre- and post-program period based on office-level data, weighted by the number of the locally registered unemployed. Re-employment rate has increased greatly from 2004 to 2008. Program participants observed a 1% point increase, while the same was 0.8 % point in the case of the control group – following the DiD, the program-effect is the difference between these two numbers, 0.23 % point. This number is not small in relation to the overall re-employment rate, but is not significantly different from 0.

Table 3.1: Changes of average re-employment rates at the PES offices
by HRDOP 1.2 program participation status

Year	Participant?		Difference
	No	Yes	
2004	0.0414	0.0386	−0.0028
2008	0.0496	0.0491	−0.0005
Difference	0.0082	0.0105	0.0023

Notes: Without participants of the Phare program; averages are weighted by the number of clients registered with the local office.
Source: Own calculations using data aggregated from the IR of the PES.

Aggregating data to the level of the whole country, we can observe trends relating to the registered unemployed. *Figure 3.2* shows that the composition of the clients has changed over time – this is one of the external effects we have to control for during estimation. The graph shows the proportion of vulnerable groups, likely to have difficulty with re-employment: those without maturity exam, above 50, labour market entrants and disabled persons (counting them multiply, hence proportions add up to more than 100).

Figure 3.2: Average composition of the local PES offices
between January 2004 and December 2008
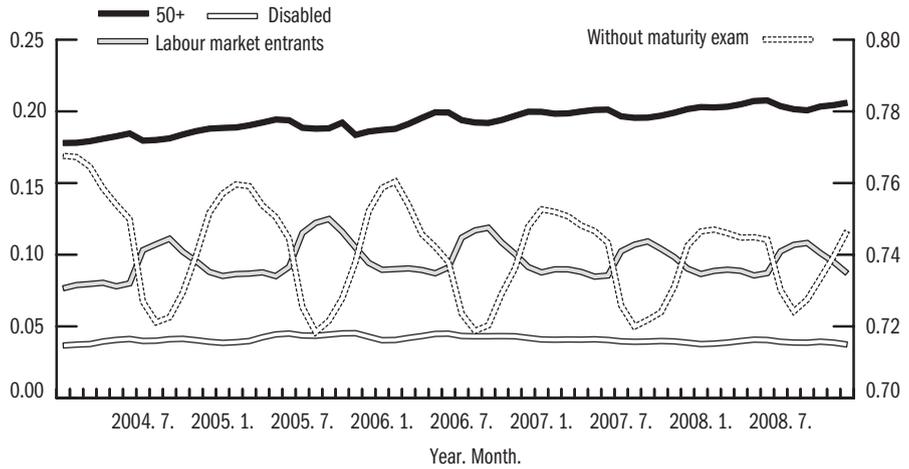
Source: Own calculations using data aggregated from the IR of the PES.

The most pronounced change is the growth of the share of the 50+ among the registered clients. Their share was a mere 15% in 2000, which grew by 5% points in 10 years, partly explained by the rise in retirement age, partly by the autonomous increase in their level of education. The share of those without a maturity exam decreases slowly but steadily, showing a strong seasonal pattern: it decreases rapidly during the summer months providing seasonal jobs, but decreases during the winter.

When using a DiD strategy, it is very important to have very similar participants and non-participants on average so that the latter form a valid control group. *Table 3.2* shows the average of indicators of offices' characteristics in the beginning of 2004, just before program participation. There are two types of indicators: one set includes the characteristics of the registered unemployed, the second includes their exit rates towards different outcomes.

Participating and non-participating local offices appear very similar: there is no real difference either in re-employment chances. The main difference is that there are almost twice as many clients registered with participating offices on average than in the case of non-participants whereas the share of better

educated clients is larger in the latter case (with very low absolute shares). Not only means, but also the spread of the indicators are very similar (not shown in the table), therefore the requirement of using only observations whose characteristics are actually comparable (staying on the common support) during the DiD analysis is not particularly demanding, as we shall see when performing matching.

Table 3.2: Main observable characteristics of participating and non-participating local PES offices in January 2004

	Participant	Non-participant
Average number of clients of the local office	1531	3090
Re-employment rate in the given subgroup of the registered unemployed		
Age: 15–25	4.3	4.1
Age: 26–50	4.4	4.1
Age: 50+	3.1	2.9
Education: without maturity exam (including lower secondary vocational education)	3.9	3.6
Education: with maturity exam	4.9	5.0
Education: higher education	5.5	5.3
Education: lower secondary vocational education	5.1	4.8
Disabled	2.5	2.6
Not labour market entrant	4.5	4.2
The share of the given subgroup among all the registered unemployed		
Age: 15–25	14.7	14.5
Age: 50+	19.4	19.3
Education: without maturity exam (including lower secondary vocational education)	75.9	77.5
Education: higher education	3.2	2.4
Not labour market entrant	7.3	6.8

Source: Own calculations using data aggregated from the IR of the PES and *TSTAR* data from the HCSO

I work with aggregate data during estimation, in which observations appear more than once and this has a direct effect on the calculation of standard errors. In order to get rid of seasonal effects and increasing efficiency at the same time, I use observations for 6 months for each office in the period before and after the program, respectively. This way every observation contributes 6 times to the estimation, and the final estimate will be an average of the monthly effects. Since there is a high degree of autocorrelation between the time-periods, I calculate clustered standard errors to take account of this. Aggregation of units with different numbers of observations in them creates a well-known form of heteroskedasticity, therefore I weight the regressions by the number of registered individuals.

Explanatory variables in the model of program participation include the 2004 January values of the variables characterising local labour markets in the

parametric estimating equations, as well as levels, squares and cross-products of outflow rates towards unsupported employment and unknown direction. I have calculated z-statistics using the bootstrap method, with 100 replications. I have used the PSMATCH2 Stata module for matching (*Leuven and Sianesi,* 2003). I experimented with different averaging methods such as 1:1, k-nearest neighbour, kernel and local linear matching.

Estimating results

I start presenting results with estimated coefficients from simple OLS regression of the differenced estimating equation, using the method explained earlier, including restriction to the common support obtained from the participation equation in the matching estimator.[6] Estimates related to the re-employment chances of an average registered unemployed person are shown in *Table 3.3,* the program effect being the coefficient on the participation indicator in the first row. The results from the most simple specification (1) simply echoes the results seen in *Table 3.1,* indicating a program effect of 0.16%point, or 5% (the numerical difference is due to the slightly different conditions of the estimation).[7] However, this estimate is not significant at conventional significance levels. This can be due to – besides the lack of certain control variables – the negative bias caused by measurement error. Specification (2) includes separate indicators for all months to filter out the effect of the time of measurement. Although it increases explanatory power to 14%, neither the estimate of the program effect nor its precision has changed. Specification (3) includes even more information, most importantly shares of registered clients with a particular characteristic: age, education, labour market entrant status. Besides the rise in explanatory power, we observe an increase in the program effect to 0.3%point and an improvement in precision that makes the estimate significant. The size of the effect is close to the one obtained with matching (see later), but is somewhat larger than the raw estimate. I have experimented with further specifications, in particular with the inclusion of characteristics of local labour markets, but these brought little gain in precision, so specification (3) has remained my preferred one.

After the completely parametric estimates, I turn to matching to take into account possible initial differences between the local offices, which I have so far assumed away. *Table 3.4* shows estimated program effects from simple DiD matching[8] with various methods. Program effects are positive in all cases, but they are somewhat smaller in magnitude than raw effects in the case of averaging methods using all data (such as the kernel and local linear methods).

The next step is to combine matching and parametric estimation that is the control for both initial differences and changes in characteristics during the program period using the two-step method outlined earlier. Based on earlier results, I use the kernel method in matching and include the parametric generation in the bootstrap procedure used for the z-statistics.

6 It is worth noting that without this restriction, the estimated effects are stronger than we shall see. Still, knowing that this strength come purely from extrapolation in the linear OLS model renders it non-credible and suggests that they are not to be used.

7 Raw re-remployment figures were calculated from totals aggregated at the level of treated and control groups. Regressions are run on office-level data weighted by the number of registered clients constrained to observations on the common support.

8 The equation used for calculating the propensity score included the share of registered clients in certain age and education groups, job market entrants, disabled, local registered unemployment rate, average income tax per taxpayer, average number of dwellings built-, enterprises-, nonprofit organisations per inhabitant, share of children in créches among all children, net inmigration rate, outflow rate from registered unemployment to employment, to other directions, the quadratic and the interaction of these.

Table 3.3: Results from DiD OLS regressions in various specifications[a]

	Dependent variable: change in the exit rate to		
	(1)	(2)	(3)
HRDOP 1.2. participant	0.0016	0.0016	0.0030[*]
	(0.431)	(0.433)	(0.0952)
Age: 15–25			–0.000919
			(0.991)
Age: 50+			0.0716
			(0.225)
Education: without maturity exam (including lower secondary vocational education)			0.0259
			(0.703)
Education: higher education			0.367[**]
			(0.0123)
Not labour market entrant			–0.188[***]
			(0.00339)
Disabled			–0.154[**]
			(0.0264)
Constant	0.00852[***]	0.00874[***]	0.00653[***]
	(6.36e–09)	(1.06e–09)	(0.00859)
N (on common support)/All observations	834/948	834/948	834/948
R[2]	0.02	0.14	0.22

[a] Standard errors in parentheses.
[*] Significant at 10% level, [**] significant at 5% level, [***] significant at 1% level.

Table 3.4: Raw program effects estimated with matching

	Nearest neighbour	5 nearest neighbours[a]	Local linear[b]	Kernel[cc]
Estimated program-effects	0.0039	0.0059[**]	0.0019	0.0016
Bootstrap z-statistics	1.41	2.03	0.69	0.71

[a] Five nearest neighbours matching (with replacement).
[b] Local linear estimation uses tricube kernel with the default bandwidth of 0.8.
[c] Kernel estimation uses Epanechnikov kernel with the default bandwidth of 0.06.
[**] Significant at the 5% level.

Results from controlled matching are shown in *Table 3.5* in the same structure adopted in *Table 3.3*. It is worth noting that the smallest difference is brought about here by controlling for seasonality, after which the program effect increases to 0.5%point and is significant at the 10% level. This value decreases slightly but not significantly after including the composition of the client pool of the local offices. For the same reasons as earlier, the most credible and thus preferred results come from specification (3). Replacing raw numbers with those coming from a multivariate DiD procedure combined with matching has thus small but significant net effects in the end, benefitting from correcting for both initial differences and those developing over time.

Table 3.5: Program effect calculated with matching on residuals obtained from DiD OLS regressions

	(1)	(2)	(3)	(4)
Estimated program-effects	0.0016	0.0051*	0.0048*	0.0043
Bootstrap *z*-statistics	(0.71)	(1.81)	(1.76)	(1.55)

Notes: Matching is performed using the kernel averaging method. Regression pre-processing uses specification (3) from *Table 3.3.*
* Significant at the 10% level.

Working with numbers aggregated over the whole client pool, I could not so far look at the heterogeneity of the program effect. Given that some parts of the program targeted some types of clients, this way we actually obtain some information that is possible to relate to specific parts of the program. One example of this is self-help terminals which are more targeted on the better educated clients: obtaining a positive program effect of the latter makes is more likely that elements targeted at them could have worked better. The NSM on the other hand is more likely to benefit the less able, where we can apply the same argument. Another dimension of the heterogeneity of the program effect is the direction of exit. It might be the case that overall, the NSM is more efficient in directing clients towards training, but not so effective in directing them towards employment. In order to take a look at the effect on different groups of clients and with regard to different outcome indicators, I have replicated the analysis for all combinations of these using different populations and outcome indicators. The former included groups defined by characteristics listed in *Table 3.2,* the latter included exit towards the directions discussed in the data section, that is towards the open labour market, public works, other active programs, training and exit to unknown direction.

The main conclusion from this exercise is that the program helped open-market employment the most: two out of three significant effects are estimated in this case. The 0.3% point average estimate comes from few large (and significant) and many smaller (and less significant) results. This can be a result of a measurement problem, given that these groups are small, but also that the program actually had a more pronounced effect in the case of the affected group. While in the case of open market employment, we do not see a significant effect in the case of the young and the 50+, the effect for the prime-age group is well above the average at 0.38%point. There is no real difference in terms of educational attainment, but these coefficients are rather imprecise. Finally, the effect for those already on the labour market is significantly larger than the average. Other coefficients are not significant at conventional levels, except for those with higher education towards ALMPs, where the program effect is negative and significant. If this effect is real, it can be attributed to the better information provided and the selection mechanism put to work and can suggest that less participation in ALMPs might be appropriate for this group.

Conclusions

This study has evaluated the effect of the 2004–2008 phase of the modernisation of the Public Employment Service in Hungary on exit chances from the unemployment registry. Results suggest that the program had a positive effect on exit to unsupported open-market employment. If I control for initial differences between participant and non-participants local offices in the composition of clients as well as its changes over time, I can conclude that the total of the interventions carried out in the HRDOP 1.2 measure had a statistically significant positive effect on re-employment chances. Analysis of subgroups revealed that the program effect was strongest in the case of prime-age workers.

The final numerical results include several corrections and are slightly larger than the one obtained from averaging raw numbers. Re-employment chances have risen from 3.86% to 4.91% in the case of participant local offices, including also effects distinct from the program itself. The impact of the program is calculated to be 0.3–0.48%point. In the first half of 2008, the number of registered unemployed was 450 thousand, of which 263 thousand were registered with program participant local offices and 5% of these become employees on the open labour market in the next month. Results show that approximately 800–1200 of them became employed as a result of the development program. We can express this result also in terms of an effect on the length of the unemployment episode. The approximately 5% exit rate measured in 2008 means that an average unemployed person spends $100/5=20$ month as a registered unemployed person (assuming a constant hazard of exit), which we can calculate to be $100/(5-0.3)=21.3$ to $100/(5-0.48)=22.1$ months in the counterfactual case had the program not being rolled out. This means that the length of the unemployment spell was shortened by 1.3–2.1 months by the program for clients registered with the participating local offices.

Because the modernisation of the PES can be considered as a labour market program, one might want to ask the question how the benefits from the modernisation effort compare to costs and to alternative programs. Had the program an effect that lasted forever, its cost can be shown to be equal to an annual HUF273 million, or a yearly HUF1038 thousand, a monthly HUF86 thousand per capita cost. Comparing this to monthly costs of training programs and subsidies for self-employment, being a monthly HUF101 and HUF177 thousand per capita respectively, this is similar, but somewhat smaller amount.

4. THE EVALUATION OF TRAINING, WAGE SUBSIDY AND PUBLIC WORKS PROGRAMS IN HUNGARY*

JUDIT CSOBA & ZITA ÉVA NAGY

This study explores the impact of labour market training, wage subsidy and public works programs in Hungary using multivariate analyses and a control-group design. The evaluation of active labour market policies was first carried out in Hungary in 1992–1993 upon the initiative of the Japanese Program of the ILO (*Godfrey, Lázár and O'Leary*, 1993). Following this the Hungarian public employment service has been assessing the results of active labour market programs on an annual basis since 1994. This uses a tailored monitoring system to measure the aggregate outcomes of labour market programs after they have ended. The monitoring system was reviewed and new methods were introduced in 2009 (*Tajti,* 2009). These – similarly to the previous period – cover the participants of wage subsidy and school leaver and business start-up schemes; however the largest group, those in public works programs, are not included.

Information in this system came from two main sources before 2009: on the one hand from the records of the employment services, and on the other hand from the responses to a postal questionnaire sent to participants three months following the end of the program. Furthermore, data have been available on employees in unsubsidised employment from the records of the National Tax and Customs Administration (NAV) and the unified employment database (UED) of the National Employment Service (NES) since 2009. However, the database of the NES does not allow us to control for *selection bias* nor to calculate *an aggregate employment effect*. Information on the largest active programs, the participants of public works schemes are still not available. This prompted us to turn to new methods.

Participants, methods and research questions

This evaluation focuses on the three active labour market policies with the largest number of participants over the past 10 years, as well as the largest share of the budget allocated to active labour market policies. The study explores the operation and impact of training, wage subsidy and public works from multiple perspectives. In 2009 73.8% of the decentralised Employment Sub-fund of the Labour Market Fund was spent on these measures.

In accordance with the generally accepted methodology of program evaluations, in addition to the participants of active programs we included a matched control group that had similar characteristics but did not participate in any active labour market policies (for a discussion of counterfactual analysis see *Chapter 1* of *In Focus*).

Monitoring questionnaires for training programs were self-report, and for all other programs employers provided the required information in Hungary until 2009. Given that the information came from different sources – for some programs the employers and for other programs the employees – their comparability is questionable. This study collected data from job seekers and program participants, regardless of their current status.

We employed a two-stage stratified sampling to select participants.[1] First, we selected the 18 small regions to be involved in the study using the CSO's complex deprivation/development indicator of small regions.[2] Then the Public Employment Service selected the participants in the active program and control groups from the records of the job centres in the 18 small regions. The list was then forwarded to the research coordinators in each local job centre who contacted the individuals – current or past job seekers – for consent to take part in the study (individuals who were no longer registered clients received a postal letter).

Data collection was carried out by independent researchers who were not affiliated with the employment service. Interviews took place at the participant's chosen location between August 15 and September 30, 2010. The number of participants was 1,041 in the active program group and 1,068 in the control group. Thirty-eight percent (n = 394) of the active program group participated in training, nearly 10% (n = 100) in wage subsidy and 52% (n = 547) in public works.

One of the main methodological components of the research (and also one of its main challenges in terms of implementation) was the longitudinal nature of data collection. We studied the period between September 1, 2009 and February 28, 2010 and the sample included those who participated in active programs in this six-month period. Those who did not take part in any programs made up the control group. Changes were followed through four time points: pre-intervention, intervention, exit and at the time of actual data collection. In-depth analysis of the 12-month period prior to data collection was carried out.

The four time points allow multiple comparisons and a detailed follow-up. Apart from the difference between the entry and exit status, the changes within the 12-month period, their timing, seasonality, their duration and the direct impact of active policies can be analysed.[3] In addition to the four fixed data collection points, additional points and intervals can be chosen because there is information on job finding. Therefore the dynamics and characteristics of employment can also be analysed for example taking into account the cyclical nature of the jobs market or other factors (such as seasonal cycles, economic and political factors, changes in the legislation etc.) within the 12-month period. The flexible timeframe and the four data collection points allow a pre- and post comparison and thus a more thorough program evaluation.

The scope of the questions was significantly expanded. Apart from the net employment effect of the programs and other standard indicators of program evaluation, detailed information was collected on:

1 This is a random sampling method that allows statistical generalisation of results because, in principle, there is no selection bias. We used data on participants and job centres in our analysis.

2 There were a total of 18 job offices in the sample from five territorial development categories. Within each development category we selected the three or four small regions that had the best development indicators. This was justified because we aimed to measure the effectiveness of active measures, so we selected small regions that provided the most favourable conditions within each category.

3 Data was collected on differences in income and occupation at the start, during and after the end of the program that could indicate an improvement, worsening or stability of status.

– the targeting of each program (the socio-demographic and employment characteristics of participants and those left out from the programs),
– the expectations of the participants towards the programs,
– "what happened" in each program,
– what were the objective changes in the participants' situation after the program (for example changes in the job role, income etc.),
– what other, indirect effects did the programs have (for example in terms of quality of life, work-related skills, future expectations and work-related plans),
– the respondents' subjective evaluation of active labour market programs and services.

Comparison of program participants and the control group

To assess the impact of active programs the study has compared the total sample of program participants (n = 1,041) and control group (n = 1068) in three main areas: firstly the most important socio-demographic and social characteristics – termed "entry differences". It was necessary to explore these because they might have an impact on the outcomes (selection bias). Secondly, it was assessed to what extent the members of the control group had these entry characteristics and what other factors they mentioned to explain their passive status. Finally, the analysis of the changes observed during the 12 months of the study aimed to explore the impact of the active programs in contrast to no intervention.

Entry differences and the targeting of the programs

There were marked differences between the groups in terms of socio-demographic characteristics *(Table 4.1).* These indicators might act as *pre-selection* criteria and might ultimately have an impact on the outcomes of active programs (selection bias).

Table 4.1: Main socio-demographic characteristics of program participants and the control group

Active program (mean)	Gender (%)		Age (mean)	Place of residence (%)			Development/ deprivation level (mean)	Family size (mean persons)	Distribution of the sample between the active programs and the control group (%)
	fe-male	male		county centre	other town	village			
Participated in active program	57	43	37	20	44	36	3	3	49
Training	57	43	35	30	50	20	3	3	19
Wage subsidy	72	28	38	43	44	13	3	3	5
Public works	54	46	39	9	40	51	2	4	26
Control group	54	46	41	31	43	26	3	3	51
Total	55	45	39	26	43	31	3	3	100

The share of women in active labour market programs (57%) is slightly higher than in the control group (54%). Therefore active labour market measures – at

least in principle – (might) considerably contribute to reducing the employment disadvantages of women.

The average age of participants in active labour market measures is substantially lower (by 4.2 years) than the average age of the control group. This result confirms the widely known disadvantage of older workers even in subsidised employment schemes. The average of the control group is closest to that of participants in public works projects (difference of 2.6 years) that suggests that out of the active measures public works projects are the most inclusive for the older generations, however they are still less likely to be involved in these.

There are also substantial differences in terms of education level. Out of all the groups included in the research, the education level of the control group was the second lowest. Participants in *training programs and wage subsidy schemes* had spent the *longest time in education* (the control group left school at the age of 18.7 on average, while the recipients of wage subsidies left school at at 20.7 years, training participants at 19.8 years and those in public works at 17.8 years).

While the majority of those in public works programs and in the control group had vocational qualifications, participants from wage subsidy schemes and training programs had graduated from secondary school and had a baccalaureate in addition to their vocational qualification *(Figure 4.1)*.

Figure 4.1: Highest education level by status groups (percent)
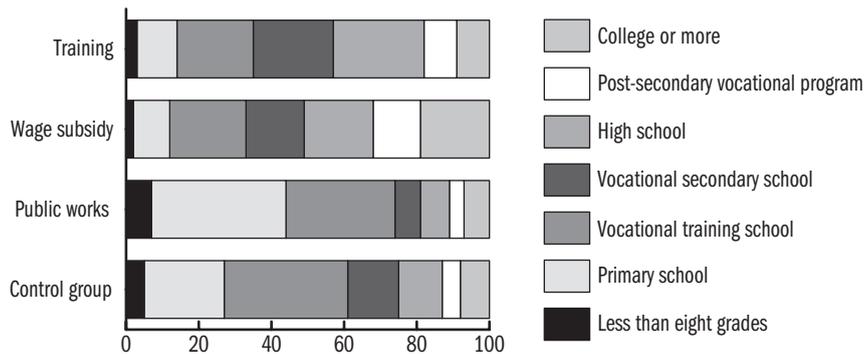
The difference in the education levels at baseline is particularly relevant because – according to a number of previous studies – this alone, regardless of the effect of the program can influence the probability of different outcomes. *Galasi, Lázár and Nagy* (2003) argued that education level has a large impact on the success of participants. A higher education level increases the probability of job-finding, with the exception of the baccalaureate alone without any higher qualifications.

At first glance this study also predicts a higher job finding rate for those with a higher education level which could lead to the conclusion that active labour market measures are more effective for this group. Nevertheless estimating

more complex relationships using a logit model later will suggest that education level alone is not a significant factor.

According to our hypothesis, the likelihood of a successful employment outcome might be also related to the labour market status prior to the program. The correlation between program entry, education level and previous activity might suggest that the employment prospects of active program participants are overall considerably worse than in the control group (at the beginning of the intervention 4% of the active labour market program participants and 21% of the control group had worked in unsubsidised employment *(Table 4.2).*

Table 4.2: Number of participants in unsubsidised jobs by highest education
at the beginning of the intervention, September 2009 (per cent)

Education level	Participants in active labour market measures	Control group
Less than eight grades	0	5
Eight grades	20	17
Vocational training school	24	41
Vocational secondary school	11	14
High school	26	12
Post-secondary vocational program	4	6
College or more	15	6
Total	4	21

The data highlight the variability of previous labour market activity by education level both within and between groups. It can be assumed that individuals with at least a higher secondary education (baccalaureate) are not only more likely to find employment on the open labour market but they are also more likely to be involved (and more quickly) in active labour market measures.

The family structure of the control group and participants of public works programs is more traditional than in other participant groups (38 and 39 per cent respectively are married or live with a partner, while this is only 29% among training participants and 33% among the beneficiaries of wage subsidies). The average family size in the control group was smaller than among program participants (3.1 compared to 3.4 persons). The members of larger families are more likely to be involved in active labour market measures than job seekers from smaller families (the average family size for participants receiving wage subsidy is 3.1 persons, 3.3 for those in training and 3.6 for participants of public works). Single mothers – who make up nearly a quarter of the sample – and young families with small children are particularly motivated to secure an income.

The residents of the most disadvantaged small regions were more likely to be involved in active labour market programs than those in more developed regions, nevertheless jobseekers living in smaller localities were less likely to ac-

cess wage subsidies and training opportunities than would be expected based on their other characteristics *(Table 4.1)*.

Whether the participants of active labour market programs received any unemployment or inactivity related assistance significantly influences the probability of finding a job. *Galasi, Lázár and Nagy* (2003) suggested that people who previously had received benefits were around 40 percent less likely to find a job than people who never received benefits before. Our findings confirm this. Job seekers who are not receiving unemployment benefits are twice as likely to find a job than the recipients of unemployment benefits. Consequently those who have ever been in subsidised employment before (mainly in public works) are half as likely to find open employment as the people who have never been involved in these active labour market measures.

The majority of participants of active labour market measures in this study had previously received unemployment-related assistance or took part in other active programs *(Table 4.3)*. Only 29% of those entering a training program were registered unemployed who did not receive any unemployment-related assistance. The same number was 26% in the wage subsidy schemes, 17% in public works programs, and 23% in the control group. The control group and the public works group had the highest level of inactivity-related income. As a result they had relative income security and thus were least motivated to find a job on the open jobs market.

Table 4.3: Participants and control group according to labour market status prior to the program

Status	Training	Wage subsidy	Public works	Control group (March 2010)
Worked in a non-subsidised job	4	6	3	5
Worked in a subsidised job	2	10	7	1
Participated in training	3	0	0	0
Registered unemployed	88	83	88	90
Out of which without assistance	29	26	18	23
Other inactive	3	1	1	5

The longest jobless period was on average 15 months among people entering wage subsidy schemes, 18 months for training participants, 27 months in the control group and 35 months among the participants of public works programs. Considering the length of unemployment, the control group would be very motivated to get involved in active labour market programs because they have been out of work for a long time. Only participants of public works programs had longer jobless cycles, nevertheless – as will be shown later – the majority of them is not trying to access active labour market programs or find lawful employment.

When analysing socio-demographic indicators, the question of counter-selection should be addressed too: is there a counter-selection and if so, what fac-

tors influence this for each active labour market policy. Data estimated using a logit model shows the following specific entry selection criteria.[4]

For training, the individual's locality plays a significant role: people who live in "other towns" were 1.7 times more likely to enrol in a training program than those who live in a village (the situation of people who live in county centres is not significantly different from those who live in villages). Education level is also significant: training programs seem to be targeted at individuals with a baccalaureate – grammar school graduates were 1.83 times and secondary school graduates with a vocational qualification were 1.49 times more likely to be involved in training compared to those with the highest level of education. In comparison to people with eight years of general education these numbers are 3.04 and 3.74. In terms of regional development/deprivation, training is significantly more common in areas with an average or above average development level than in the most deprived areas (2 and 1.65 times)

For wage subsidy the main selection criteria are gender, education level and per capita income, however the level of regional development is also a significant factor. Women are 1.8 times more likely to participate in a wage subsidy program than men. In terms of education level, the advantage of college and higher vocational qualification is the greatest factor, they are 4.1 times more likely to receive a wage subsidy than people with only eight years of general education, while the same number is 3.3 for people with a university degree.

Participation in public works was influenced by the individual's locality, the development level of the small region, ethnic background and previous work history. The Roma unemployed were 1.8 times more likely to be involved in public works than the non-Roma unemployed. Village dwellers were twice as likely to enrol in public works than residents of towns, and seven times more likely than city dwellers. Public works is primarily targeted at lower educated people and the least developed areas. Compared to the least developed small regions, the probability of being in public works was 0.5 in "less developed" and "developed" areas, and was even lower in the remaining two categories.

Data suggest that the unemployed who lived in county centres were 3.3 times more likely to be in the control group than the unemployed in villages (or in other words: not participating in any active labour market programs and having no income). The unemployed who lived in the most developed small regions were 6.3 times more likely to be in the control group than those in the least developed small regions, 0.6 for a non-Roma versus a Roma, and 0.6 for a graduate versus someone with eight years of general education.

These findings about the selection into participant and control groups suggest that active labour market measures are after all targeted at those with multiple disadvantages (although different groups of them). While selection into the control group was more likely among the non-Roma unemployed with a vocational qualification or a degree who lived in the more developed

4 In our logit model the dependent variable was participation in the given active measures or control group. The explanatory variables were type of locality (city, town or village), the development level of the region, gender, age, education and ethnic background of the respondent, the length of time spent in employment within the total work history, per capita income of the household.

small regions (whose employment prospects are in principle better), regional disadvantages, being lower on the hierarchy of localities and educational disadvantages increased the likelihood of participation in active labour market measures. However there were some fundamental differences between the different measures in terms of entry characteristics. Therefore, it can be assumed that training was more powerful in reducing disadvantages due to its more favourable entry characteristics (small regions of average or above average development level, medium-sized towns, grammar school or baccaleareate with vocational qualification) than for example public works where the main entry characteristics (least developed regions, villages, low education level) forecast the lower probability of successful labour market integration.

Subjective status assessment and work motivation

There were other differences between the control group and active labour market program participants that were due to subjective rather than objective factors. These differences are presented in *Table 4.4.*

Table 4.4: Obstacles reported by participant groups (per cent)

Subjective reason	Training	Wage subsidy	Public works	Control group
Health problem that limits the range of potential jobs	18	14	21	28
Too old	14	12	18	22
Too young, not enough experience	18	15	11	10
Ethnicity	3	1	13	5
Does not have enough money to buy adequate clothes	3	0	5	4
Housing problems	1	0	4	4
Has been out of work for long/has never had a job	11	14	9	15
Outdated qualification	6	4	8	11
Outdated knowledge	4	3	6	11
Stopped working during maternity leave	12	4	8	12
Village locality, lack of jobs	21	13	39	22
Too expensive to commute	26	16	34	27
Lack of adequate public transportation	10	5	18	8
They are less likely to hire unemployed	11	4	10	16
Too many unemployed in the area	54	30	54	55
Could not sell property to move away	12	8	19	14

People in the control group were considerably more likely than active labour market measure participants to view their health status, their age and the lack of employment opportunities, the time spent out of work, outdated qualification and the rejection of the environment as a result of their unemployment as an obstacle. The subjective assessments also emphasise the regional disadvantages and the lack of work-related skills (knowledge and work experience) but

health status is considered more important – nearly one third of respondents mentioned this as the reason for not looking for work.

Apart from the data presented in *Table 4.4* there is information on the intensity of job search after participation in an active labour market measure. Twenty-six percent of the control group clearly expressed their unwillingness to work and even to participate in active labour market programs. The main reason for non-participation (50% of respondents mentioned this) was that they were not offered the possibility to take part in an active measure. Nevertheless, it should be highlighted that it was only in a minority of cases that participation in an active labour market policy was initiated by job centre advisors. Participation was initiated by the unemployed themselves in 65% of the cases in training, 67% in wage subsidy and 55% in public works. For each measure less than one third of the participants were referred by the employment service. Therefore passivity results from other factors, not only the fact that they were not informed of the opportunities or offered participation.

Investigating (further) the reasons for staying away from the labour market both among the participants of active labour market measures and the control group, we sought the individual's own explanation of their passivity, why they are not looking for work on the open labour market.

Men were deterred from the open labour market by their health status and alternative sources of income, while women mentioned child care responsibilities, increased expenses as a result of taking up work, less flexibility in terms of time use and higher expectations. Participants of training, wage subsidy and public works programs mentioned similar factors as disadvantages of active labour market programs. Only a smaller proportion of respondents said that illegal employment was one of the factors that kept them away from work (24% said that they have ever worked illegally and 6% said that they were working illegally at the time of responding), the majority of them in the control group. Nearly a quarter of those not giving any reasons for staying out of work were employed illegally.

There were also differences in terms of expectations towards work. Participants of active labour market programs were "less picky" and the control group had higher expectations and stricter conditions towards potential jobs: they were more likely to reject outdoors work (71% vs 59% among participants), work that is potential harmful to health (68% vs 65%), were less likely to accept 12-hour working days (56% vs 60%), and shift work (53% vs 56%). Interestingly there were no differences between the groups in terms of accepting part of the salary paid directly in cash (and without paying tax or other contributions), or if they could work part-time or from home – nearly two thirds were willing to accept these options. Almost 60% would be willing to pay for equipment or work wear if they had the opportunity to work. A similar percentage (over 70%) would reject undeclared employment, if they could not take annual leave, if they could not go on sick leave and unpaid overtime.

The results suggest that there are substantial differences between the two groups in terms of their attitude and expectations towards work. The participants of the active labour market programs seem more open and flexible, while the control group is more attached to traditional forms of employment both in lawful and undeclared work. This has implications for the job prospects of both groups and highlights the necessity of differential treatment.

Program evaluation – a comparative analysis of active labour market policies

Changes in the status as a result of participation in active labour market programs (ALMPs) was measured at four time points: before intervention (baseline), at the beginning of the intervention, at exit from the active measure (and linked to this the outcome indicator), and at data collection (at the end of a 12-month observation period). Data from the first two stages (baseline and intervention) have already been discussed. The results as measured by the outcome indicators and the impact of the programs will now be summarised, highlighting and comparing the similarities and differences between the four measures.

Immediately after the intervention (at exit) participants of the wage subsidy schemes were the most likely to find unsubsidised work on the open labour market (72 per cent) *(Table 4.5)*. These were followed by training participants (12 per cent). The employment rate of the control group and public works participants – both at 5% – seems to support the previous argument that the probability of open employment is similarly low in the two groups with less favourable socio-demographic indicators, less motivation and worse employment prospects.

Table 4.5: Employment status of ALMP participants and the control group immediately after the intervention (per cent)

Status	Training	Wage subsidy	Public works	Control group (March 2010)
Employed, not subsidised	12	72	5	5
Employed, subsidised	4	0	7	1
In training	0	0	1	0
Unemployed	83	25	87	89
Other inactive	2	3	1	5

Note: For ALMPs $N = 839$, for the control group $N = 1061$.

Thus far monitoring studies have measured the effectiveness of programs with the number of participants who found paid employment within six months from the end of the program. Although this study has adopted a longer timeframe (12 months), data from the first six months was compared to findings of other studies *(see Table 4.6)*.

Table 4.6: Comparison of the number of participants taking up employment within six months in the two studies (per cent)

ALMP	1997 (*Galasi, Lázár and Nagy,* 1999)	2010 (this study)
Training	45	33
Wage subsidy	71	77
Public works	25	23
Control group	n. d.	7

The findings of the study by *Galasi, Lázár and Nagy* (1999) – that used the records of the Hungarian Employment Methodological Centre with nearly 5,000 participants in 1997 – and this study using survey methods are by-and-large similar.

Considering the differences in the methods between the two studies (one was based on the secondary analysis of data from a large administrative database and the other on data collection using survey methods on a sample of participants) this is noteworthy and reassuring. Nevertheless, it also suggests that the efficiency of active labour market policies – regardless of any changes in the labour market or external circumstances – has been fairly constant over the past 13 years.

The comparison of the status of the ALMP participants and the control group at the end of the study (at the 12th month) also indicates the more favourable situation of ALMP participants. Nineteen percent worked in unsubsidised jobs as opposed to 11% of the control group. Sixty-three percent of ALMP participants were registered unemployed in comparison to 80% of the control group.

There was a substantial difference between ALMP participants and the control group in terms of participation in subsidised employment at the end of the 12-month period: this was only 4% in the control group while 15% of ALMP participants were once again among the beneficiaries. A considerable number had already participated in subsidised employment at least once (mainly public works). Only one per cent of the control group were involved in a wage subsidy scheme and 4% were in a public works programs at the end of the 12-month period. At the same time, they were significantly more likely to receive welfare benefits (34% as opposed to 20% among former ALMP participants) or unemployment benefits (23% in the control group and 20% in the ALMP group), and they were twice as likely to be inactive (4% vs 2%).

At the end of the analysis the question as to what influenced successful job finding on the open labour market should be addressed. Did the individual active labour market programs contribute significantly to this success? Using a logit model[5] we found that two variables were particularly important in predicting a successful employment outcome. These were: *status4(.)* variable that showed participation in a given ALMP during the intervention period, and

5 In our logit model the dependent variable was non-subsidised work at the time of measurement. The explanatory variables were type of active measure (or control group), type of locality, the development level of the region, gender, age, education, marital status and ethnic background of the respondent, the length of time spent in employment within the total work history, labour market characteristics at the beginning of the intervention period (working on the open market – all else; in a subsidised job – all else; claiming unemployment benefit – all else; parental leave – all else).

unemp(1) that represented the ratio of the duration of unemployment within the total work history (see *Annex 4*, *Table 4A1*).

A further analysis of the variables with a significant effect within the model reveals that training participants were 1.82 times and receipients of a wage subsidy 20.24 times more likely to be in employment on the open labour market. The outcomes of those in public works programs are even less favourable than those of the control group: the likelihood of them finding employment was 0.26.

The "raw effects" of each active labour market program, summarised in *Table 4A1* (which includes the effects of all variables and not only those of ALMPs), were compared to the results of the logit model adjusted for the effect of active labour market programs. Effects were expressed as the group-wise odds ratio between the participant and control groups. The comparison of results suggests that, despite the different methods of data analysis, the un-adjusted and adjusted odds were relatively similar (the unadjusted odds ratio of wage subsidy was 19.04 and the adjusted 20.24, while both odds were 1.82 for training relative to the control group). In public works the unadjusted odds ratio of finding employment relative to the control group was 0.37 and the adjusted odds ratio was 0.26. This difference can indicate on the one hand a selection bias or alternatively a negative effect on employment outcomes (for example through a stall effect – this is discussed later in the study).

The variable *unemp(1)* highlighted again the already known negative relationship between the length of unemployment and the probability of finding employment.

Our results are similar to the findings of *Galasi et al.* (2003) and also to those reported by *Kluve* (2010): the outcome is largely explained by the type of ALMP the individual has participated in (or the absence of ALMP). This also means that the differences in the entry characteristics do not have an effect of their own but they are accumulated through selection into a program.

During the 12-month period of data collection in this study – considering the whole of the period *(Table 4.7)* – 41% of ALMP participants found employment. Unlike the general practice, in this time period only lawful employment was considered in order to give an insight into the movements between "re-employment", subsidised employment and active labour market programs. (This indicator includes very short-term employment too.) On average it took 2.1 months for ALMP participants to find work and 24% found employment on the open labour market. Thirty-eight percent of those who have taken part in training found work and this took on average 2.3 months. Two thirds of those who found work (24.4% of total training participants) secured a job on the open labour market and the rest were divided between wage subsidy schemes (66%) and public works (33%). Eighty percent of those previously involved in a wage subsidy scheme found work out of which 76% were on the open labour market and less than one percent in public works. On average it took 0.5 month

for them to find employment. From those in public works 32% found employment in an average of 2.8 months. However only 6% of these were employed on the open labour market.

Table 4.7: The number of those in employment at the end
of the 12-month observation period (per cent)

	Employed		Not em-ployed	Missing status	If employed, how long did it take to find first "regular" employment?*			
	total	subsi-dised			0–3 months	4–6 months	7–9 months	10–12 months
Training	38	14	60	1	29	7	2	0
Wage subsidy	80	4	20	–	75	3	2	0
Public works	32	26	62	6	21	8	2	1
Total ALMPs	41	17	56	3	31	7	2	1
Control group	37	5	63	–				

* Data includes unsubsidised employment, public works, wage subsidy, business start-up support and agricultural producers.

Thirty-seven percent of the control group found work – including any type of employment – during the 12-month observation period. Thirty-two percent of this was open employment.

The methodology of the study also allows us to consider changes longitudinally rather than at discrete data collection points. *Figure 4.2* illustrates this.

Figure 4.2: Status of ALMP participants and the control group
between March and September 2010 (per cent)
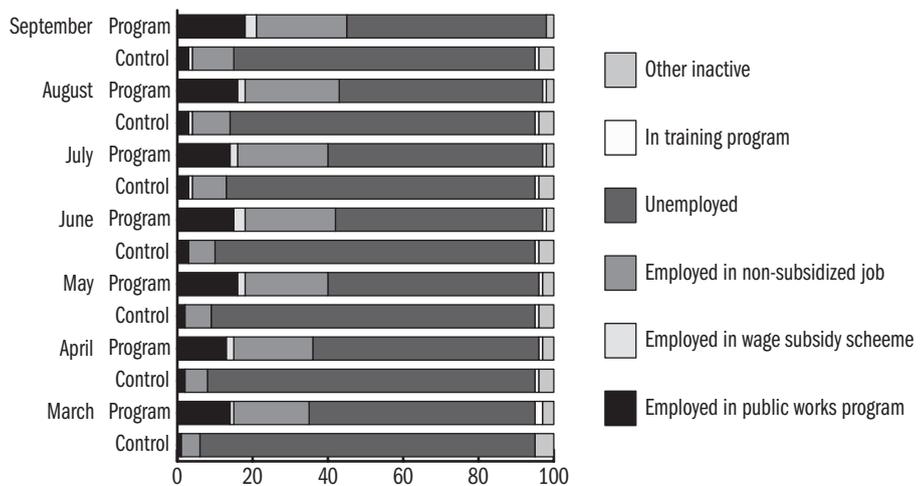
Figure 4.2 shows the second half of the 12-month observation period (from February to August) in which anyone from the control group had the possi-

bility to take part in ALMPs as well – this was an exclusion criterion only in the first six months of the study. The figure allows us to follow the dynamics of changes month by month and also illustrates the variety and changes of outcomes other than open employment.

The figure shows that those who had previously participated in ALMPs were more likely to be among the beneficiaries again even in the second – relatively short – part of the observation period than people from the control group. Previous ALMP participants were found in wage subsidy schemes, training and public works in fairly large numbers. Maybe they were participating in a different type of program, however it can be concluded that they were making better use of the opportunities offered by the labour market and the employment service than members of the control group. Another notable difference is that the people in the control group were more likely to move to an economically inactive status than participants who had previously been involved in ALMPs.

In program evaluation – in addition to the employment outcomes – it is also important to consider to what extent active labour market policies contributed to maintaining or improving the situation and social status of those involved. To assess this effect, changes in the participants' job roles and type of work contract were analysed.

The findings of the analysis are briefly summarised here. Participants in training and public works programs generally maintained their status following intervention and there was even evidence of a small improvement. The status of those in wage subsidy schemes remained largely the same. There is also a minor status improvement in the control group, however its scale lags behind the changes among training and public works participants.

Another finding was that the share of fixed-term contracts increased considerably among all employment contracts. Wage subsidy programs appear the most stable because the share of permanent contracts was highest among their former beneficiaries (nearly two thirds), and there was only a 9% decline in the number of permanent contracts compared to the longest job ever held by the respondent. Among public works participants barely every tenth worker has the chance for a stable and long-term job.

During the intervention period – apart from the above changes – the wage expectations grew substantially in each ALMP group while there was no change in the control group.

Active labour market policies can also have an impact on participants' employability and skills, self-esteem, feeling a useful member of society and social networks. These "soft" indicators are not widely accepted in program evaluations because there are no standard measurements for these. Nevertheless it is useful to offer a brief insight into these more "indirect" outcomes of ALMPs.

The subjective assessment of programs was carried out among those who participated in ALMPs and were successful in finding a job: 32% said that they

would have not found a job without the program while 28% thought that they would have been able to secure a job without it. Particularly, those in training thought they would have been able to find a job without it while public works participants were more likely to attribute their success to the program.

According to our findings, ALMPs also altered some of the self-concepts held by the individual participants. Participants of training and wage subsidy schemes were more likely to report a significant improvement in their employability. Nearly two thirds of those who reported a deterioration were from the control group. In terms of self-esteem, changes were similar: the highest improvement was reported by training participants (21%). Participants of wage subsidy schemes were the least likely to report a significant improvement in self-advocacy and work motivation (13% for both). The biggest improvement in professional and theoretical knowledge was – not surprisingly – reported by training participants: 61% said that the program was "good". According to respondents programs were not very helpful in developing contacts and social networks for job search.

Data suggest that one of the value added elements of ALMPs can be personal development and the strengthening of self-esteem. Participants most often mentioned the importance of respect, a feeling of being useful and actively contributing to the family income.

An important finding however, was that individuals from the control group who succeeded in finding a job on their own were much more positive about the changes than ALMP participants who considered job creation and continued employment as part of the programs.

Characteristics and outcomes of active labour market policies

The following section considers each of the three active labour market policies and examines the characteristics, the processes and factors behind the effects presented earlier.

Training

According to data 38% of participants found a job between the end of training and the end of the data collection period. On average this took 2.3 months from the end of the training program. In the first three months 29% of respondents, in months four to six a further seven per cent, in months six to nine only an additional two per cent and in months 10 to 12 only 0.3% found work (*Table 4.7*).

Program evaluations often put forward a number of misgivings with respect to the effectiveness of training / re-training programs (see the *Chapter 2* in this *In Focus* as well as *Frey,* 2008). According to earlier program evaluations, many of the participants in training programs are people with higher than average education level and skills sought after on the labour market who would most likely find work without this (*Frey,* 2008, *Tajti,* 2009). Our results confirmed

this finding. Training is not the most adequately targeted active labour market policy. It is not helping those without qualifications to gain a qualification but rather it is assisting in the re-training of people who already have a qualification. Sixty-two percent of training participants already had a vocational qualification (the same level was 68% in wage subsidy schemes and 47% in public works) and the number of early school leavers was not higher than the average among them (24% of the total sample and 23% of training participants were early school leavers). It is also known that just over a quarter of previous qualifications were never used!

Fifty-two per cent of participants received a re-training allowance once, while 13% twice or more often – most likely they participate in successive training programs to secure an income.[6]

The large majority of respondents (92%) participated in their preferred training. Typically participants were self-referred (65%) and only 30% of the participants were referred by the employment service. It is interesting to note that 28% of those referred by the employment service found a job on the open labour market, while this was only 13% for those who referred themselves. So why did participants enrol in training? Most people mentioned interest, the hope of finding work, however 60% also mentioned that they were paid to participate.

About a fifth of labour market training programs do not provide a new qualification but develop new skills and abilities that improve the employability of the participants.[7] The majority of training programs are in the areas of information technology, languages, administration, retail, welding and cutting and social care.

The majority of training participants (78%) received a national vocational qualification, 6% received a vocational diploma (not included in the register of national vocational qualifications), 12% received a special vocational qualification (such as ECDL, language examination, non-professional driving licence etc.), and two per cent received other qualification. Furthermore two per cent of participants dropped out of training. Results show that there was no significant relationship between the type of training and the probability of re-employment (the only exception was the special vocational qualification that was significantly less likely to be associated with successful job search).

Out of the 38% in employment only 24% were on the open labour market. A further nine per cent of training participants were employed in a wage subsidy scheme and five per cent in a public works programs. The effect of training on the probability of re-employment is strongest in the first three months and is also noticeable for a further three months, however it becomes negligible six months after the closure of the program.

To understand the effect of training on employment, we should also consider the characteristics of participants who succeeded in returning to the labour

6 Researchers created the term *trainfare* based on the concepts of *work-fare* and *welfare.* It describes the phenomenon when participants enrol in subsequent training programs in order to qualify for the training allowance that becomes a main source of income (*Jordan,* 1996).
7 Such as language courses, computer courses, driving lessons and other courses developing competences.

market. The effect of the following variables on re-employment was examined: status at the beginning of the observation period, education level, age, marital status, gender, ethnic background, type and development of place of residence. The main characteristics of training were also taken into account, such as the duration, the type of qualification, type of referral, and whether it was the preferred training option of the respondent.

Results show that three factors had a significant effect on the probability of a successful employment outcome. On the one hand the respondent's place of residence, and the development level of the small region on the other, were important. Compared to a respondent living in a county centre, the odds of job-finding were significantly higher for somebody living in a small town (2.27) and significantly lower for a village resident (0.642). Therefore, training might be more important and effective in helping job seekers to find work in medium-sized localities where there are potential job vacancies, however there might be a shortage of qualified workforce (even due to the drain effect of larger cities) than in small localities or cities. It might also be argued that the organisers of training initiatives are more aware of the needs of the local labour market. The results also show that the effect of training on the probability of re-employment is smallest in the most developed areas: the odds of a successful employment outcome here are 0.113 compared to the least developed areas. The effect of training on employment outcomes is similar to the general trends observed within all active labour market policies: there are particular patterns within the five development categories. The effects are most favourable in the less and more developed areas, however they are negligible in the least developed, developed and most developed areas.

The third contributing factor to the probability of re-employment was the duration of training. Similarly to earlier research (see *Chapter 2* of *In Focus*, *O'Leary,* 1998b) the findings of this study also confirmed that short training courses (one to six months) are much more effective than long courses (see *Table 4.8*).[8]

Table 4.8: The effect of the duration of training on the probability of re-employment

Duration of training	Percentage of respondents in unsubsidised jobs at time of data collection
Less than 3 months	25
4–6 months	27
7–9 months	14
Longer than 9 months	10

The evaluation of training programs by the participants was not very favourable. Forty-five per cent of participants said that they would have been able to find a similar job without training (the same number was 21–28% for other active labour market policies). If we accept the assessment of the participants

8 This effect was strengthened by the fact that people with higher levels of education were more likely to enrol in longer – especially six to nine months – training courses. The only exception was skilled workers who were significantly more likely to be involved in training courses longer than nine months.

then it can be concluded there is a large deadweight loss associated with current labour market training policies.

Respondents said that the training was useful at a personal level; two thirds thought that the new knowledge was slightly or very useful and would happily take part in training again: 27% said they would do it once more, 39% said would be willing to do it twice or even more times. The most popular courses were language, IT, accountancy, and machine-operating. In terms of motivation to enrol in a training program and the willingness to participate again by 62% of the respondents, it might be argued that this is not only the result of the new skills / knowledge but also due to the motivating effect of the income that training participants received which was significant. This suggests that participants were motivated to "learn a living".

The effect on employment outcomes of training is distorted by changes in the attitude of participants: they were looking for different, higher prestige jobs than they would have done without training. According to our results there was no skill enhancement effect among participants. Expectations regarding potential jobs – for example wage expectations or whether they would be willing to take up undeclared employment – changed substantially (improved). However this was also the case for other active labour market policies (therefore it might be argued that this is an effect of the intervention itself, the fact that people were offered support, rather than a training-specific issue).

Wage subsidy

In wage subsidy schemes 80% of the participants found a job between the end of the intervention and the end of the observation period. Out of this figure, 77% found one within six months which increased to 80% by the end of the twelfth month.

The primary aim of wage subsidy schemes within active labour market policies is to help job seekers into the open labour market and provide a sustainable employment outcome following the end of the subsidy. The follow-up of these programs within the monitoring system over the past years showed a very favourable picture and indicated a very high (continued) employment ratio (*Frey,* 2008, *Tajti,* 2009). For example in 2009 over two thirds of recipients (75.6%) of a wage subsidy were still employed six months following the end of the scheme (and over the required duration) (*Tajti,* 2009).

In this study the average duration of unemployment before entering a wage subsidy scheme was 9.7 months – 23 months for social assistance recipients, 10 months for registered job seekers, and the shortest time (one month) among former training participants. Those who spent three months or less without work before the wage subsidy scheme were significantly more likely to find unsubsidised employment than those who were jobless for longer. In this respect, wage subsidy policies support the employment of the short-term unemployed.

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In terms of the typical routes into wage subsidy schemes, three groups were identified among the job seekers using a clustering method.[9]

The largest group (*active jobseekers* – 44 people) was characterised by self-referral without previous participation in wage subsidy schemes or work experience at their chosen workplace. Typically they were not hired for new positions and it was observed only in this group that other employees lost their job because the employer hired subsidised workers. The second group (*those using their social networks to return to work* – 22 people) was made up – among others – of participants who had already received wage subsidy in the past. Their personal relationship with their future employer is key in their employment which is also indicated by the fact that they had not worked at the chosen workplace before and they were hired for a newly created position. The smallest group (*returnees* – 12 people) comprised of people who had already been employed by the same employer at least once but sometimes even twice. Nevertheless, most respondents said that they were hired for a newly created position.

According to *Gerfin-Lechner and Steiger* (2002) as cited by *Hudomiet and Kézdi* (2008) wage subsidy schemes often have a greater effect on the situation of women than that of men, although the reasons are unclear. The effect was particularly large for the long-term unemployed for whom the wage subsidy scheme increased the probability of employment by 13% 18 months following the end of the scheme. For the short-term unemployed the estimated effect was not significant.

In this study the percentage of men and women in the scheme was 28% and 72% respectively – men were more likely to say that they would have been able to find a job without the subsidy (61%) than women (50%). Their expectations were confirmed by the actual outcomes, 74% of men were in unsubsidised employment after the end of the scheme as opposed to 68% of women, while seven per cent of men and 13% of women were registered job seekers. In conclusion it might be argued that contrary to the international literature, women were more likely to be involved in wage subsidy schemes, however men had more favourable employment outcomes.

Over one third of respondents (38%) said that they received a wage subsidy for up to six months. The average duration of subsidised employment was 8.3 months.[10] Women are not only more likely to be involved in a scheme, they also receive the subsidy for longer than men: on average for 8.5 months compared to 7.8 months. The mode employment duration was nine months.

The analysis reveals no relationship between successful employment and socio-demographic factors (age, marital status, place of residence and development level, education). What are the significant factors? According to some it is the relationship with the employer. Wage subsidy schemes were often criticised in this study because they do not create new jobs but rather they create incentives for re-employing existing workers for a higher wage. A

9 The analysis was carried out using *k*-means clustering.
10 The monitoring studies carried out by the PES collected data from employers to evaluate the efficiency of wage subsidy programs. Our research aimed to involve participants in the survey. One of the disadvantages of this is that participants couldn't always differentiate the different phases of the program. They struggled to distinguish the subsidy period from the continuation of employment although our questionnaire clearly asked about the situation after the end of the program regarding the continuation of employment.

few respondents mentioned that whole teams (for example sewing factories) were "re-employed".

To check the accuracy of these claims and to try to uncover the real effect respondents were also asked whether they started their subsidised employment alone or as part of a group of workers. Seventy-seven per cent said they started their job alone and 23% reported that they were part of a group.

There was a highly significant relationship between group re-employment and the willingness of employees to continue the employment of workers without the subsidy. Seventy-four per cent of those in a group said that they would have been employed without the subsidy as opposed to 48% of those employed alone.

The extent of the substitutions effect – or termed differently the hypothetical "re-employment" – was measured using further variables. First, respondents were asked where they heard about the opportunity. Fifty-four per cent of recipients of wage subsidy reported that they first heard about the scheme in the job centre and 23% said that they were informed by their employer. This gives an upper value for the extent of re-employment in the sample. The second question to measure the extent of re-employment was about who initiated employment. In 20% of the cases this was the job office, in 23% the employer directly and in 53% of the cases the job seeker (out which 9% had already participated in a wage subsidy scheme).

Thus in 23% of the cases employers provided information and in 23% of the cases initiated subsidised employment but only 9% of participants had previously participated in a wage subsidy scheme. Sixteen per cent of respondents had worked for the same employer before and three per cent said that this was their third job with the same employer. It can be assumed that nearly 20% of participants were re-employed in the wage subsidy program. There was evidence that the respondent had previously worked for the same employer and participated in a wage subsidy program before. Therefore it is justified to argue that approximately 20% of program participants were simply re-circulated into the labour market.

Another highly contested feature of wage subsidy programs is whether they actually contribute to the creation of jobs. The monitoring studies of the employment service asked employers whether they would have created the same jobs in the absence of the subsidy. This is the so-called deadweight loss of the active labour market policy and according to the monitoring studies it was consistently around 20–25% each year.

To measure deadweight loss this study asked participants of wage subsidy programs: 53% said that they would have been employed without the subsidy. The logit model looking at the effect of deadweight loss highlights an important factor: there was no significant difference between the probability of finding employment after the program among those who said they would have got

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the job without the subsidy and those who thought the subsidy was necessary. Therefore it seems that there is a large deadweight loss at the start of the programs, at the selection of participants, however there is no deadweight loss in terms of the long-term employment effect and it makes no difference whether they would have got the job with or without the subsidy.

Examining deadweight loss from a different perspective, the data show that 70% of job seekers were first-time wage subsidy recipients and had not worked for the same employer before. Therefore it could be assumed that these were new positions that were created using wage subsidy. However the possibility that workers were made redundant to hire somebody using wage subsidy cannot be ruled out. Nine per cent of the respondents – and one person who was re-employed by the same employer – said that their job had been filled by somebody else and that person had been made redundant before they started working for the employer.

It is useful to consider the substitution effect and the deadweight loss of wage subsidy programs because the average unit cost of wage subsidy was 853,200 forints per person in the first half of 2009 in contrast to 173,200 forints for training (*Tajti,* 2009, *p* 17).

Hudomiet–Kézdi give an overview of the attempts to measure the impact of active labour market policies in *Chapter 2* of *In Focus* and in their 2008 paper. They also argue that international experience suggests that wage subsidy programs have large negative externalities, highlighting the substitution effect in particular. They argued in *Chapter 1* that wage subsidy programs in the United States are generally considered successful, while wage subsidy programs in Northern Europe are regarded as non-successful. The picture in Western Europe and the post-communist countries is mixed. This study could not measure the substitution effect but it can be assumed that it is present in the wage subsidy programs. In conclusion, with regard to the substitution effect and deadweight loss, up to 60–65% of jobs created using wage subsidies are new positions.

Our results also suggest that the employment effect of wage subsidy programs is very good in comparison to other active labour market policies, however this is moderated by their strong substitution effect and deadweight loss. If these are taken into account the effects are only slightly better than in training programs, nevertheless wage subsidies are still considerably more effective than public works programs. Nevertheless recipients of wage subsidy have more favourable socio-demographic characteristics and the unit cost of the program is higher than in public works programs.

Public works

Looking at the employment effect of public works – the combined ratio of open employment and subsidised employment – the results are surprising. Within the first three months following the end of public works 21% of the partici-

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pants found work, within four to six months a further 8%, two per cent within seven to nine months and one percent within ten to 12 months. This meant that 32% of the participants worked for some time either in open employment or in another subsidised job, mainly public works after leaving the program.

The effectiveness and the impact of public works programs can be assessed in the context of their objectives.[11] None of the regulations and documents setting out the aims of public works programs makes an explicit reference to the objective of open employment.[12] Therefore we only used one indicator to measure the effectiveness of public works – participation in the open labour market. The analysis of other effects and outcomes can also indicate whether the program fulfils its objectives, and its effectiveness.

Participants in public works programs had less favourable demographic characteristics and lower levels of education – as shown in previous sections – than registered job seekers. Older, less educated groups were significantly over represented among public works participants. Probably related to this, the type of work typically carried out in public works is unskilled physical labour. According to data from the monitoring evaluations between 2001 and 2006 77–80% (*Frey*, 2008), and according to this study 78% of the jobs were unskilled positions related to community infrastructure. Related problems have been well documented by a series of research studies over recent years and several alternative models were put forward, however the type of work carried out in public works programs has basically remained unchanged for the past 20 years (*Csoba,* 2010a, 2010b).

The effectiveness of a program is enhanced by the attitudes of participants – whether they are motivated to take part and accept the aims of the program as their own. The element of coercion is considerably stronger in public works than in wage subsidy programs and this also impacts on its effectiveness. Sixty-five per cent of training participants and 67% of wage subsidy program participants said that they volunteered to participate, the same number was 55% for public works and in 27.9% of the cases unemployed participants were approached by the job office.

Mainly men with upper secondary education or lower rely on this employment opportunity, although over half of those with a vocational qualification would also be willing to take part again. Over three quarters of women with a vocational qualification or a baccalaureate said that they were likely to participate again in public works. Participants aged 25 years or under were more optimistic in terms of open employment prospects than those aged 26 years or over who would be more willing to participate in public works again. In general, older generations are more willing to accept public works as a substitute for open employment.

There is a significant relationship between the average duration of participation in public works and the level of regional development. In the most devel-

11 The study looked at the previous regime of public works that included municipal public works (organised by local councils), communal public works (organised by the PES) and centrally organised public works. In the end we did not consider the three types separately because participants could rarely tell which type they were involved in. They identified themselves as "public workers" regardless of the type of the program.

12 At the time of the research municipal public works were regulated by Article 36 of Act 3 of 1993 on Social Administration and Social Provisions. The aims and the subsidies available for communal public works were set out Article 16/A of Act 4 of 1991 on the Promotion of Employment and Provision of Unemployment Assistance and Article 12 of MoL regulation no. 6/1996. (16. 07). Centrally organised public works projects were regulated by Government regulation no. 49/1999 (26. 03).

oped areas this was 8.6 months, 8.4 months in the areas of average development and 7.9 months in the least developed areas.[13] The duration of employment is also related to the position filled by the worker: in non-administrative white collar positions this was 9.7 months, in administrative white-collar positions 8.5 months and in blue-collar positions it was 6.9 months.

The effect of subsidisied employment is significantly reduced if the same job seekers are admitted to the programs more than once. The ratio of re-employment is highest in public works programs, more than half of the job seekers had already worked in the same job. As a result of recurrent employment the worker considers the public works agency as a long-term stable employer which can hinder efforts to find a job elsewhere. Nearly one third of the sample took part in public works programs on a recurring basis (more than twice). Nearly one third of respondents (28%) had already worked in their current position more than once. This is particularly characteristic of men who regularly return to public works as if it was a seasonal job. Four per cent of the sample participated in public works 10 times or more; the average number was 2.78–3.2 for men and 2.4 for women. In line with the recurring nature of public works, 80% of participants were planning to take part in similar programs again.

There is a significant relationship between the effect of the program and the age of participants. For the under 25 group there is a stronger transition effect than in the older age group.[14] Younger people are more likely to find work than older people who participated in similar active labour market programs. People aged 36–45 years, although they make up the largest proportion of participants in public works, seem to rely on returning to the program for temporary income. There are very few people aged over 45 years involved in public works and they are less likely to find a job.

The probability of unsubsidised employment is also influenced by the place of residence: compared to county centres, public works is 1.47 times more likely to lead to employment in small towns and 2.4 times more likely in villages. Therefore personal networks and the fact that new employees are often hired as public workers at the beginning due to the lack of resources have a considerable impact on the transition effect of the program.

The probability of open employment increases as the sector of the employer moves away from the local council status. The average ratio of open employment was 5% – if the employer was a local council this was only 3% and at non-profit organisations it was 5%.[15] However, if the participant was employed by a state-owned company the job finding rate increased to 8% and if it was a large state-owned company it reached 17%.

Public works in companies that operate under market or quasi-market conditions is significantly more effective in helping people find employment than the public sector where the emphasis is on temporary work and income rather than on the transition effect.[16]

13 It should be highlighted here that our data collection coincided with the Road to Work Program that saw significantly increased spending on public works programs compared to previous years and thanks to this the average employment was nearly 50% longer than in previous years.

14 By *transition effect* we mean the extent to which the given measure contributes to the change of unemployed status through the provision of unemployment supports – services, wage subsidies, job brokerage etc. – and re-employment – preferably – on the open labour market. If the measure – as in this case – is the subsidised employment itself then its "transition effect" can be (re-)employment on the open labour market.

15 A similar rate was reported in the public sector by a study in 2000 using a sample of participants from Budapest. Here the number of public works participants who received a permanent work contract after the end of the subsidised period was four per cent. According to the authors the low rate was explained by the hiring freeze in the public sector and the disincentive of employers – they would no longer qualify for the subsidy (*Orsovai et al.,* 2000).

16 Subsidised employment does not lead to employment and it does not change the labour market status of participants. After the end of subsidised employment participants return to their original unemployed status.

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It is assumed that some of the participants of public works programs remain in open employment for a couple of months following the end of the program (6% of those lawfully employed), however the open employment effect of the program declines after the third month and by the twelfth month hardly reaches 3% and the share of public works increases again (at the 12th month point of the observation this stood at 38%).

Within six months following the end of the program, participants of public works were the most likely to develop a "survival strategy" and 24% reported working illegally for various lengths of time.

Those who became economically inactive after taking part in a public works program did not want to return to subsidised employment again. It seems that public works and inactivity-related benefit receipt were considered mutually exclusive rather than alternative options by the respondents. Those who managed to secure an inactivity-related benefit did not wish to return to public works. Public works are not attractive enough in terms of income potential, prestige or any other factor to motivate inactive benefit recipients to return to work.

The more often people return to public works the less motivated they become to find a job on the open labour market. Seventy-three percent of first-time public works participants said that they were likely to participate again, while the same number was 77% for those who participated twice and 93% for people who participated in public works three times. The numbers of participation in public works is strongly related to the probability of re-employment. Among those who were involved in public works five or six times the job finding rate on the open labour market is very low. Public works programs create dependency and a loss of self initiative.

The lock-in effect develops during participation in the third public works program and leads a situation that is less favourable than the individual's initial situation in terms of employment prospects (*Hudomiet and Kézdi,* 2008, *Scharle,* 2011).

Considering another aspect of this phenomenon it confirms our hypothesis that it is the third public works program that locks in participants. Eighteen per cent of those who participated once said that they were not planning to take part again, and the same number was 14% for those who participated twice and only five per cent for those who participated three times. Therefore those who are at the beginning of their "public works career" and not yet considering subsidised employment as a way to extend eligibility for unemployment-related benefits were more likely to reject this rather unfavourable job opportunity than those for whom this short-term employment and income opportunity had already become part of their survival strategy.

Conclusion

This study has examined the impact of three active labour market policies – wage subsidy, training and public works – using multivariate analysis with a control group design. The study considered a broad range of outcomes and looked at the changes longitudinally. The sample was selected using a two-stage stratified sampling method and consisted of 1,041 participants in active labour market policies and 1,068 job seekers not receiving any interventions in the control group.

In terms of the targeting of programs, the findings of the study suggest that ALMPs generally target disadvantaged job seekers compared to the control group: regional disadvantages, localities at the lower end of the hierarchy and educational disadvantages increase the probability of participation in an active labour market program. However there are differences between the participants in each program that might have implications for their effectiveness.

At the end of the study 19% of ALMP participants were in unsubsidised employment compared to 11% of the control group. However the probability of re-employment on the open labour market – a successful employment outcome – was significantly different by type of program. Training participants were twice as likely as the control group to find a job, while beneficiaries of wage subsidy programs were 20 times more likely. However, participants of public works programs were considerably less likely – one fourth as likely – to find work than the control group.

Training is not the most adequately targeted active labour market measure because over two thirds of participants had a formal vocational qualification thus it did not help participants to gain their first vocational qualification. Furthermore it only helped one in four participants to find work on the open labour market. This might be related to the fact that over half of the participants considered training not as a direct route into work but rather as an income opportunity.

Taken literally, the results suggest that wage subsidy programs tend to enhance the employment of the short-term unemployed. On the other hand, the program has a large substitutions effect and deadweight loss: only up to two thirds of the jobs are newly created as a result of the subsidy and in over half of the cases the participants would have also been hired in the absence of the subsidy. Therefore the finding that the participants of wage subsidy programs were 20 times more likely to find work than the control group probably massively overestimates their real effect.

Public works programs had a strong lock-in effect: the job finding rate dropped sharply after the end of the programs and nearly half of the participants were involved in the same public works program more than once.

The regression analyses suggest that training and wage subsidy programs had a direct positive effect (even conditional on the characteristics of the participants). The direct effect of public works is less favourable than the outcomes

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in the control group. These programs on the one hand cannot compensate for the unfavourable entry characteristics of participants and on the other hand, through their lock-in effect, they reduce the probability of open labour market integration.

The study also provided interesting information on the subjective status assessment and work motivation of job seekers. Participants of active labour market programs were more open, flexible and pro-active than those in the control group, while they were more attached to the more traditional forms of lawful employment. These characteristics can also influence the effectiveness of active labour market policies.

In conclusion, out of the active labour market programs public works definitely does not have a positive effect while the effect of training and particularly wage subsidy programs can be positive. The real effect of the program is more modest than the employment ratio after the end of the program indicates because the majority of participants would been employed also in the absence of the subsidy and not more than two in three posts were newly created thanks to the wage subsidy program. The evaluation of active labour market programs was further complicated by the fact that there were significant differences between the participants and the control group that could not be fully taken into account in the analysis.

Appendix 4

Table 4A1: Factors influencing the probability of open employment.
Dependent variable: individual takes up work on the open labour market
(rather than any other type of employment or status)

Explanatory variable[*]	b	Standard error	Wald-test	Degree of freedom	Significance	Exp(b)
ratio	−0.014	0.006	5.732	1	0.017	0.986
education			9.076	6	0.169	
education(1)	0.056	0.508	0.012	1	0.912	1.058
education(2)	0.178	0.493	0.131	1	0.717	1.195
education(3)	0.054	0.52	0.011	1	0.918	1.055
education(4)	0.435	0.506	0.741	1	0.389	1.545
education(5)	0.163	0.585	0.077	1	0.781	1.176
education(6)	0.863	0.536	2.592	1	0.107	2.371
Development			4.971	4	0.29	
Development(1)	−0.363	0.265	1.876	1	0.171	0.696
Development(2)	0.27	0.294	0.841	1	0.359	1.31
Development(3)	−0.231	0.303	0.582	1	0.445	0.794
Development(4)	−0.13	0.301	0.186	1	0.666	0.878
status4			120.148	3	0	
status4(training)	0.597	0.213	7.852	1	0.005	1.817
status4(wage subs)	3.008	0.39	59.402	1	0	20.243
status4(publ empl)	−1.324	0.336	15.517	1	0	0.266

Explanatory variable*	b	Standard error	Wald-test	Degree of freedom	Significance	Exp(b)
Age group			5.833	4	0.212	
Age group(1)	–0.335	0.276	1.481	1	0.224	0.715
Age group(2)	–0.396	0.311	1.619	1	0.203	0.673
Age group(3)	–0.656	0.331	3.925	1	0.048	0.519
Age group(4)	–0.946	0.439	4.651	1	0.031	0.388
Residence			2.275	2	0.321	
residence(1)	0.46	0.308	2.223	1	0.136	1.583
residence(2)	0.416	0.319	1.709	1	0.191	1.516
Gender	0.229	0.175	1.709	1	0.191	1.257
d4(marital stat)			12.508	8	0.13	
d4(1)	0.22	1.186	0.034	1	0.853	1.246
d4(2)	0.083	1.202	0.005	1	0.945	1.087
d4(3)	0.75	1.164	0.415	1	0.519	2.116
d4(4)	1.329	1.246	1.137	1	0.286	3.776
d4(5)	0.232	1.409	0.027	1	0.869	1.261
d4(6)	0.25	1.182	0.045	1	0.833	1.284
d4(7)	–0.105	1.266	0.007	1	0.934	0.901
d4(8)	0.109	1.278	0.007	1	0.932	1.116
u10 (Roma)			1.65	2	0.438	
u10(1)	0.175	0.332	0.277	1	0.599	1.191
u10(2)	–0.353	0.533	0.437	1	0.509	0.703
Open empl(1)	–0.522	0.312	2.793	1	0.095	0.593
Subsidised empl(1)	–0.355	0.428	0.686	1	0.407	0.701
unemployed(1)	0.436	0.314	1.925	1	0.165	1.547
Unemployment benefit(1)	0.127	0.273	0.216	1	0.642	1.135
Child care allowance(1)	0.89	0.825	1.165	1	0.28	2.435
Constant	–3.111	1.886	2.72	1	0.099	0.045

* Explanatory variables included in the analysis:
ratio: ratio of the duration of unemployment within total work history
Education(.): respondent's highest education level;
Development(.): development level of the small region;
status4(.): respondent's status at time of intervention (training, wage subsidy, public works);
age group(.): respondent's age;
residence(.): respondent's place of residence;
gender: respondent's gender;
d4 (marital stat)(.): respondent's marital status;
u10(.): respondent's Roma ethnic background;
open empl(1): employment status at the beginning of the observation period: previously in open employment;
subsidised empl(1): employment status at the beginning of the observation period: previously in subsidised employment;
unemployed(1): employment status at the beginning of the observation period: previously unemployed without receiving any unemployment-related benefit;
unemployment benefit(1): employment status at the beginning of the observation period: previously unemployed, receiving unemployment-related benefit;
child care allowance(1): employment status at the beginning of the observation period: maternity leave

5. THE IMPACT OF THE EXPANSION OF PUBLIC WORKS PROGRAMS ON LONG-TERM UNEMPLOYMENT

JÁNOS KÖLLŐ & ÁGOTA SCHARLE

The *Road to Work Program* ("Út a Munkához Program") was launched in 2009 with the objective of providing income and an employment opportunity to unemployed low education level workers living in the most disadvantaged small settlements, or in other words to provide work incentives and improve the employability of the long-term unemployed. This study examines the impact of public work programs on the employment opportunities of the long-term unemployed before the launch of *Road to Work Program*. As will be shown later, *Road to Work Program* was virtually the extension of existing public works programs therefore the same effects can be expected as those presented here.

After an overview of the labour market and institutional context, the study will present the development of public works in the 2000s and the *Road to Work Program* in more detail. It will address the allocation of additional resources to different groups of workers (targeting) and the number of unemployed workers and local councils – including disadvantaged micro-regions – that were reached by the program (take-up). A separate section will discuss the experiences of public works programs in Hungary. The last section will focus on the key question of the study, the impact of public works programs between 2003 and 2008.

The study is based mainly on administrative data and analyses the impact of public works programs on the development of long-term unemployment at the settlement-level. This chapter is a substantially shortened version of the full research report prepared by the Budapest Institute and Hétfa Research Institute (*Budapest Intézet,* 2011).

Labour market and institutional context

Unemployment rose very rapidly during the early years of regime change. Long-term unemployment rose steadily within the working age population and stood at just over three per cent by the 1990s. Over half of the unemployed took longer than a year to find employment. Both the number of short- and long-term unemployed was declining until 2001, but then started growing again. The relative ratio of short- and long-term unemployment remained relatively stable until 2008 when the crisis started to deepen. Since then the ratio of short-term unemployment has somewhat increased. The rate of long-term unemployment (within the working age population) again approached three per cent in 2009 (*Figure 5.1*).

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Figure 5.1: Unemployment and benefits
(within the working age population, percentage)
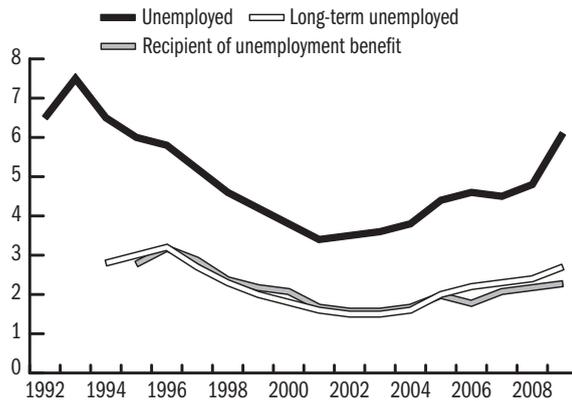
Source: The Hungarian Labour Market in 2010. Tables 5.6 and 5.7 claimant count, October.

The majority of the long-term unemployed are older workers, low-educated workers and people living in remote settlements with poor public transportation links due to cuts in transport services (*Galasi–Nagy,* 1999, *Köllő,* 2009). Consistently low employment levels can be linked to a number of issues – inherited economic structure, the post-communist transition, demographic trends and government policies might have been contributing factors. The global crisis in 2008 made things worse but internal structural problems and processes that had originated much earlier are a more likely explanation for the low employment level. It is not surprising that the rapidly changing economy during the years of the post-communist transition did not offer many employment opportunities to masses of the low-educated workforce. However, persistent long-term unemployment is not an inherent part of the market economy – it is explained by the characteristics of Central East European economies. One of the contributing factors is most probably the weak education system (public and vocational education) that is responsible for the low adaptability of the workforce (*Commander and Köllő,* 2008, *Kézdi, Köllő and Varga,* 2009). Other important factors include the lack of small and family businesses and the extensive red tape that hinders their expansion. In Western Europe the employment rate of the low-educated is similar to that of graduates, but they are typically employed by small businesses. This sector was disrupted by the socialist economies and cannot be restored overnight – even in Poland where the SME sector is growing rapidly thanks to the capital investments of returning migrants, it falls behind the extent of the SME sector in similarly developed South American economies (*Maloney,* 2004). In addition, the Hungarian regulatory environment is not particularly helpful in fostering the long and difficult process of small business development.

Economic and employment policy decisions with a direct effect on labour supply and demand also contributed to stagnating employment. There is an unhealthy balance on the labour market that is maintained by the mutually reinforcing effects of low employment, welfare policies, high taxes and low tax revenues. As a result of the generous welfare policies designed to mitigate tensions in the early years of regime change, currently the main source of income for nearly one fourth of the working age population is some form of welfare payment with the majority of recipients being economically inactive and absenting themselves from the labour market for a long period or permanently (*Cseres-Gergely and Scharle*, 2008). The ex-post evaluation of the increase to the minimum wage in 2001–2002 showed that it had no significant impact on labour supply, however it clearly reduced employment in labour-intensive sectors (*Benedek et al.,* 2006, *Kertesi and Köllő* 2004). In some areas it is not the excessive government intervention but rather inaction that hinders employment. These areas include the reluctance to combat gender and ethnic discrimination and delaying the adoption of public health policies to improve the health status of the population. Finally, based on the rather sporadic data and empirical studies active and passive labour market policies aimed at reducing unemployment did not prove effective in increasing employment (*Bódis et al.,* 2005, *Bódis and Nagy,* 2008, *Cseres-Gergely and Scharle*, 2010, *Fazekas,* 2001, *Csák,* 2007, *Nagy,* 2008).

The system of unemployment assistance, including both the insurance-based and time-limited unemployment benefit and the means-tested social assistance paid to the long-term unemployed, underwent numerous changes over the past 20 years (for more on this see *Budapest Intézet,* 2011, and *Duman and Scharle,* 2010). There are a number of conditions attached to the payment of unemployment assistance in most countries, including Hungary. As part of a workfare reform in 2000 a new rule was introduced that required the long-term unemployed claimants of social welfare assistance to take up public works for up to 30 days before the assistance could be paid. The only exception was when the local council or job centre was unable to organise public works programs. Claimants were required to cooperate with the local council or a designated service (typically the family counselling service or the job centre), sign on as unemployed, visit their advisor on a regular basis, report any changes that may affect eligibility and take part in employability programs.

The reform in 2000 expanded the range of activities that could be carried out in public works programs and allocated central government subsidies for financing public works. The new rules were based on the principles of workfare and aimed to provide "work instead of benefits". It was hoped that the new system would help to reduce benefit fraud and reduce long-term unemployment (*Fazekas* 2001, *Duman and Scharle*, 2011). The focus of this study, the *Road to Work Program*, is not substantively different from the system created

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in 2000 in terms of its objectives or main components. The difference was a substantial increase of the budget available for public works programs managed by local councils.

The *Road to Work Program*

The *Road to Work Program* was launched by the Hungarian government in 2008. The main objectives of the program were to improve the labour market situation of benefit claimants, reduce work disincentives of the benefit system and increase employment level (*Szűcs,* 2009). It also aimed to create public sector jobs to provide work opportunities for the long-term and improve joint working between social and employment services. Some further benefits of the program were also envisaged by the Government, such as reducing the number of working age people claiming social assistance, improving the time-use of job centres, enhancing the efficiency of partnerships between local councils, family counselling services and the public employment service, increasing the number of work-ready jobseekers, better targeting of employment assistance and improving the employment situation in the most disadvantaged small regions.

The *Road to Work Program* was introduced in two phases in 2009. Social assistance claimants were allocated into two groups: those able to work and those not able to work. The first group would either participate in public works or receive income replacement. The central government substantially increased the budget available to local councils for public works programs. There were also further incentives for local councils to make the most of this: the rate of government co-financing was 95% for public works programs but only 80% for income replacement (reduced from a previous level of 90%). The income replacement is a fixed-sum payment and somewhat less than the average amount of social assistance. This rule entered into force in January 2010, thus in 2009 all claimants were receiving the regular social assistance according to the previous regulation (*Csoba,* 2010a; *Frey,* 2010).

The *Road to Work Program* limited the possibilities of local councils because it no longer allowed the involvement of a broad range of long-term unemployed only those receiving the income replacement. At the same the available budget increased. Previously the budget was allocated by the ministry responsible for local councils based on the needs forecasted by local councils at the beginning of each year. On the contrary the *Road to Work Program* was based on normative post-financing which meant that the State Treasury reimbursed 95% of the expenses related to the employment of public workers to local councils at the end of each month (they received a 50% discount on contributions paid by employers). For related program components and details on management see *Budapest Intézet* (2011). The rapid expansion of the *Road to Work Program* is illustrated by *Figure 5.2.* The figure clearly shows that the total number of participants increased substantially by the end of the year.

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Figure 5.2: Introduction of the Road to Work Program – number of people claiming social assistance, income replacement and participants of public works programs, monthly average, 2009, thousand people
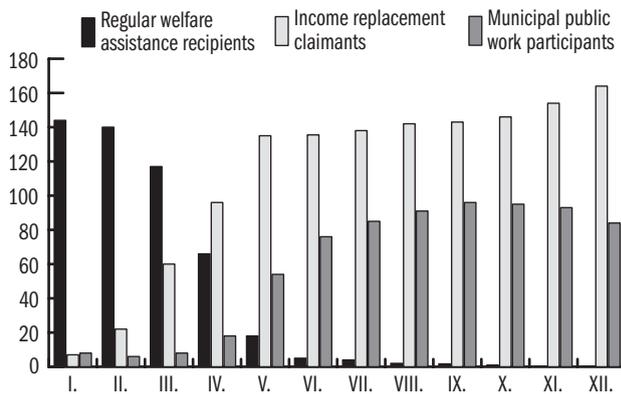
Source: Regular social welfare assistance and income replacement claimants Employ-ment Office (claimant count on the closing day); municipal public works partici-pants: Ministry of National Resources.

Figure 5.3 shows that there was no clear upward trend in the number of reg-istered unemployed prior to the launch of the *Road to Work Program*: the number of claimants and registered unemployed only started to increase as a result of the global crisis. Nonetheless the number of long-term unemployed receiving assistance already showed an upward trend throughout 2008. There have been three kinds of public works programs in operation in Hungary: the "municipal" public works programs, the "communal" public works programs and the public works programs organized by the National Employment Ser-vice (ÁFSZ) program.

Figure 5.3: Average headcount of unemployment assistance claimants and public works participants
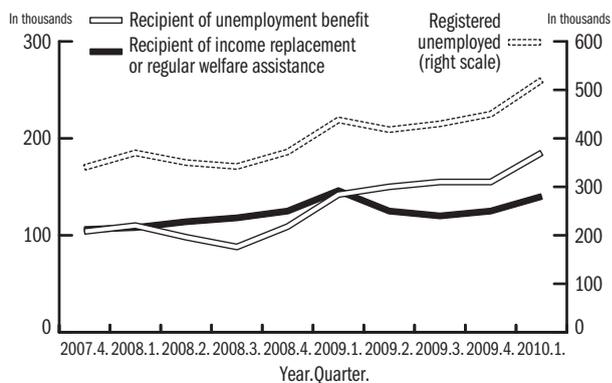
Source: Own calculation based on the Labour Force Survey of the Hungarian Central Statistical Office (CSO).

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According to available administrative data on average 14,000 to 16,000 people were employed in one ot the three types of public works programs each year before to the introduction of Road to Work. Thus each program provided employment to approximately 10–12% of the long-term unemployed (20–22% in total). In the first year of the Road to Work program, the average headcount in communal public works jumped to 60,000 (while it shrank to 5,000 in municipal public works) that made up 27% of income replacement claimants. Together with those in municipal public works the number of workers increased by 50% compared to the previous year. It should be noted that the level of employment in public works was only extraordinary in a sense that local councils have never been allocated so much funding for this from the central government's budget. The level of employment measured as the percentage of benefit claimants was similarly high in 2003 as well: then 15% of benefit claimants were employed in municipal public works and a further 10% in the community *(Figure 5.4)*.

Figure 5.4: Ratio of participants in municipal and communal public works within the total eligible benefit claimants, 1996–2009
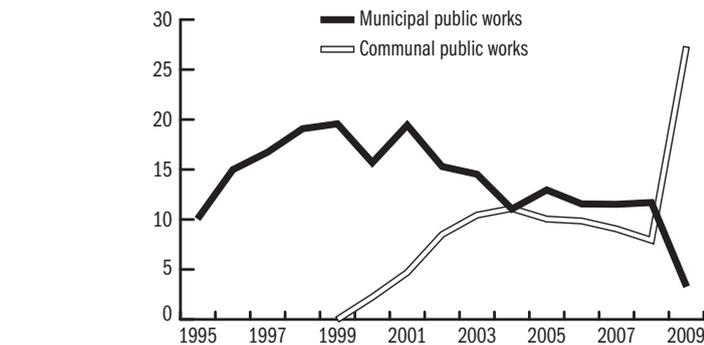
Source: Average headcount in October for municipal public works (Labour Market Review, 2010, Table 5.13). Average annual headcount for communal public works (Fazekas, 2001; based on data provided by the National Audit Office (2007) and the Hungarian State Treasury, 2001 and 2007 figures estimated on the basis of data provided by the State Treasury, 2008 figure calculated using settlement data on the number of days eligible for reimbursement. Both data sets are expressed as the ratio of eligible benefit claimants (income replacement assistance, social welfare assistance and income replacement) using the average October headcount (The Hungarian Labour Market, 2010, Table 5.13): ratio of municipal public works = municipal public works participants/(municipal + community + benefit claimants); ratio of communal public works participants/(community + municipal + benefit claimants).

Regional disparities in targeting and take-up

Considering the regulatory background of the *Road to Work Program*, we can expect that its targeting is probably adequate and it reaches the most disadvantaged long-term unemployed with the worst employment prospects. However it might create problems if local councils decided to employ more educated jobseek-

ers who are more likely to have the necessary skills, or if due to inadequate management capacities programs fail to reach those living in remote villages with no jobs. Uptake at the national level is very high, but due to the decentralised nature of the program implementation, there might be major regional disparities.

Table 5.1 shows the number of settlements that had municipal public works programs between 2003 and 2009. After the introduction of the state subsidy in 2000 it took a few years for the program to take off. While in 2003 less than half of the local councils arranged public works, in 2005 this was more than 85%. This then remained by-and-large unchanged until 2008 and increased slightly after the launch of the *Road to Work Program*. In 2009 nearly all local councils had public works programs. A more detailed analysis shows that uptake increased most by local councils with high long-term unemployment and where there was a history of public works (*Budapest Institute,* 2011). In localities further away from the capital the number of participants in public works programs increased more, however the most remote villages were less able to take advantage of the increasing funding opportunities. There was no significant relationship between the percentage of the Roma population within the settlement and changes in the uptake.

Table 5.1: Share of local councils that organise public works programs, 2003–2009

Local council	2003	2005	2007	2008	2009
Village with a population of less than 50	0.00	0.53	0.53	0.67	0.84
Village with a population of 50–99	0.13	0.78	0.73	0.80	0.91
Village with a population of 100–149	0.14	0.83	0.81	0.86	0.95
Village with a population of 150–499	0.25	0.84	0.85	0.87	0.96
Village with a population of 500–4,999	0.44	0.88	0.87	0.88	0.97
Town / village with a population of 5,000–9,999	0.71	0.89	0.92	0.92	0.97
Town with a population of 10,000–19,999	0.70	0.85	0.85	0.84	0.99
Town with a population of 20,000–49,999	0.71	0.98	0.90	0.98	1.00
Town with a population of over 50,000	0.90	0.95	1.00	1.00	1.00
Total local councils	0.39	0.85	0.85	0.87	0.96

Note: Villages with a population of less than 50 inhabitants make up nearly one third of all municipalities, and villages with 500 to 5,000 inhabitants make up nearly two thirds (without population weights).
Source: own calculations based on data from the Hungarian State Treasury and Tstar.

The targeting of the *Road to Work Program* was analysed using quasi-panel monthly data generated from individual-level data held by the Employment Office. The data-set was generated using individual data and a time-series of group-level observations; "real" panel data follows individuals over time, however the data did not allow this type of analysis. Our groups were based on gender, level of education and age group.

Our regression model analysed the relationship between take-up and other characteristics within groups and the month of observation. The results in *Ta-*

ble 5.2 show that the *Road to Work Program* did reach its target groups at the individual level: low educated job seekers were more likely to participate. Age had no significant effect on take-up aside from the fact that in the age group under 25 years, involvement was significantly more likely. This might not be a good thing if they do not gain work experience in public works that can also be useful elsewhere but they have less time and motivation to look for work on the open labour market.

Table 5.2: Probability of public works take-up (social assistance recipients from the register of Employment Office, 2009)

	Co-efficient	Standard error
Less than 8 years of general education and aged over 35 years	–0.003	0.0023
Less than 8 years of general education	0.002	0.0019
Eight years of general education	0.006***	0.0013
Lower secondary	0.005***	0.0011
Upper secondary	0.002**	0.0010
Education level not known	–0.054***	0.0015
Under 25	0.003**	0.0011
25–29 years	0.001	0.0011
30–34 years	0.000	0.0011
Over 55	0.001	0.0011
January – March	–0.002	0.0014
May	0.063***	0.0017
June	0.088***	0.0017
July	0.050***	0.0017
August	0.053***	0.0017
September	0.065***	0.0017
October	0.050***	0.0017
November	0.035***	0.0017
December	0.020***	0.0017
Constant	–0.002	0.0015

Source: own calculations based on data from the Employment Office.

The experiences of public works programs in Hungary before 2008

In a review of the international experiences of the effectiveness of active labour market policies *Kluve* (2010) argues that public works programs are rarely effective and in some cases they can be detrimental for future employment prospects – if they lack even a minimal positive impact that could compensate for the reduced time available for job search by job seekers (see also *Chapter 2 of In Focus*).

Our understanding of the effectiveness of active labour market policies in Hungary is limited. The validity of program evaluations has been challenged by the fact that participants of public works programs are a special group and it is very difficult to find adequate control groups to measure the effect of non-intervention (on the importance of this see for example *Chapter 1 of In Focus*).

There have been no experimental studies and the validity of non-experimental studies can often be questionable. Nevertheless this section will review research on the effectiveness of public works programs before 2008. There seems to be a general agreement in the literature that public works failed to achieve its main objectives and improve the job prospects of workers in public works programs.

Many reports present only unadjusted job-finding rates. Although these data are informative, they do not allow us to separate the program's real effects from the participant and context effects. The ÁFSZ monitoring studies measure the job-finding rate three months after the end of the main programs. These studies in 2007 found that after training nearly 40% and after participation in wage subsidy schemes, over 60% of jobseekers found work (*ÁFSZ,* 2007). *Frey* (2008) argued that the job-finding rate among participants of public works programs was virtually zero (0.1–0.3 per cent) in counties with high unemployment, and even in more developed counties this rate was around 5% between 2001 and 2005. *Csoba* (2010a) showed that the exit rate from long-term unemployment as a result of finding a job was only 1.4% in 2009.

Galasi, Lázár and Nagy (1999), in their study that also takes into account selection, found a weak positve effect of training and a negative effect of public works on job finding. *Galasi, Lázár and Nagy* (2003) showed that public works participants were less likely to find a job than participants in other active labour market programs, but the difference was partly explained by participant characteristics. *Fazekas* (2001) studied the first results of the introduction of public works using data recorded by local councils, interviews and data from administrative sources in 2001. He found that the number of participants in municipal public works fell short of expectations and job finding among the long-term unemployed did not increase. Nevertheless the program provided an opportunity to offer employment for people who were not eligible for unemployment assistance. According to *Fazekas* (2001) 11.4% of those claiming regular social assistance were recruited to public works using this option between May 1, 2000 and October 31, 2001.

The National Audit Office investigated the use of resources allocated for public works in 2002 and 2007. In 2002 18% of the financial resources were included in the investigation using site visits and data from the unemployment register. They concluded that there was a lack of coordination between the different types of public works and their efficiency was rather poor. There was limited use of employment plans to facilitate return to the open labour market and public works programs were largely led by the short-term financial interests and workforce needs of local councils. In terms of the allocation of resources, no consideration was given to efficiency and all program proposals received funding until the budget was exhausted. The second report from 2007 was based on site visits between 2003 and 2006 and a survey on the perception of public works. This report reiterated the conclusions of the previous

report and also highlighted deficiencies in the monitoring and evaluation of programs whether they delivered the planned outcomes (employment, education etc.). It also concluded that public works failed to considerably improve the employment prospects of participants. The survey however, found that public works were socially accepted and the jobs carried out were considered useful by the majority of respondents.

Bódis and Nagy (2008) suggested that the differences in the administration of benefits between local councils persisted based on a survey carried out in the summer of 2007. The survey examined the assessment of eligibility and considered whether claimants were offered the possibility to take part in public works at 44 municipalities and local job centres. Eighty per cent of participating local councils designated the employment service to monitor the compliance of claimants, in the rest of the cases the designated authority was the family counselling service but benefit claimants were still required to cooperate with the public employment service too. The findings of this study, similarly to some earlier case studies, suggested that, in the absence of incentives and professional inspection, adherence to policies was very uneven: authorities involved in the administration of benefits could create their own rules and based on personal characteristics, their legal and human rights awareness and local interests decided on the level of cooperation expected from benefit claimants and the use of sanctions (*Bódis and Nagy,* 2008, *Szalai,* 2004–2005).

Firle and Szabó (2007) examined the job finding rate among benefit claimants and public works participants based on individual panel data from the CSO's Labour Force Survey between 2001 and 2004. They found that public works participants were six to nine per cent less likely to find (non-subsidised) employment in the following quarter than a comparable group – in terms of age, education level and family situation – of unemployed people. To date this is the only research using a large sample to estimate the individual-level effect of public works in Hungary. Similarly to other program evaluations discussed here, the results of *Firle and Szabó* (2007) are more informative than a simple comparison of exit rates, however it does not necessarily reflect the real effect of the program because non-experimental studies usually need to control for a wider range of variables (for example long-term employment history).

The effect of public works on job finding – a settlement-level analysis

Based on international experiences and program results in Hungary so far we can hypothesise that public works does not contribute to the reduction of long-term unemployment in the short run. Longer term effects are also unlikely to be positive, but we cannot assess those, due to the relatively recent nature of these programs.

Before the settlement-level analysis, it is worth considering national rates. According to the CSO's Labour Force Survey very few workers – approximately one to five per cent – with short fixed-term contracts in any type of public works program (municipal, communal and national) find unsubsidised employment from one quarter to the next *(Figure 5.5)*. Approximately 20–40% of those employed in public works in a given quarter will (again) become registered unemployed in the following quarter.

Figure 5.5: Exit rate from subsidised employment compared to baseline rates by labour market status
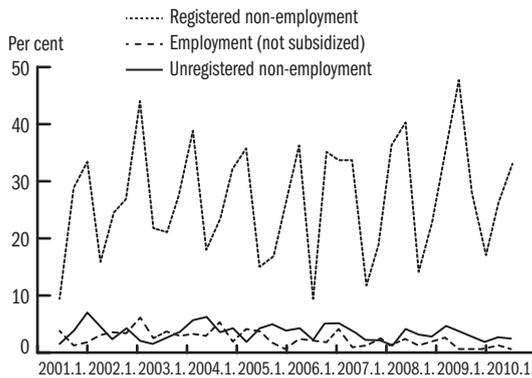
Note: The flows are consistent with the population flows and do not include new entrants.
Source: Calculations by Zsombor Cseres-Gergely based on the CSO Labour Force Survey (*Budapest Institute,* 2011).

Our study measures the effect of public works programs implemented between 2003 and 2008 using a settlement-level analysis. It seeks to answer the question of whether long-term unemployment declined more (increased less) in settlements where there was an expansion of public works programs (relative to long-term unemployment) than in settlements where public works did not expand or expanded less. If public works programs really improve participants' employment prospects then we should find a negative relationship, namely with the expansion of public works we should see a decline in long-term unemployment with time.

Impact evaluations of employment policies generally compare participants' employment odds with the counterfactual odds, notably those that would have characterised them in the absence of the program. The counterfactual odds are usually measured with a carefully selected control group. The comparison is typically between individuals in the intervention group and individuals in the control group. In this case, to measure the effect of public works we should consider the long term employment odds of program participants with the employment odds of long-term unemployed people who were not involved in

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the program but are similar to participants in all other aspects. To achieve an adequate sample size and to measure participation more accurately the participant and the control group should be selected from the register of the Employment Office. However it was not possible to obtain individual data in time for the analysis and the measurement issues of individual data would have posed more difficulties. Therefore we decided to do settlement-level analysis instead of an individual analysis.

Unemployment data was obtained from the central register of the Employment Office, data on program participation came from the municipal public works database of the State Treasury. The analysis also used the CSO Labour Force Survey as well as the CSO's settlement-level indicators database (expanded by the IE HAS). The settlement-level estimates were based on a panel dataset generated from these, in which each observation represents yearly data from settlements in Hungary. The data necessary for the analysis were only available for the years 2003 to 2008, therefore all estimates are for this period.

Using the panel datasets we employed panel regressions to estimate the relationship between trends in public works and long-term unemployment. The first type of regression tested the levels with fixed settlement and year effects; the second type of regression analysed changes between years. The two regression formulas are as follows:

$$LU_{it} = \beta P_{it} + \alpha SU_{i,t-1} + \gamma X_{it} + c_i + d_t + u_{it}$$

$$\Delta LU_{it} = \beta \Delta P_{it} + \alpha \Delta SU_{i,t-1} + \gamma \Delta X_{it} + \Delta d_t + v_{it},$$

where:

i is the settlement,

t is the year of observation,

LU is the rate of long-term unemployment within the working age population,

SU is the rate of short-term unemployment within the working age population.

P is the share of public works participants within the total number of public works participants and social assistance recipients.

X is the vector for settlement-level control variables,

c_i denotes fixed effects of the settlement,

d_t denotes fixed effects of the given year,

u_{it} denotes the unobserved time-varying heterogeneity within settlements,

v_{it} is the equivalent of this in the differential equation.

Both u_{it} and v_{it} can be auto-correlated, therefore in the basic models we estimated clustered standard errors and we also repeated all estimations using generalised least squares that takes autocorrelations into account to estimate parameters. Both regressions were also estimated with the lagged rate of public works $(P_{i,t-1})$ instead of the real time rate (P_{it}) in the right side of the equation.

The rate of long-term unemployment was defined in our analysis as the total number of jobseekers who had been registered for 180 days or longer and participants in public works, divided by the total working age population. The rate of short-term unemployment is the total number of public works participants and jobseekers registered for less than 180 days divided by the total number of the working age population. The rate of public works participants was calculated dividing the number of public works participants with the total number of social assistance recipients (income replacement assistance) and public works participants.

These regression equations can also be seen as variations of the *difference in differences* (*DiD*) technique: we compared long-term unemployment rates of settlements along the expansion of public works. However, while in DiD models there is a pre- and post treatment measurement, in our model we compare data from settlements with different levels of public works expansion. The comparison is based on changes in participation rates over time.

The regression outputs with the estimated coefficients are presented in *Table 5.3 (see next page)*. The results clearly show that public works do not reduce long term unemployment and they may even increase it slightly in the short term. The results of the equations estimating the short-term relationships show that if the share of public works participants among the total unemployed increases by one per cent in a given settlement then the rate of long-term unemployment in the working age population increases by 0.016 percentage points within the same year. The results of the models estimating lagged effects are more ambiguous; depending on the parameters this coefficient is not significant (zero), positive or negative. Considering that all coefficients are very small, it can be concluded that increased participation in public works does not lead to a perceptible decline in long-term unemployment in subsequent years either.

Table 5.3: Municipal public works and long-term unemployment in Hungarian settlements, regression estimates (2002–2008)

	Estimated on levels		Estimated on differences	
	given year	previous year	given year	previous year
Baseline model				
Public works (P_{it})[a]	0.0098***	–	0.0186***	–
	(0.0018)		(0.0021)	
Public works, lagged (P_{it-1})[b]	–	0.0045**	–	–0.0060**
		(0.0022)		(0.0025)
Short-term unemployment, lagged SU_{t-1}[c]	0.1217***	0.1252	0.2156***	0.2167***
	(0.0098)	(0.0116)	(0.0097)	(0.0115)
Other explanatory variables (X_{it})	YES	YES	YES	YES
Settlement fixed effects	YES	YES		
Year fixed effects	YES	YES	YES	YES
Autoregression (ρ)	0	0	0	0
Observations	16,610	12,726	12,709	9,710
Number of settlements	2,994	2,878	2,871	2,703
Number of years	6	5	5	4
Model incorporating autocorrelation				
Public works (P_{it})[a]	0.0169***	–	0.0159***	–
	(0.0026)		(0.0026)	
Public works, lagged (P_{it-1})[b]	–	0.0028	–	–0.0043
		(0.0026)		(0.0033)
Short-term unemploymen, lagged SU_{t-1}[c]	0.1833***	0.1842***	0.2337***	0.2602***
	(0.0102)	(0.0121)	(0.0113)	(0.0143)
Other explanatory variables (X_{it})	YES	YES	YES	YES
Settlement fixed effects	YES	YES		
Year fixed effects	YES	YES	YES	YES
Autoregression (ρ)	0.3787	0.3412	–0.1313	–0.1099
Observations	13,116	9,848	9,838	7,007
Number of settlements	2,907	2,732	2,730	2,486
Number of years	5	4	4	3

[a] The number of public workers divided by the total number of public workers and benefit recipients.
[b] Number of those who have been registered unemployed for less than 12 months divided by the total number of working age people.
[c] Reference: 2008.
Dependent variable: Number of those who have been registered unemployed for 12 months or over divided by the total number of working age people.
Standard errors in parentheses. * Significant at the 10 per cent level, ** five per cent level, *** one per cent level.

Conclusion

The results suggest that the *Road to Work Program* reached the most disadvantaged long-term unemployed with the worst employment prospects. Although occasionally local councils tried to compensate for the sharp drop in their resources with the *Road to Work Program*, this did not worsen the targeting significantly – this would have been indicated by the increased involvement of more capable and educated public workers.

The *Road to Work Program* had a very high take-up and it significantly increased in 2009. In the year of its introduction nearly all settlements and over a quarter of the eligible long-term unemployed participated in public works for some time. The program grew faster than expected probably as a result of the uncapped budget and the total absence of professional control. Local councils could use the additional resources provided by the *Road to Work Program* within broad limits and with favourable conditions to expand public services or reduce wage costs. There were no inbuilt mechanisms that would have limited the increase in spending either to ensure fiscal prudence or to allocate funding for other employment policy objectives.

The *Road to Work Program* has not been evaluated yet, but its effects will probably be similar to the public works programs of previous years. The literature and our analysis of settlement-level data clearly show that public works programs in Hungary did not bring about a reduction in long-term unemployment. It seems evident that public works schemes do not improve the employment prospects of participants. Therefore it is uncertain how the *Road to Work Program* could achieve its primary objective of improving the labour market situation of benefit claimants and thus increasing the level of employment.

6. THE IMPLEMENTATION OF A COMPLEX LABOUR MARKET PROGRAM AND ITS LOCAL EFFECTS IN THE SOUTH-TRANSDANUBIAN REGION

GERGELY KABAI & NÁNDOR NÉMETH

Introduction

The South-Transdanubian region (apart from a few urban areas) is an area lagging behind on a range of economic and social indicators. One of the most important indicators is the high rate of long-term unemployment in the hamlets that are characteristic settlements of this area. To address long-term unemployment in these small settlements the (then) South-Transdanubian Regional Employment Service (STRES) launched the complex labour market program *Life Changing – Life Shaping* (in Hungarian: *Sorsfordító – sorsformáló*) in March 2009. Initially the program was implemented in six localities in Tolna County, but later it was expanded to Somogy and Baranya counties and currently it covers over 30 localities. The participants in the *Life Changing Program*, over 200 former long-term unemployed, received training and were employed mainly in vegetable and fruit growing. They are employed by local councils, cooperatives and agricultural businesses. "Life shaping" was a work experience scheme using wage subsidies to support graduates with an agriculture-related degree.

The *Life Changing – Life Shaping* Program is a complex labour market program.[1] Its main characteristics are that it is a long term scheme (it runs for two years or longer) and it can offer assistance using the whole range of active labour market policies including paid training, employment and mentoring.

This study presents the *Life Changing – Life Shaping* labour market program, highlights its good practices, compares it with other similar initiatives and also uncovers some of its weaknesses. The second part of the study highlights the results of the program using concrete examples from participating settlements and also considers what effects could be contributed to the program.

The study is based on a research project in which we interviewed staff from the relevant employment services who were responsible for coordinating the program, colleagues at Diófa Consortium who were responsible for the management and implementation of the program and other stakeholders. The interviews aimed to explore the weakness of the program and any issues with management and implementation, and also future opportunities and plans. We also reviewed – mainly publicly available – documents to collect information about the program and its implementation. Furthermore, we followed the implementation of the program for nearly 18 months: we participated (and made a presentation) at the evaluation conference in the spring of 2011 and half a dozen other program events including meetings, workshops and prod-

1 See the *Introduction* and *Chapter 2* of *In Focus* on the types of active labour market programs in general and on complex programs in particular.

uct launch events. These provided valuable information that would have been impossible to obtain from other sources.[2]

Background of the *Life Changing – Life Shaping* Program

The program was officially launched in March 2009; however preparations had started much earlier. The key individuals of the programs had been discussing and planning an innovative program specially designed to address the employment problems and challenges of the South-Transdanubian hamlets. The long preparatory phase was also necessary because some of the staff of the regional employment services questioned the feasibility of the program; they doubted whether the long-term unemployed who already had lost some of their work capacity and had no or little previous agricultural experience would be suitable participants for an agricultural/horticultural project. Finally the director of STRES was won over to support the program in 2008 and he also persuaded his colleagues who initially had misgivings about the initiative.

Two forerunners of the *Life Changing* Program should also be mentioned here that had a key role in shaping the scheme. Successful, although slightly different horticultural programs had been running for more than 10 years in two localities of Tolna County: Belecska (Tamási Small Region) and Kisvejke (Bonyhád Small Region).In Belecska vegetable and fruit growing is part of a social employment program organised by the local council. The example of Belecska demonstrated to the organisers of the *Life Changing* Program that low educated long-term unemployed people can be successfully employed in horticulture and it might be worth expanding this. In the Kisvejke area there are a number of farmers who had achieved considerable international market share through their sale cooperative and are realising high profits. The example of Kisvejke demonstrated that fruit growing is viable in the region and with adequate knowledge this can be really successful. Therefore the first phase of the *Life Changing* Program was implemented around these settlements where it was less risky to test the feasibility of the ideas in practice.

A direct predecessor of the scheme was the Herbal Network project financed from Interreg in the South-Transdanubia Region in 2006–2007. The project, jointly implemented by partners from Croatia and Hungary, aimed to set up a business cluster to collect, produce and distribute medicinal herbs that would become a major source of jobs for people living in these disadvantaged rural areas. One of the aims was to create an economic development and agricultural integration model. In the end, the project which also provided training and mentoring, had limited results, but it convinced SRES staff and other stakeholders about the viability of a job creation project based on the region's agricultural heritage. The results also inspired the design of the *Life Changing* Program.[3]

By the second half of 2008 the basis of the *Life Changing* Program was laid down. The aim was to create a labour market and employment program that

2 This study is based on *Kabai* (2010).

3 For more information on the *Herbal Network* Program see: http://www.bmmk.hu/herbal-netw/interregnyito.html

was more sustainable than previous initiatives, addressed local challenges and used local resources to tackle the complex issue of rural job creation.

Program structure and participants

The long term objective of the *Life Changing* Program was to provide jobs for people living in rural areas who had been excluded from the labour market, and equip them with the necessary skills to search and take up employment independently. The training provided as part of the scheme would give them the necessary knowledge and experience to earn their living or additional income from growing and processing agricultural produce.

The structure of the program is simple. The long-term unemployed take part in a 1000-hour agricultural training program and then do work experience in a local council scheme or with local producers for one or two years. The program provides a wage subsidy (but its rate might vary according to the phase and employer). As far as possible the participants also undergo personal development to create an adequate attitude to work. The aim is that following the program as many of them as possible find a job on the primary labour market or convert their work experience job into long-term employment. The essence of the "life shaping" component was to provide paid work experience for eight agriculture graduates aged under 30 years for three years and thus launch them in their careers.

Municipalities aimed to become – at least partly – self-sufficient and produce goods that they could either use in their own kitchens or for welfare purposes and any surplus could be sold and thereby produce an income.

The agricultural producers in the program could employ trained workers for up to 12 months with a wage subsidy and use this time to reduce the burden or develop their business.

The program was not managed by the public employment service – unlike many similar programs – but an organisation, Diófa Consortium, set up specifically for this purpose at the beginning of 2009.

Initially the Consortium was made up of the following organisations:
- The Szekszárd-based Agrokonzult Training and Project Consultancy Ltd was responsible for the overall management of the Consortium and the program;
- The Szekszárd-based Ministry of Agriculture Agricultural Training Centre, Csapó Dániel High School and Agricultural College were responsible for organising training, and later they also took over the management of the Consortium;
- The local councils of Udvari and Závod were responsible for finding and coordinating work placements in the Tamási and Bonyhád small regions;
- The South-Transdanubian Regional Resource Centre public interest company was responsible for administration, monitoring and fund-raising activities with the Consortium (*Programterv,* 2009).

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Table 6.1: Settlements taking part in the Life Changing Program and the initial number of participants

	Settlement	Number of participants[*]	Note
Phase 1 (spring 2009 to fall 2010)			
1	Udvari	5	Tamási Micro-Region, municipal and business employment
2	Szakadát	3	Tamási Micro-Region, municipal employment
3	Belecska	12	Tamási Micro-Region, municipal employment (one of the participants passed away and the number of participants dropped to 11)
4	Kisvejke	9	Bonyhád Micro-Region, participants employed by agricultural producers. (The number of participants increased slightly in the Kisvejke area later on.)
5	Závod	5	
6	Lengyel	6	
Phase 2 (January 2010 to fall 2011)			
7	Nemesdéd	20	Marcali Micro-Region
8	Gyulaj	10	Dombóvár Micro-Region, municipal employment
9	Döbrököz	10	
10	Gerényes	11	Sásd Micro-Region
11	Alsómocsolád	9	
Phase 3 (April 2010 to January 2012)			
12	Hegyszentmárton	20	Sellye Micro-Region
13	Csányoszró	10	
14	Drávasztára	4	
15	Sellye	6	
16	Somogyjád	8	Kaposvár Micro-Region
17	Osztopán	2	
18	Juta	2	
19	Alsóbogát	2	
20	Edde	1	
21	Nagybajom	6	Csurgó, Kaposvár and Marcali Micro-Region
22	Szenyér	6	
23	Berzence	8	
24	Fadd	20	Tolna Micro-Region
25	Regöly	3	Tamási Micro-Region
26	Kisszékely	4	
27	Kalaznó	3	
28	Nagykónyi	5	
29	Udvari	7	
30	Szárazd	3	
31	Varsád	3	
32	Kocsola	3	Dombóvár Micro-Region
33	Szakcs	3	
Total		229	

[*] Initial or planned number of participants.

Source: Based on the project documentation of *Life Changing – Life Shaping* regional labour market program (http://www.ddrmk.hu/?id=20&subid=0&parent=2).

Figure 6.1: Flow chart of the Life Changing Program
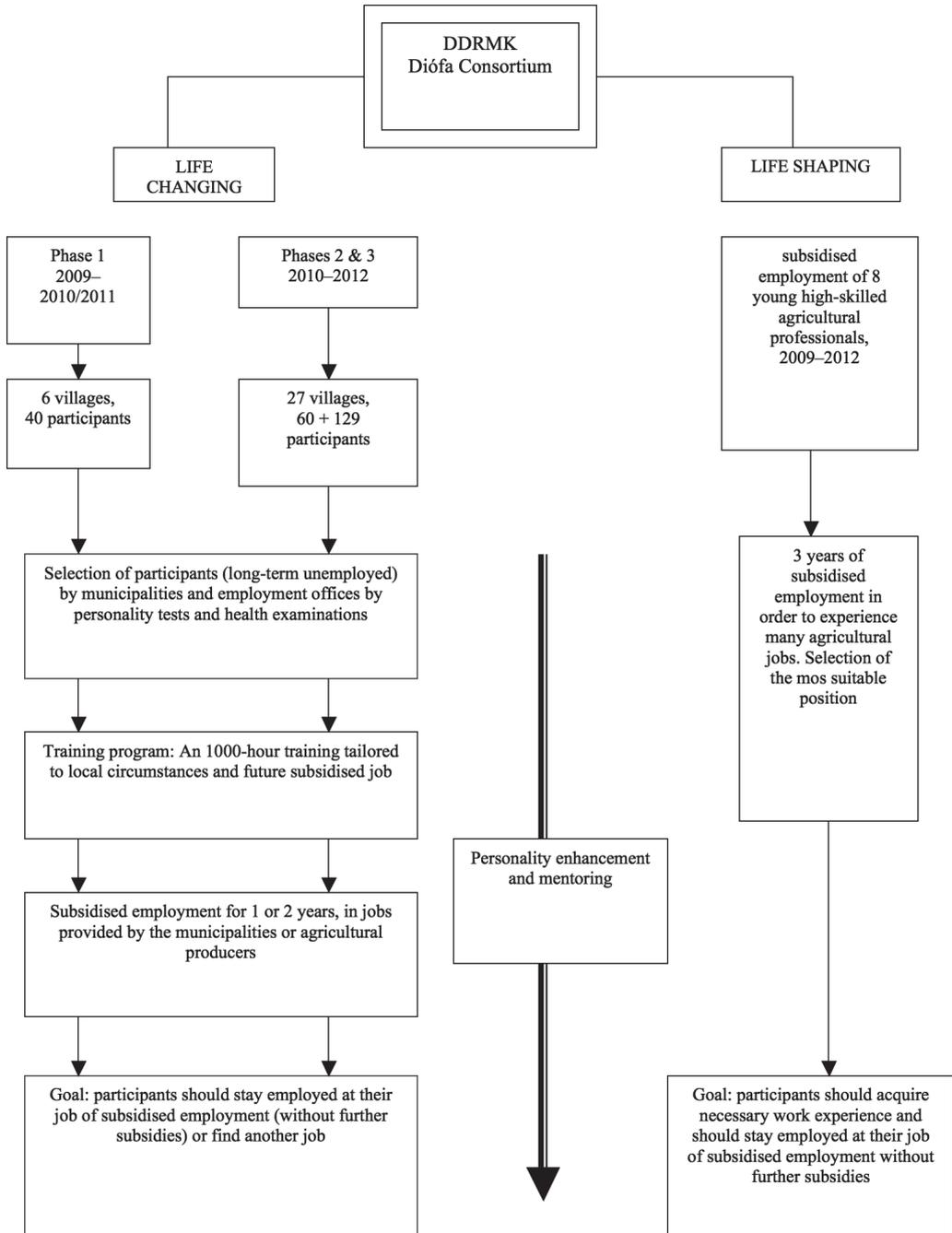
The Consortium was later expanded to include the Municipality of Fadd and as a sixth member the Institute of Medicinal Herb Research Ltd as well. The local council of Fadd provided work placements while the research institute contributed to the program by providing expert advice and buying the medicinal herbs produced in the program (*Programterv,* 2010a).

The program aimed to take into account local characteristics and opportunities as much as possible. Therefore training was provided locally in most settlements so that participants did not have to commute. More importantly production was also set up taking into account the local context and opportunities. Where fruit production was more viable, training was based on that, where there was demand for vegetable growing then training was set up accordingly (lalthough not only fruit and vegetables but also medicinal herbs and small animal husbandry were possible options). Taking into account local characteristics was one of the main pillars that ensured the efficiency of the program by not setting out to "simply" provide assistance but to produce value locally.

One of the main advantages of the *Life Changing* Program was its flexibility – apparent at all levels: training, finances, mentoring and organisational structure. One of the consequences of this flexibility was that the management and coordination of the program was much more labour-intensive than other employment schemes. To sustain a unique system tailored to specific needs required numerous negotiations, discussion and a lot of attention – a continuous challenge to the management organisation.

Also as a result of its flexibility the *Life Changing* Program was not a well-defined and mature initiative at the outset (that turned out to be one of its main advantages). The management of the program learnt along the way, the original structure had a few failures that required correction. Shortly after the launch of the program it emerged that the long-term unemployed living in the small villages are very self-contained and their training needed more complex approaches than originally planned. Addressing this personal development was added to the program and was led by qualified psychologists. Also as a result of the introvert nature of participants, the training had to be reviewed continuously. After a couple of initial pilots it became clear that only locally provided training could be really effective in their case. It also emerged that training should be hands-on and practice oriented because the knowledge transferred by theoretical training was not easily accessible for them. Due to the need for a special approach, the trainers received further training during the implementation of the program to make sure they could effectively deal with the unique challenges associated with the target group.

There were also problems in the first phase of the program that nobody could foresee. For example there were conflicts between the participants of the *Road to Work* Program (see *Chapter 5* of *In Focus*) and the participants of *Life Changing* in a number of localities because public works participants were somewhat

jealous of *Life Changing* participants whose job was secured for two years. This was particularly the case where *Life Changing* participants were required – against the aims of the program – to undertake municipal maintenance jobs or public works participants had to take part in agricultural production. These difficulties were addressed by clearly separating job roles. Sometimes these problems were aggravated by local councils that often treated participants as "usual" public works participants in the absence of any prior experience with similar schemes. In comparison to other assistance schemes, one of the key features of this program was that it provided job seekers with long-term employment for approximately two years (although this is not at all uncommon among complex employment schemes).[4] Longer term participation was also thought to increase the likelihood of re-employment on the open labour market. Although post-program employment prospects are also closely related to the selection of participants the management of the program aimed to involve participants with the right attitude and skills.

Participants had to go through a selection process. First, the local job centre together with the local council identified potential participants from the given locality who were invited to apply for the program. First they had to go through a medical examination (people with long-term health condition and people with alcohol addiction were not eligible), and an assessment of their mental and cognitive status, motivation and social circumstances. Each locality was allowed to recruit a certain number of participants, usually no more than 10 persons (see *Table 6.1*).

The selected participants then had to take part in training that lasted eight to nine months and, as far as possible, delivered locally or at a nearby locality. This comprised 200 hours theoretical and 800 hours practical training and it was very flexible – just like the rest of the program. The training was tailored to local characteristics in all cases: the curriculum was tailored to participants' future area of work. For example for individuals that were going to be employed in fruit growing, most of their training focused on this subject. Trainers were also from the local area (as far as possible) to make sure that had an adequate knowledge of the local circumstances and could build trust in participants. Teaching did not aim to provide a deeper understanding of underlying issues but was practice-oriented and taught participants how to carry out certain tasks without necessarily understanding why it was done in a certain way. Work placements were provided by local councils and local businesses. At the end of the training all participants were required to sit an exam.

Following the training participants started a work placement that lasted up to two years. Placements were provided by local councils or agricultural businesses and producers. Workers always received the statutory minimum wage and were employed full time. Similarly to the training phases, changes in the participants' personality and attitudes were continuously monitored.

4 Settlements that joined the program later could receive the subsidy for one year only.

One of the major challenges in both public and private sector employment was that it was difficult to provide participants with adequate work during the autumn and winter seasons. Municipalities tried to deal with this by involving participants in community jobs. For businesses this was more difficult and workers had to take leave during the winter period and make up for this time between spring and autumn (the Labour Code allows to average working hours over a longer period of time). This caused difficulties where the workers did not have the right attitudes and were unwilling to work more than eight hours a day during the summer.

Participants finished the program after the one- or two-year work placement. As was mentioned earlier, the aim of the program was that many of the participants could retain their job long term. In the business sector this was possible if the individual performed well throughout the year and the business could keep them on without the wage subsidy. In the public sector the aim was to create sustainable schemes that would employ a larger number of people. A third option for participants – now equipped with adequate qualifications and work experience – was to start looking for a job or start their own production business.

The aforementioned mentoring activity can be potentially very important for the outcomes of the program and the satisfaction of participants. Therefore the mental well-being of workers and psycho-social assistance were important elements of the program. Qualified mentors were part of the selection process as well to make sure those with the most appropriate attitudes were selected as participants. Later on designated mentors were in regular contact – in person and even over the phone – with the participants. Apart from work-related issues they also offered assistance in other areas such as debt management, budgeting advice etc.

The selection of settlements in the program happened through various channels. On the one hand organisers contacted villages with high unemployment where there was still a living tradition of agricultural production that could be effectively used in the program. Whether they decided to take part in the program depended on the openness of the local government or businesses. The opportunity was typically very well received also due to the personal networks and lobby activities of coordinators. On the other hand some (although not too many) localities put themselves forward to take part in the program.

Budget structure of the program

Due to its complex nature, *Life Changing* was slightly more costly than other labour market programs. The total cost of the program is expected to be around 660 million forints during the three years. Funding comes from the decentralised employment sub-fund of the Labour Market Fund and various SROP funded sources. Wage subsidies and training make up the largest part

of the cost (approximately 572 million forints), while the management of the program costs approximately 90 million forints.

The rate of wage subsidies paid to businesses and local councils varied depending on the locality and the program phase. In most cases it was 100% but for those who joined the program later at the third phase it was only 50% of the statutory minimum wage and contributions (*Programterv,* 2010b).

According to 2010 calculations the cost of an eight- or nine-month training for one participant was no more than 500,000 forints. During the training period participants were receiving training assistance that amounted to 93,000 forints per month (a total of 837,000 forints during the nine-month period). The majority of the workers were employed by local councils which meant a 100% wage subsidy in the program. In 2010 this was 96,000 forints per month – for a 12-month employment period this totaled 1,152,000 forints (ibid idem). The per capita cost of the program excluding other costs (such as transport) was 2,489,000 forints at 2010 prices. Considering the total cost of the program (660 million forints) the per capita cost was 2.8 million forints.

With regards to the cost of the program it should be mentioned that participants would have been receiving social assistance had they not been in the program; this reduces the real cost of the program by approximately 100–150 million forints. Furthermore some of the costs of the program are returned to the state budget through taxation (for example income tax paid by the management, trainers etc.). If these factors are taken into account the program is comparable to an average-cost complex labour market program. Nevertheless the costing and the cost-efficiency of the program would require further investigation that is only possible after its closure.

Comparison of *Life Changing* and other labour market programs

County (later regional) employment services have had the possibility to initiate and implement their own labour market programs using active labour market policies (for example training, wage subsidy). Job centres have ample autonomy in the design and implementation of these programs; therefore there has been a wide variety of such programs over recent years.

So far there was only one comprehensive study on complex labour market programs that was conducted by the HAS Institute of Economics in 2007 (*Fazekas et al.,* 2007). The study also examined locally initiated labour market programs like (*Simkó,* 2007). The results of this study allow us to compare the *Life Changing – Life Shaping* Program with other, similar initiatives, identify its unique features and better assess its efficiency.

The main characteristics of complex labour market programs can be summarised as follows. Joint working of the job centre and external organisations is an important part of the programs. Labor market programs are generally longer (up to three years), take into account individual needs and character-

istics and use a combination of employment services and active labour market policies. The unit cost of labour market programs is generally high due to their complexity but the programs might be more effective in achieving their objectives thanks to the combination of different types of assistance (*Fazekas et al.,* 2007).

The comparison of different labour market programs is made difficult by the absence of clear categorisation. To resolve this we adopt the categories used by Fazekas et al. and attempt to classify the program in these. Considering that the *life changing* and *life shaping* components of the program are fundamentally different, these should be analysed separately as well. The comparison uses the 149 complex labour market programs implemented in Hungary between 2000 and 2006.

The duration of complex labour market programs implemented between 2000 and 2006 was between six and 36 months, on average around 24 months. The *life changing* component lasted three years which puts it among the longer programs. The differences in the program objectives do not allow us to directly compare the number of participants and this is made even more difficult by differences in the geographical scope of the programs (i.e. municipal, county and regional programs). The average number of participants in the 149 programs included in the study was 180 people which is similar to the number of participants in *Life Changing*.

The average per capita cost of the programs in the study was 453,00 forints. As has been shown the *Life Changing* Program was considerably more expensive than this, the average per capita cost was nearly three million forints. This is only comparable to the cost of small-scale intensive mentoring programs that also had two to three million average per capita costs. (Taking into account the rate of inflation since the previous study *Life Changing* was somewhat cheaper than these programs.)

The *life shaping* component can be compared to graduate programs. These programs ran on average for 2.5 to three years with around 20–30 participants. Their primary aim was typically to keep young graduates in the local area or in some cases to retrain them to improve their employment prospects. The *life shaping* component was a unique initiative in that it provided work placements in agriculture. There was a similar program in Heves County in 2000–2002 that provided work experience for 12 young agriculture graduates in agricultural business development with the longer-term aim of setting up their own business. All 12 participants found long-term employment after the program. As has been shown, the *life shaping* component is also expected to be similarly successful.

It is a lot more challenging to compare the *life changing* components because potentially there are many similar programs. It can be equally regarded as a program aimed at the low-educated, those aged 40 years or over or even the re-

integration of disadvantaged people. Although there are countless programs in these categories (these groups are the most common target groups of complex labour market programs), they might not be comparable meaningfully.

Looking at the objectives of the programs it might be argued that Sorfordito was innovative in that it offered long-term employment in agriculture that no other program did. Horticulture-related training and longer-term employment appeared in other programs (for example Bácsalmás, Jánoshalma 2003–2006), but these were smaller and did not focus on production.

Most labour market programs are based on training and/or wage subsidy but mentoring and personal development are also common elements. In this comparison the *Life Changing* Program was not at all unique. However it should be highlighted that mentoring in this program was much more effective than in other programs. *Fazekas et al.* (2007) argued that different advisory services and personal and skills development training that should have been a key part of the programs, were often implemented inadequately. Job centres usually used their own staff to provide services that had negative implications for the efficiency of programs. Nevertheless, relatively few job centres took advantage of the possibility to purchase external services or outsource program management to ease pressure on internal capacities (*Simkó,* 2007). To the contrary, the *Life Changing* Program provided seemingly efficient psycho-social development throughout its duration.

The *Life Changing – Life Shaping* Program is clearly unique in a sense that both its components are fully linked to agriculture and aims to provide long-term jobs in this sector. Its effective mentoring provision also differentiates it from many other programs. Its complexity is not without examples and similar programs have been implemented efficiently before. It should be highlighted that the *Life Changing* Program, compared to other initiatives was somewhat more costly and this was mainly due to extended and combined use of multiple active labour market policies.

Views about the program, the feedback and problems so far

Before presenting a more systematic evaluation of the program effects, it is worth considering the feedback and views about the program that might give an indication of its potential success.

The program ended in November 2010 in the settlements around Kisvejke that had been involved in its first phase. A total of 20 workers participated in the micro region. Initially it was expected that approximately half of them would be able to find a job locally, however this did not happen. Only a couple of people could find a job and local agricultural businesses would only employ workers on a seasonal basis. It is unlikely that other agricultural businesses involved in the program would provide many jobs to former participants and therefore only a few of them will break the cycle of unemployment.

With regards to employment after the program, the organisers were also faced with some unforeseen challenges: some of the agricultural producers are, to a large extent, unfamiliar with lawful employment because they have always employed undeclared workers. It is likely that some of the participants will find undeclared work after the end of the program.

Most local councils are aiming to maintain the achievements of the program over the long term and provide jobs to as many workers as possible; the scheme might become the foundation for social land programs and local social economy projects.

The majority of workers participating in the program are satisfied. The satisfaction of 57 workers who joined the program in its second phase was surveyed in the autumn of 2010. Seventy per cent of respondents said that their financial situation improved thanks to the regular monthly income from the program. Eighty-six percent indicated that they would be willing to take part again and 52 out of 57 said that they would like to remain in their current job (it is interesting to note that four respondents were undecided on this question because they had achieved a higher income as undeclared workers previously). The majority of respondents (46 persons) were 80 per cent or more satisfied with the program. The fact that no workers rated their attitude lower than three (on a scale of five, 5 indicating the best possible score) is quite telling about the mentoring activity (*Anonim elégedettségi ...* 2010).

There were other unforeseen results as well. Most importantly real communities formed among the workers that had the effect of linking them outside work. This is extremely important in the life of these settlements which are facing multiple difficulties.

The graduate component of the program also seems successful based on the feedback. With this organisers aimed to revive the tradition of a once very popular graduate program in agriculture in Hungary and provide an example to follow for agricultural businesses. The program provided wage subsidies for eight agriculture graduates for three years. Despite various difficulties, in the end all participants found a job that was right for them and they are likely to stay in their job long term (the young people are mainly employed by agricultural companies based in Szekszárd)

Until recently the *Life Changing* Program had very limited national publicity; employment policy makers and the press did not show much interest. This changed in the autumn of 2010 and since then the program has had a considerable amount of media attention.

The management of the program would like to turn the results and the experiences into a "best practice" model. This is based on two principles: on the one hand they are aiming to create a program that is not in conflict with the private sector, and on the other hand it places great emphasis on community development because experience showed that the success of the program

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largely depends on this. These principles were embraced by other initiatives: a pilot public works program is being launched in various regions at the time of the publication of this study, based at least partly on the example of the *Life Changing* Program.[5] Furthermore, the organisers' aims are linked to the objectives of the Government's rural development policy thus it is hoped that the experiences accumulated in the program will not be lost.

In many settlements the program ended in September 2011 and some problems were already visible that might hamper the sustainability of the results. First and foremost, the shortage of land; some local councils that are planning to continue production do not have enough land to expand. Generally local councils own so little land that this issue might require government intervention. If decision makers would like to maintain the successful results achieved by the programs then some of the state-owned land will have to be handed over to local councils involved in agricultural production. (Or alternatively local landowners might concede a small part of their estate to local councils.)

One of the program objectives was to help previously unemployed participants to set up their own business. Unfortunately those who had such plans came to realise that the administrative and financial burdens were insurmountable. This could only be resolved by simplifying existing regulations that might encourage more people to start their own business.

Another obstacle to self-employment in agriculture is the uncertainty in the sale of produce. The renewal and strengthening of cooperatives in the future might address this problem (there have been some policy measures to improve this situation). Similarly to local councils, potential producers are also affected by the shortage of land. The size of gardens often does not allow a profitable production but without any capital these producers are unable to purchase or rent land. Again, government intervention might be necessary to address this issue. Furthermore it has been proposed that land sharing might allow those without land to start production.

For the sustainability of results the lack of funding was also a major problem. There were not many grant programs since the first half of 2010 for about a year and that also hindered the development of the *Life Changing* Program. Hopefully this will change in the future; different stakeholders of the program (primarily local councils, management organisations etc.) are putting great efforts into mobilising external resources that might help to sustain the results.

Results of the *Life Changing* Program – a local case study

The full evaluation of the program will only be possible after its end in early 2012. The most important result indicator will be the percentage of participants with a regular job after the end of the wage subsidy, either as a continuation of their work placement in the same job or elsewhere including successful self-employment. This indicator will need to be compared to a re-employment

5 This is the *Start* small regional work program, organised by the Ministry of the Interior.

rate that we would have found in the absence of the program. This counterfactual result could be measured using a control group of unemployed people from settlements that are similar to those in the program. Such program evaluation is yet to be carried out.

Feedback so far and the general results suggest that the implementation of the centrally designed program plan depended on the local context and differed from village to village, so results will probably differ too. Using a case study design this chapter presents the potential results of the program, under what conditions and through which mechanisms these might prevail.

The case study summarises the experiences of Gyulaj, a village in Tolna County. The village has been presented in more detail in our volume on the evaluation of local economic development programs in the *IES Book* Series (*Kabai–Németh,* 2010b), thus this chapter focuses on more recent trends since the publication of the earlier paper and explores the impact of the program on the village. Neither the history of the village nor its current social situation will be presented in detail here.[6]

In parallel with the socio-economic trends in rural Hungary, Gyulaj has slowly but steadily become increasingly poorer for the past 60 years. Apart from the many problems – the nationalisation of the forest that was a vital part of the local economy, the creation of a collective farm, then the negative impact of the land restitution, the gradual dismantling of local services – the biggest problem is that the village does not have a through road. Its only good quality road links the village with Dombóvár therefore its spatial relations are limited and that is thought to be the main obstacle of development.

There were various attempts to tackle this issue after the change of regime that all aimed to build a new through road towards the village of Szakály. The finally happened in 2000 but the new road did not meet expectations: the construction was financed by various public funds and the new road was too narrow which makes it impossible to run a regular bus service there. Furthermore the road goes through private property which generated numerous legal disputes. Therefore Tamási (and Szekszárd) are only accessible for Gyulaj residents with a car although access to these settlements was the main rationale of the new road. Therefore Gyulaj still depends on Dombóvár; its spatial relations are as limited as ever.

There was another significant capital investment in the village during the last decade: the primary school was refurbished with a total budget of 160 million forints financed by the South-Transdanubian Regional Operational Program. Certainly this is an important development in its category and undoubtedly it will have a positive effect that local children can attend a state-of-the-art school. In parallel with the development of the infrastructure, the school is also aiming to reform the curriculum to tailor it to the needs of the mainly multiple disadvantaged pupils.

6 The Gyulaj-born author, Ferenc Bali Pap published a longer piece on the societal situation of the village (*Bali Pap*, 2011).

Since the dissolution of the collective farm in the early nineties, there has been only one actor that can play a significant role in the development and prosperity of the village, and the improvement of living conditions: this is the local council and its primary school. The Catholic Church effectively abandoned the village around the early 1990s and there have been no significant religious activities in Gyulaj since then. There are no local charities in the village; regional or national charities are also absent. The presence of public institutions is rather limited too. Since 1990 the village had a general practitioner for only short periods of time; currently the GP from the neighbouring village visits the village on certain days. This has resulted, indirectly, in the deterioration of the health of Gyulaj residents. Today two thirds of the village's residents are Roma – living in poverty, the majority of them are out of work and they do not have access to the necessary health care services. Nevertheless there is a full time health visitor in Gyulaj. The police – similarly to the general practitioner – "left" the village in the early nineties and Gyulaj has had its own police officer again for two years. Gyulaj has very high levels of crime, anything left unattended is likely to disappear, and empty houses are sooner or later burgled. This hampers the little entrepreneurial drive that is left in a few people in or around Gyulaj.

Good quality land around the village is concentrated in the hands of a few individuals, the majority of whom are not from Gyulaj and have hardly any relationship with the village. Agriculture is no longer part of the local culture in the village.

Nowadays the residents of Gyulaj hardly own any land, only three or four families have 30–40 hectares supplemented with some small areas of rented land. The other families either do not own any land at all or only one or two hectares or a larger garden in the village. The land is not used to grow any produce (other than wheat). Furthermore, it might be argued that most Gyulaj residents would not be capable of starting agricultural production on their own because the younger generations lack the necessary skills.

In summary, human resources in the village are generally poor and many individuals are in a poor physical condition. If there was a sudden surge in the demand for unskilled labour in the village, it is unlikely that this would be satisfied hiring local unemployed because probably only a few of them have their full work capacity.

The *Life Changing* Program in Gyulaj achieved results in these areas and proposed a viable development model. As has been mentioned earlier, the local council is the only organisation that can effectively do something to improve the employment prospects of the local population.[7] The most influential figure in the local council is the mayor in such small settlements – Gyulaj has 1,000 inhabitants. If the mayor can understand local challenges and act then the village has the chance to develop. However, if the local leadership is not adequate

7 The agricultural company that owns most of the land around the village has more resources than the local council however their production structure is such that they do not need many unskilled workers. The few other smaller-scale agricultural producers can employ only a few workers on a regular basis.

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then the whole village is likely to stagnate. A number of case studies and local experience suggest two further conditions: first, the mayor needs a network of local allies – headed by the district notary and the management of local institutions – that is supportive of the development; and second there needs to be a general consensus behind the developments, any internal tensions (social, political) can undermine the initiative.

After the transition to a market economy there were no positive changes in the life of the community in Gyulaj, the social and economic situation of the village continued to deteriorate and deprivation became permanent. This is illustrated by trends in two commonly used regional development indicators: per capita income and unemployment rate (Figures *6.2 and 6.3*). While the per capita income in the small region is around 75% of the national average, in Gyulaj it was under 40% between 2000 and 2008. Only two of the smallest hamlets with 100–200 inhabitants are "poorer" than Gyulaj in the Dombóvár Small Region: Jágó and Lápafő. The unemployment rate shows a similar trend: there was a clear deterioration until the mid-2000s then it stabilised at a level over 2.5 times above the national average. Similarly to income, Gyulaj has one of the highest unemployment levels in the small region.

Figure 6.2: Per capita average income in the settlements of Dombóvár Small Region, as a percentage of the national average, 1990–2009*
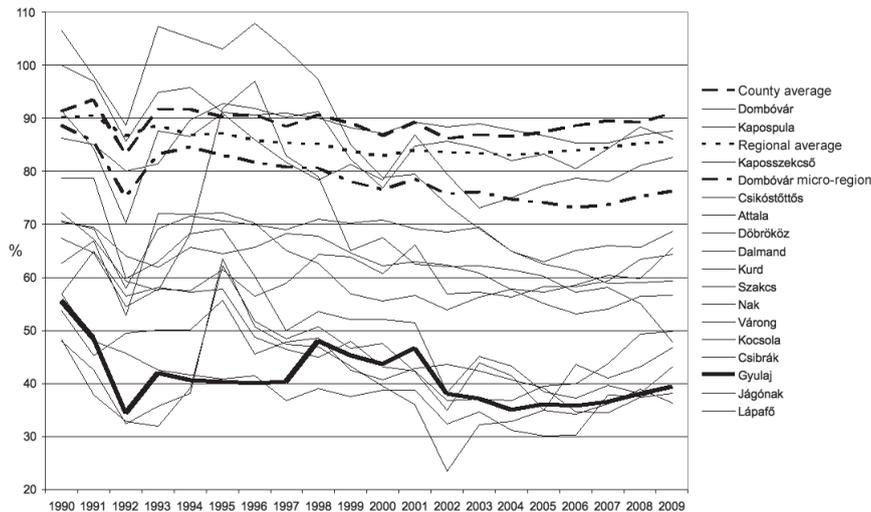
* National average = 100. The figure also includes the average for Dombóvár Small Region, Tolna County and the South-Transdanubia region as a percentage of the national average income.

 Settlements are ranked from the highest rate to the lowest as follows: Dombóvár, Kapospula, Kaposszekcső, Csikóstőttős, Attala, Döbrököz, Dalmand, Kurd, Szakcs, Nak, Várong, Kocsola, Csibrák, Gyulaj, Jágónak, Lápafő.

 Source: Based on the *Regional resource map* of the IE HAS.

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Figure 6.3: Estimated unemployment rate in the settlements of
Dombóvár Small Region, percentage of the national average, 1990–2008[*]
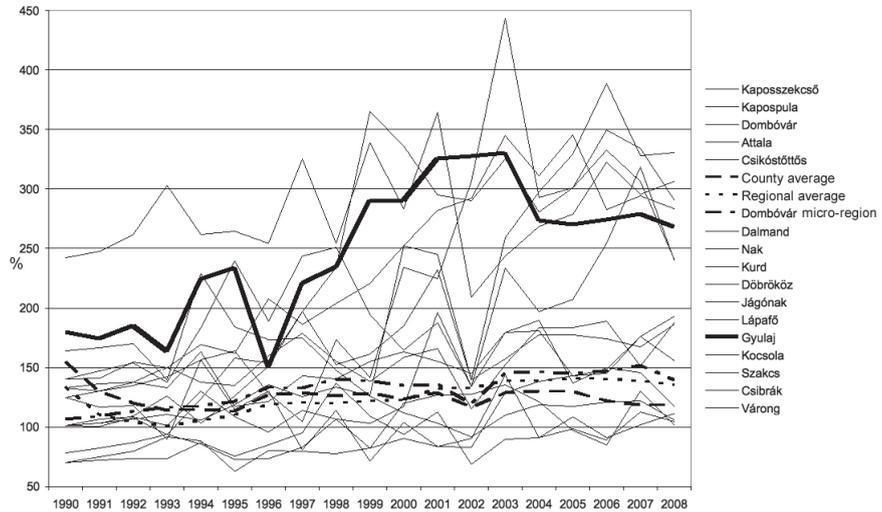
[*] Estimated unemployment rate: the yearly average number of registered job seekers
    divided by the number of inhabitants aged between 18–59 years in the given set-
    tlement or region (percentage). National average = 100 The figure also includes the
    average for Dombóvár Small Region, Tolna county and the South-Transdanubia
    region expressed as a percentage of the national average unemployment rate.
Settlements are ranked from the highest rate to the lowest as follows:
    Kaposszekcső, Kapospula, Dombóvár, Attala, Csikóstőttős, Dalmand, Nak, Kurd,
    Döbrököz, Jágónak, Lápafő, Gyulaj, Kocsola, Szakcs, Csibrák, Várong.
Source: Based on the *Regional resource map* of the IE HAS.

As has been pointed out above the only actor that in our view is capable of tak-
ing significant action to improve the employment situation and the quality
of life of the disadvantaged population is the local council. Therefore it is im-
portant to consider the measures that were available to them to influence the
local jobs market – also as an employer – before the *Life Changing* Program.
As in many similar villages these were mainly related to public works and sub-
sidies. The local village council tried to make use of the opportunities of pub-
lic works policies to provide – at least temporarily – work opportunities to as
many people as possible. An overview of the public works programs in the vil-
lage over the past few years might give a good indication of the opportunities
that would characterise the labour market policies of the local council in the
absence of the *Life Changing* Program.

Between 2006 and 2008 a total of 50 people were employed in different
forms of public works in the village (*Table 6.2*); most of them in jobs related
to the statutory services provided by local councils (mainly water management,
rainwater drainage, maintenance of the public cemetery and street cleaning).
Thanks to the *Road to Work* Program in 2009 the number of people in public

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works increased to 69 but their tasks did not change substantially compared to previous years as is highlighted by *Table 6.3.*

Table 6.2: Public works in numbers, Gyulaj 2006–2008

Year	Municipal public works		Communal public works		Public works organized by PES	
	participants	work hours (total)	participants	work hours (total)	participants	work hours (total)
2006	35	15,792	2	2,016	14	8,484
2007	38	15,802	3	3,024	17	6,468
2008	29	11,319	7	5,040	16	10,332

Source: the Public Works Plan of Gyulaj Village Council for 2009.

Table 6.3: Tasks carried out in public works and number of participants in Gyulaj, 2009

Task	Number of workers necessary to carry out task (full-time equivalent)	Person-hours used (total)
Social housing maintenance	2	1,512
Water management, rainwater drainage	12	8,064
Maintenance of public cemetery	5	5,376
Maintenance of local roads, parks and public spaces	22	14,784
Street cleaning	4	2,688
Management of public works projects	3	3,528
Provision of social care	4	2,688
Culture and sport related activities	1	672
Administrative support	2	1,344
Implementation of national and ethnic minority rights	1	1,008
Tasks related to education	2	3,024
Tasks related to the maintenance of council buildings	8	5,376
Tasks related to public works	2	1,344
Total	68	51,408

Source: the Public Works Plan of Gyulaj Village Council for 2009.

The public works plans of the village for 2009 and 2010 give us an idea of what would have happened and what the situation would be like without the *Life Changing* Program. Considering the management and financing of public works policies, they would have provided only short-term results without any long-term effects and sustainability.

Apart from increased funding, three changes in public works policies in 2009–2010 were important for Gyulaj: first, unemployed persons aged under 35 years who had dropped out of primary school were required to return to school to complete primary education. This affected 13 people in Gyulaj. Pri-

mary education forms the basis of any further education or training, therefore this was a useful measure.

The other important change was – potentially – the provision of long-term employment up to 12 months in the *Road to Work* Program. Local implementation plans had to be reviewed and submitted each year which involved the uncertainty of changing financial frameworks and conditions. One of the implicit aims of the *Road to Work* Program was to allow village councils to create "real" jobs locally and promote community production and the development of social economy. Policy makers did not want to "penalise" settlements where the local council was slower to change; therefore tasks that had been typically carried out in public works projects remained eligible for funding in the *Road to Work* Program. It was envisaged that the system would gradually shift towards job creation over three years. It is not known how they thought to implement this because the program was cancelled halfway through, however it is certain that a major review of existing legislation would have been required to allow the startup of social cooperatives and community production in villages with the potential to employ a large number of unskilled job seekers. Even with these changes it is unlikely that Gyulaj could have developed a production system similar to its current one using previous financing schemes.

Finally, the third important change brought about by the *Road to Work* Program in Gyulaj's public works projects was the possibility to purchase a limited amount of equipment and work wear *(Table 6.4)*. However the amount allowed for this would not be sufficient to purchase enough equipment for the cultivation of the current 3–4 hectares of land that is continuously increasing.

Table 6.4: Planned measures for public works in Gyulaj, 2009

Measure	Expenditure (HUF ,000)
Occupational health and safety training	60
Occupational health assessment	50
Work wear, safety gloves	476
Tools and equipment	480
Purchase of tangible assets	150

Source: the Public Works Plan of Gyulaj Village Council for 2009.

At the same time the *Life Changing* Program brought about strategic change in the village. Gyulaj became involved in the program with 10 participants at the beginning of 2010 thanks to the efforts of the local mayor who was familiar with the program in Belecska (*Kabai–Németh,* 2010a) and wanted to organise and set up similar municipal agricultural production in Gyulaj. The main features of the *Life Changing* Program in Gyulaj were presented in our previous study (*Kabai–Németh,* 2010b); the subsidy period ended on the 30th of September 2011, at the time of writing this paper. During the two years the

program grew and provided the village's kitchen with vegetables and could sell some of the produce (ground paprika and medicinal herbs)

Community production in Gyulaj follows the model developed in Belecska, similarly to the majority of participating villages where the main producer is the local council. The majority of Gyulaj residents participating in the program – similarly to other villages – are probably not capable of starting their own business just yet and the external conditions are not favourable either – legislation, tax rules, market access – the role of the local council seems vital.

Probably one of the most important factors in the success of the *Life Changing* Program is that it allowed local governments to set up their own production. Before the launch of the program the business sector was unable to solve the employment problems of the village and the local council was the only actor that was capable of bringing about any change in this. However this was only possible with the local council setting up a system that is sustainable or at least viable in the long-run: based on real activity, work and production. Furthermore it allows paying a decent wage and enhancing the cohesion of the local community. Workers have individual responsibility but they can also have an individual sense of achievement. According to the initial experiences the *Life Changing* Program succeeded in creating such a system.

The planners of the program adequately recognised that in small settlements like Gyulaj, only the local council can tackle unemployment at least by improving the employability of local residents with impaired work capacity. In our view, the *Life Changing* Program laid down the foundations for the implementation of a comprehensive village development strategy. Community production is not simply public works but a social enterprise linked to the local economic development strategy; the creation of a third sector business. Therefore its frameworks are completely different from that of public works. There is a need for equipment and specialist knowledge in the social economy as well as the market production taking into account community interest. There is a qualitative difference between earlier public works projects and the *Life Changing* Program.

Partly due to the local results of the *Life Changing* Program, the primary school launched a two year agricultural vocational course for year 9–10 in 2011. Pupils do work experience on a communal allotment while their parents, relatives and neighbours do similar work on municipal allotments. This initiative is the innovation of the new school headmaster and indicates the aspiration to revive agricultural traditions in the life of the village. By establishing community production and involving the primary school in the scheme Gyulaj might become a model settlement in South-Transdanubia or even nationally. The *Life Changing* Program has undoubtedly contributed to this by providing the initial impetus and the organisational framework.

The recognition of the village is indicated by the fact that Dombóvár Small Region was included in the public works model program (*Start* work scheme)

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of the Ministry of Home Affairs largely thanks to the community production in Gyulaj. This might open up further opportunities for the village: the possibility to employ further workers, purchase equipment and the processing of fresh vegetables and fruit planned to be launched in the next couple of years might bring about significant changes in production as well.

Gyulaj also decided to join the program "*Nyúl-unk a munkáért!*" aiming to re-introduce small animal husbandry in the village that might be a further step towards strengthening the local community and promoting the labour market re-integration of participating families.

The need and the results also attracted community activity and the attention of independent non-profit organisations. The Hungarian Maltese Charity Service became active in Gyulaj and the village was invited to take part in a community building project supporting long-term local development in settlements with high levels of social exclusion.

These are obviously just the first steps of what – in our view – could be a regeneration in Gyulaj (and other similar settlements) providing the opportunity for a better life to its inhabitants. This will be a long process and will require decades of continuous and committed work, government support (not only financial), European Union funding and significant grass-roots activity.

Conclusion

The *Life Changing – Life Shaping* complex labour market program was launched in two small regions of Tolna county by the South-Transdanubia Regional Employment Service in the spring of 2009. The program built on the once successful agricultural tradition of the region and provided long term unemployed participants with tailored training for eight months and work placement for one to two years with local councils or agricultural businesses using wage subsidies. In the three counties of South-Transdanubia nearly 40 settlements and over 200 workers participated in the program.

The complexity of the *Life Changing – Life Shaping* Program can be captured in the simultaneous use of multiple active labour market policies: training, training assistance, work experience, wage subsidy and mentoring. The participating local councils could start their own production and apart from providing jobs to local residents, this could save a significant amount of money. The program had an impact on local development; a good example of this is the case of Gyulaj.

The *Life Changing* Program had a number of positive side effects as well. Participants built strong social networks that bring people together outside work too. The majority of participants went through real personal development which significantly improved their lifestyle and future employment prospects. The graduate component of the program was no less successful. The eight gradu-

ate trainees in the agricultural sector did very well in their job and they all had the possibility to remain there after the end of the three-year subsidy period.

The *Life Changing* Program ends in 2012, therefore its overall assessment is not yet possible. It is hoped that as many workers as possible can stay in their job long term. It is promising that some of the local councils are already making plans to maintain the achieved results after the subsidy ends. Hopefully these will be successful and results will be sustained over the long term.

The content and approach of the *Life Changing* Program, together with the experiences gained through its implementation make it suitable for a national roll-out. This could significantly improve the employment situation in small settlements of rural Hungary.

7. EVALUATING THE IMPACT OF HUNGARIAN LABOUR MARKET POLICIES

ZSOMBOR CSERES-GERGELY & ÁGOTA SCHARLE

This chapter of *In Focus* reviews evaluation studies of active labour market policies and unemployment benefits in Hungary. Somewhat unusually we focus on what was evaluated and especially how, rather than on the outcomes. We also briefly consider some obstacles to fulfilling the methodological requirements discussed in *Chapter 1* of *In Focus*, and their consequences for Hungarian empirical investigations. The review also provides some basis for reconstructing the evidence base available to the previous governments when they made decisions regarding employment policies. We cannot claim to have uncovered all the information accessible to politicians, but we can safely say that at least this evidence was available to them.

Selection criteria for the studies

We confine our analysis to two types of studies: evaluations of wage subsidies, and those of unemployment benefits. Wage subsidies deserve special attention for several reasons. First, the few existing studies from Central and Eastern Europe show either a neutral or a negative effect, while in developed countries this type of program has a mostly positive impact on employment (*Kluve,* 2010). Second, these programs often have indirect effects which may override their positive effects: e.g. the subsidised employer could employ people without the subsidy, or it puts other employees at a disadvantage by taking on the subsidized unemployed person. Finally, these programs are quite costly, thus even if their net impact turns out to be positive, the subsidy might not be cost-efficient. The reason for including unemployment benefits is much simpler: these are the most frequently evaluated programs in Hungary.

The review covers evaluation studies in the narrow sense as well as reports where the title or the abstract makes an explicit reference to policy evaluation. Thus, we did not exclude studies which aim to analyse the impact of a program but are lacking in terms of methodological rigour as these may still offer important insights on program outcomes.

We know of no archive either public or private which provides a complete collection of evaluation studies. Therefore, we used online search engines to collect the relevant literature.[1] This method restrains our findings, because such evaluations are typically prepared when commissioned by a government body (such as a ministry or the National Development Agency) or when the program promises to be interesting from an academic point of view. In the former case, results are not necessarily made public.[2]

1 On 15 September 2011, a web search under the "tanulmányok" (research studies) label in the document archive of the new government homepage yielded zero results (http://www.kormany.hu/hu/dok?type=411#!DocumentBrowse)

2 The *Introduction* of *In Focus* discusses the importance of public access to of evaluation reports.

Our list is therefore not complete, and it is most likely selective. Well-written papers motivated by scientific interest are likely to be overrepresented in it.[3] The possibility of a contractor restricting access to its paper (due to unfavourable results which could e.g. divert funds from its program) can also cause bias. Finally, the same reason can introduce significant bias in the timing and subject of such evaluations.

Dimensions of the review

Appendix 7.1 lists the papers reviewed. We categorize unemployment benefits based on whether they pertain to insurance based benefits or social assistance. Studies analysing wage subsidies are classified into monitoring reports and econometric evaluations.

We highlighted those characteristics of the studies which can determine the expected quality of their contents. They are listed in a table in *Appendix 7.2:* size, structure, and information-content of the database, observation period, identification strategy, identified effect(s), success criteria, and indirect effects (if estimated in the paper). This part of the review only covers studies that actually measure program effects, i.e. monitoring reports are excluded.

The demand for evaluations

The list of studies surveyed in the review shows that during the period of roughly 20 years, evaluations of main employment policy instruments were scarce, and were mostly written after 2000. The reason behind this may be partly methodological – since high-performance desktop computers only became widely available around this time – and partly political as the demand for evaluations rose after Hungary's accession to the EU (*Váradi,* 2012). However, since we know that sufficient computing power had been available e.g. in the CSO (Központi Statisztikai Hivatal, Hungarian Central Statistical Office), and most analyses would not require exceptional capacities (sample sizes were not extraordinary and methods did not require much processing power), we are inclined to believe that the definitive reason in this case is on the demand side.[4]

Finally, it is important to note that the majority of these studies have been written by a handful of experienced, senior members of the Hungarian academic community. Even though an evaluation study needs serious thought and thus, senior experience also, we believe the above circumstance is due to the previously described lack of demand. It is quite understandable in the case of a small market if studies which are expected to have scientific value are carried out by the most experienced and well-connected researchers. But if the demand for evaluation studies in Hungary were in line with international trends, we should be able to find works of younger researchers. This suggests that policymakers of this period did not consider program evaluation a conventional tool of routine use in their decision making, neither before nor after the launch of

3 One concern may be the so-called publication bias: authors (and journals) tend to like to publish statistically significant results that conform prior expectations.
4 See e.g. *Scharle* (2008) on the decision making process in Hungarian employment policy-making compared to the British practice.

policy interventions. Nevertheless, the appearance of a few papers written by younger researchers around the end of the 2000s is promising /a hopeful sign.

The data sources

Most of the studies reviewed rely on the administrative data of the unemployment register. This is because alternative data sources, e.g. labour force surveys do not contain information on participation in employment policy programs; therefore, their use would greatly restrict or completely rule out evaluations (except maybe in the case of unemployment benefits). However, since the register reveals nothing of the period following exiting the programs, using it as the sole source of data also significantly restricts research. Up until 2009, the monitoring of active programs provided this sort of surplus information, but only in a very particular form: exiting workers (or their employers, in the case of wage subsidies) were surveyed 3 months after leaving the programs. Thus, information on after-program status is very limited – practically non-existent on individual workers for wage subsidies. In light of the findings of *Card et al*. (2010), this suggests that using these data, the majority of program effects can only be estimated with a bias. To reduce these restrictions, some studies relied on supplementary data collected in a separate survey. That cannot provide a permanent solution to the lack of data because of the costs, but it helps create a more realistic view of program effects by enabling their estimation farther from the ending of the program.

The CI. law of 2007 allows studies to surpass the limitations of the unemployment register by anonymously linking other administrative data sources (e.g. on social security contributions), and to follow the subsequent work history of participants or control for previous employment spells. We have not yet found such a paper however, maybe due to the shortness of the period and the frequency of policy changes. The National Employment Office (NEO) introduced a reform in active program monitoring in 2009 to exploit the possibility that data from the register and social security contributions can be linked at the individual level. This could have improved the quality of the monitoring, but we have not yet seen its use in evaluations, and it is unrelated to the studies reviewed here. Administrative data (e.g. on tax contribution) could have also helped evaluation reports in the essential issue of making detailed work history (among other observable characteristics) controllable. Lately, the NEO collects data on the registered unemployed for four years retrospectively, but this is unavailable for those who participate in one of the programs but are not entitled to benefits. Therefore, supplementary data is needed in their case.

Identification and estimation methods

Most evaluations do not make a formal distinction between identification and estimation, nor do they systematically discuss identification conditions and

the implications when these are unmet – though several studies touch on these issues when discussing the estimation methods. The applicable identification strategies (see *Chapter 1* of *In Focus*) are mostly determined by data availability. Small sample size makes parametric methods the most viable option. Controlling for heterogeneity is restricted by the number of observable individual characteristics. Since the register only collects data necessary for administration, it does not contain information on other members of the household, which is a serious limitation. This is why the studies working with supplementary data can be more reliable than those relying solely on the register. Matching methods are rarely used in our sample of studies, despite the fact that matching is considered superior to parametric models when comparing treated and untreated individuals having similar observable characteristics.

We have found few attempts to control for unobserved heterogeneity; these include the modelling of selection, exploiting changes to administrative rules; and a genuine experiment in one case (see *Appendix 7.2*). Hungarian labour market policies change very often, but evaluations of the above sort have not yet accompanied these. Quasi-experimental situations arise because newly introduced nationwide programs are grandfathered (i.e. only affect new entrants). The lack of experiments makes selection modelling hard to verify and leaves it to rest on disputable assumptions. Therefore, a rise in the number of experimental studies would make a big difference. If the demand for evaluations increased, this may generate an increase in the number of studies exploiting policy changes in space or time. We expect that such evaluations would generally outperform those that only use observable characteristics.

Publication of estimations and attention to detail

The presentation of estimation methods and results is quite varied. Publishing marginal effects or at least their average has now become common in international practice, but not in the studies we have reviewed. Thus, estimates from nonlinear models are impossible[5] to compare with previous research for reference. Some studies do not even present regression tables, though fortunately these are rare. Almost every paper interprets treatment effects in the form of average treatment effect or average treatment effect on the treated.

Further analysis

In order to evaluate a program completely and conduct a cost-benefit analysis, indirect or unintended effects also need to be measured in addition to direct impact. Such are substitution effects, which arise when a subsidised program participant replaces a non-subsidized worker who therefore loses his/her job. Few studies examine these program effects, but at least some do. Evaluations would be even more comprehensive if (1) treatment distribution was estimated, (2) treatment heterogeneity was measured by observable characteristics, or (3)

5 In the case of nonlinear estimations, coefficients do not show the effect itself, since it changes constantly with explanatory variables' values. This is the reason why average marginal effect is the only theoretically sound measure available here.

program impacts on other relevant parts of the population were assessed. Indirect effects should be of primary concern to institutions directly involved with the programs, since substitution effects can completely override the positive effects. Also, various features of the distributions can identify how and why the observed effect arises. The fact that analyses rarely investigate these suggests that, in most of the cases, contractors were simply not concerned by these issues.

Conclusions

Based on the evaluations reviewed above, we come to a number of conclusions which promote an optimistic outlook.

1. Though the number of evaluation reports on the employment policy instruments in question is rather small, quite a few of these can adequately fufil its purpose. In other words, many of them can be used to determine how a given program has affected its participants. However, there remains some room for improvement, e.g. it would be useful if future evaluations considered comparability with similar studies (Hungarian or international) an explicit priority.

2. It seems that the lack of methodological skills needed for evaluations does not hinder this kind of research. Considering the trends of the past, there are more than enough experts who would be able to conduct several analyses on a regular basis. However, it is undeniable that the integration of evaluation studies in labour market policy routine requires more experts of the same quality. Most university programs in Hungary do not provide for meeting this demand.

3. Data availability may also cease to be a problem if policymakers show interest in program effects and contribute to making the required data anonymous. Besides, there is great potential in routinely collecting data from development projects and in small alterations of program design that would facilitate identification strategies. Short, well-organized questionnaires can yield valuable additional information which can even be linked to administrative data later. Finally, it is possible to put cut-off points deliberately into a program, or conduct experiments (e.g. by randomly including or dropping regions) which are not too costly but effectively solve several methodological problems.

4. Apparently, the demand from policymakers falls below the possibilities. First, this damages the programs themselves, since their efficiency might not improve as much as it could, with the help of evaluations. Second, in the present legal environment, academic interest is not sufficient for conducting evaluations, because only politicians can initiate the anonymity status of the required administrative data. Thus, unless policymakers show more explicit interest in evaluations, they will not have the possibility to choose from a wide range of products. In order for this to change, data accessibility policies must be expanded, and policymakers must turn their attention toward this area of research. There is some reason to expect an improvement, signalled by the establishment of the new Government Centre for Impact Assessment charged

with such a mission. A single government institution, however, cannot make up for the sustained work effort of a competitive research community motivated by academic interest. These two activities are complements rather than substitutes. Therefore, the increase in government efforts calls for increasing support for external research activities as well.

Appendix 7.1. List of papers reviewed

Out of work benefits

Unemployment insurance benefits

BÓDIS, LAJOS, MICKLEWRIGHT, JOHN. AND NAGY, GYULA (2004): A munkanélküli ellátás indokoltsági feltételeinek érvényesítése: empirikus vizsgálat az elhelyezkedési készség ellenőrzésének hatásairól [Job Search Monitoring in Hungary]. BWP, 2004/6. Labour Research Department, Institute of Economics Hungarian Academy of Sciences and the Department of Human Resources, Corvinus University of Budapest. http://www.econ.core.hu/doc/bwp/bwp/Bwp0406.pdf.

GALASI, PÉTER AND NAGY, GYULA (2002a): Járadékjogosultsági időtartam és elhelyezkedés, [Duration of Benefit Entitlement and Re-employment]. Közgazdasági Szemle, Vol. 49. No. 2. pp. 126–142.

KÖLLŐ JÁNOS (2001): A járadékos munkanélküliek álláskilátásai 1994 és 2001 tavaszán [Job Prospects of the Insured Unemployed in the Spring of 1994 and 2001]. BWP 2001/7 http://www.econ.core.hu/doc/bwp/bwp/bwp0107.pdf.

KÖLLŐ, JÁNOS AND NAGY, GYULA (1996) Earnings Gains and Losses from Insured Unemployment in Hungary, Labour Economics 3, pp. 279–298.

MICKLEWRIGHT, JOHN AND NAGY, GYULA (1995): Unemployment Insurance and Incentives in Hungary: Preliminary Evidence. CEPR Discussion Paper 1118, and in: NEWBERY, D. (ed.): Tax and Benefit Reform in Central and Eastern Europe, CEPR, London.

MICKLEWRIGHT, JOHN AND NAGY, GYULA (2010): The Effect of Monitoring Unemployment Insurance Recipients on Unemployment Duration: Evidence from a Field Experiment, Labour Economics, Vol. 17. No. 1. January 2010, pp 180–187 [essentially the same as Bódis, Micklewright and Nagy (2004) BWP 2004/6].

WOLFF, JOACHIM (2001) The Hungarian Unemployment Insurance Benefit System and Incentives to Return to Work, LMU IS Discussion Paper No. 253. http://epub.ub.uni-muenchen.de/1633/1/paper_253.pdf.

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Appendix 7.2.

Table 7A1: Out of work benefits[*]

	Target group	Database	Sample size	Observation period	Identification method	Quantitative findings
Impact of the receipt of unemployment insurance benefits on re-employment						
Galasi and Nagy (2002a)	UI recipients	UI register new entrants in 1 Jan – 15 March 2000 Excluded voluntary quits and severance pay recipients.	31,031 control 27,947 treatment group	9–12 months	Quasi experiment: new claimants after 1 Feb are entitled to UI for a period 25% shorter (worst case); Kaplan Meier survival functions, for treated and control group, right censored, by sex and four subgroups by prior employment spell, which determined length of UI entitlement.	No effect. Control group exit rates are even higher for some of the subgroups which may be explained by the higher share of recalled workers in January claims (control group).
Bódis and Micklewright and Nagy (2004) = Micklewright and Nagy (2010)[1]	Entered UI register and entitled to 75–179 days of UI benefit.	Interview surveys and PES registers Entrants between 26 May and 26 July 2003	479 w aged <30 615 w aged >29 1,037 men(longer entitlements excluded to control for the intro of a new incentive)	4–6 months following entry to register	Experiment. Treatment: 4 visits to PES and questions on job search in 3 month (control: no visit in 3 months). Right censored (excl. exhausters) Conditional prob of exit to job or ALMP, proportional hazard with treatment dummy and controls for indiv.char. and local u.	Hazard ratio for women over 29 is 1.43 (43% over control group's)
Köllő and Nagy (1996)[2]	UI recipients re-entering employment 4 subgroups: (a) job losers with <181 days in UI (b) Job losers with 180+ days in UI, (c) voluntary quits, (d) recalled workers	interview survey of re-employed + PES register of UI recipients; exits from UI register to a job between March 20 and April 20, 1994	9,420 divided into 4 subgroups. (a) 3,839, (b) 3,092, (c) 383 (d) 2,106 Q: tested selectivity of non-response (18%) Weighting observations with the inverse of the predicted non-response rate does not affect the results.	NA, less than 270 days (max duration of UI)	OLS on log(w1/w0) – ΔlogW, dep on individual and job characteristics, controlling for local u. Subgroups justified by Chow tests of pooling restrictions; parameters are jointly significant, heteroscedasticity is rejected; Ramsey test for omitted variables *not* rejected for (a) and (d).	The median unemployed lost 5.2 percent in real terms. Duration of UI spell: compared to a spell lasting for six months the new wage is estimated to be 5% higher if completed duration was 0–3 months, and almost 5% lower if the spell lasted for one year.
Köllő (2001)	UI recipients	interview survey of re-employed (+ PES register of UI recipients) exits from UI pool between 18 March and 7 April 2001	1994: 8,549 (238,841) 2001: 8,339 (105,924) (excluding those exhausting UI during period observed and recalled workers)	9–12 months	multinomial logit (1) stays in UI, (2) exit to new job, (3) exit to old job, (4) exit to unknown job, controls for indiv char, past lm experience (e, u), tests robustness with alternative specifications. Cross section.	Remaining benefit on exit to new job: –0.182 Entitlement: for upper secondary &graduates: if E(UI) < 50, odds of exit is 1.56 times higher towards end of eligibility.

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	Target group	Database	Sample size	Observation period	Identification method	Quantitative findings
Impact of the amount of unemployment insurance benefits on re-employment						
Micklewright and Nagy (1995)	UI recipients	UI register new entrants in Dec 1992 and Jan 1993 Excluded voluntary quits and UI claims over 2 month after job loss	50,441 control 30,270 treatment group	3–19 months	Quasi experiment: after 1 Jan, 1st phase of UI is shorter (1/4 of old system) but replacement rate is higher (75 vs 70%); Kaplan Meier survival functions and hazards, for treated and control group, right censored, by sex and four subgroups by prior employment spell, which determined length of UI entitlement.	No effect. Treatment group exit rates are higher for some of the subgroups, but this is most likely due to the higher share of recalled workers in January claims (the treatment group in this case).
Wolff (2001) I.	UI recipients	UI register new entrants in Dec 1992 and Jan 1993 Same as in M&N1995	18,995 w, 7,031 (control) 12,914 m, 5,397 (treatment)	3–19 months	Quasi experiment, Kaplan Meier survival as in M&N1995, but only for a sub-sample considered less likely to be recalled workers based on previous job history.	No effect
Wolff (2001) II.	UI recipients, excl. older workers	UI register new entrants in Dec 1992 and Jan 1993 Same as in M&N1995	13,121(control) 10,373 (treatment) m aged below 55 6,162 (control) 5,047 (treatment) w aged below 50	3–19 months	Quasi experiment, data as in M&N1995, but using variation in entitlement and replacement rates. ML estimate of semi-parametric continuous duration model, tests alternative specifications.	No robust effect for men, small robust effects for women: entitlement effect: job hazard is 53% higher than base (over 270 days) in the last 30 days. For women <30: Elasticity wrt UI –0.35, wrt wages 0.31
Impact of unemployment assistance on re-employment						
Firle and Szabó (2007) I.	Exited UI	Labour force survey 2001 q1–2004 q4 (stacked panel) received UI one quarter and not in the next quarter. Immediate exits to job not excluded	1,023 m 607 w	3–15 months	Jenkins logit (equivalent to discrete duration) and estimates of alternative specifications (discrete and continuous duration) no attempt to deal with selection bias other than sampling, controls for past u, family income and local u but not eg for health, motivation	Average marginal effects of SB receipt on reemployment prob. –0.0596 (m) (75%) –0.0557 (w) (82%) Duration on unemp 7 quarters longer
Firle and Szabó (2007) II.	Non-employed (excluding those not seeking a job because are in full time/ill/disabled/caring for family member) aged 18–62	Labour force survey 2001 q1 – 2004 q4 (stacked panel)	22,153 m 22,087 w	2 consecutive quarters	Probit with robust standard errors, on exit to job Parameters jointly significant, no specification testsno attempt to deal with selection bias, poor controls (as in I)	Average marginal effect of SB receipt on re-employment probability –0.0679 (m) –0.0530 (w)

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	Target group	Database	Sample size	Observation period	Identification method	Quantitative findings
Galasi and Nagy (2002b)	Exhausted UI	Retrospective interview survey of a sample taken from PES register exhausted UI in April/May 2000	April: 11,259 (m) 8,678 (w) May: 14,314 (m) 12,372 (w)	7–8 month after April/May 2000	Quasi experiment: change in UA rules in May 2000, discrete time duration for affected and unaffected cohort (Jenkins logit for 2week spells), controls for indiv.char, local u. Benefit= actual or expected benefit = amount x P(takeup), the latter estimated in a separate logit. Parameters jointly significant, no specification tests	Effects on odds ratio –0,043 (April, men) –0,070 (May, men) –0,043 (April, w) –0,062 (May, w) assumed to be constant during the observed period
Micklewright and Nagy (1998)	Registered unemployed who exhausted UI benefit	March–April 1994 UI register inflow cohort of benefit recipients, + interview survey of those who exhausted UI	4,661 Only those with (nearly) complete employment history. Response rate to survey was almost 90%	11/12 months (in UI) + 3–4 months (after exhausting UI)	Discrete time duration model of post UI exhaustion hazard (Jenkins logit) by sex, estimate coeff for expected Social Benefit. Controls for individual / household char. and local u. no attempt to control for selection bias (variation in unobserved char)	Effects on odds ratio (logit) –0.144 (m) –0.157 (w) conditional on survival past 1st week after exhausting UI

*The Hungarian LFS is a rotating panel where an individual may be included for a maximum of 6 consecutive quarters.

1 Analyzes the impact of the behavioral requirements for unemployment insurance benefits.

2 Success criterion: wage gain (compared to the average rise in wages for the UI pool in the same period).

Table 7A2: Wage subsidies

	Type of program	Target group	Database	Sample size	Observation period	Identification method	Quantitative findings
O'Leary (1998) (also in O'Leary and Nesporova (2001))[1, 4]	Wage subsidy paying up to 50% of the wage bill up to one year. Employment must be sustained for an indentical period after exit from program. (Provides a similar evaluation on training programs and public works too.)	Longer term registered unemployed[5]	Survey data collected following-up supported individuals and a randomly selected control group. Treated: exit from program: Q2 1996, observed:up to Q2 1997 Control: entered registered status in Q2 1995	Whole sample: 9,219 treated: 1,131, control: 3,338 (training: 2,543; public works: 1,140; self-emp: 1,067)	12 months	OLS on exit with control group. Matched pairs, interaction terms in linear OLS. Personal and regional characteristics used in OLS and matching.	Effect on employment probability: 17–24%points if unadjusted/unmatched, 0 to –6%point with controls. No effect on earnings. Also significant parameters on individual characteristics
Galasi, Lázár and Nagy (2003)[1]	As in *O'Leary (1998)*,	As in *O'Leary (1998)*	As in *O'Leary (1998)*	As in *O'Leary (1998)*, but does not use control group	As in *O'Leary (1998)*	logit on participants of all programs with personal characteristics	Significant and positive schooling (0.04–0.47) and 25+ age (0.27–0.52) and wage-subsidy program participation (1.87) coefficient when compared to young uneducated public work participants
Galasi and Nagy (2005)[2]	As in *O'Leary (1998)*	Long term registered unemployed[5]	Monitoring data referring to employers of subsidized workers. Registered unemployed exiting wage-subsidy program in 2002 and 2003	N = 39,000	3 months	probit corrected for nonresponse bias. Probit uses personal characteristics, correction uses industry of employer and job type.	Significant and positive marginal effect for women (0.018), those not very young (above 25: 0.05–0.06), with not very low or high education (0.08 as opposed to –0.05 and 0.037 resp.) and participating for around the average duration of the program 0.045 for 180–270 days), living in the central area and areas with lower unemployment rate (–0.5)
Csoba, Nagy and Szabó (2010)[1]	As in *O'Leary (1998)*, but support payable up to 100% of the wage bill (new regulation)	Longer term registered unemployed[5]	Survey data collected following-up supported individuals and a randomly selected control group. Treated: exit from program: between September 2009–February 2010	Treatment group: 1,041; control group: 1,068	6 months	logit on exit with control group. Personal and regional characteristics used in logit estimation.	No marginal effect, significant positive effect on program parameter (odds ratio compared to the control group: 24)

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	Type of program	Target group	Database	Sample size	Observation period	Identification method	Quantitative findings
Galasi and Nagy (2008)[3]	As in *O'Leary* (1998), but also looking at public works and training	Registered unemployed	Individual data snapshots (sampled from PES register) matched with monitoring data. Sampling: June 2005–January 2006	N = 351,787 (7.6% of which in one of the three types of programs)	6 months	discrete time duration model of hazard to exit towards ALMP registry drop out hazard (Jenkins logit)	UI recipients have 33% higher probability of participation than those who get no subsidy, social benefit recipients: 50% less

[1] Success criteria: exit to employment.
[2] Continued employment with the same employer.
[3] Participated in one of the programs analysed.
[4] Wage if employed and use of UI.
[5] Six months, three months if labour market entrants.

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INSTITUTIONAL ENVIRONMENT OF THE LABOUR MARKET BETWEEN SEPTEMBER 2010 AND SEPTEMBER 2011

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&

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INTRODUCTION*

The recent financial crisis has also had a fundamental impact on labour markets. European countries were forced to re-think and often reform their labour market institutions with flexibility and security in mind, and all this amidst shrinking financial resources. In this context it is crucially important to give a clear and accurate overview of the policy tools that can influence the operation of the economy. Apart from these global events, the fact that Hungary has one of the lowest employment rates within the European Union also makes the overview of labour market institutions most timely. Low employment is a major obstacle to economic growth.

This chapter continues the tradition of the Hungarian Labour Market Year Book that has reviewed changes in the labour market institutions each year, however this time it is presented in a slightly different format. We have created a structure that is closely related to the labour market and its forces; measures influencing prices, quantities and costs.

Market prices (most importantly wages) are determined by transfers, taxes, contributions, alternative incomes are influenced by available insurance-based (unemployment allowance, pension) or means-tested payments (for example social benefit type assistance, children's benefits), costs are determined by certain types of assistance (for example towards the cost of commuting or childcare provision) and services (such as human services provided for unemployed people or job search services). The structure of the labour market and the relationships that are formed with the labour market are shaped by contractual possibilities, transaction costs and mechanisms of dialogue between social partners. The effectiveness and stability of the above institutions are determined by policy structures and policy-making mechanisms.

We classify employment policy measures according to the classification used by Eurostat in its *Labour Market Policy* (LMP) database. In addition categories from the LABREF database of the European Commission's Directorate General for Economic and Financial Affairs (DG ECFIN) are also used here (*European Commission*, 2005). These include broader – labour market related – policies such as tax and social policies that are strongly inter-related. Overall, we can distinguish labour market and labour market related policies.[1] Our choice

1 To some extents these categories are arbitrary because "everything is related to everything" so most policy measures have an employment effect. However considering the model of labour supply and labour demand we can identify a limited number of parameters that influence decisions: prices, quantities, costs, market structures and uncertainty around demand and supply decisions. We are interested in all of those policy measures that directly influence one or more of these.

The classification of employment policy measures according to the Labour Market Policy Database of Eurostat

has been influenced by two factors. First, so far there has been no comprehensive classification in Hungary, which is probably explained by the limited interest in this issue (see also *Chapter 7* of *In Focus* on the evaluation of active labour market policies in Hungary). Second, we wanted to prepare the overview in a comparable format based on some existing practice that makes it possible to continue the overview even if policies change considerably.

We aim to give a balanced overview of each issue, however there are topics that will be discussed in more detail; these are key employment policy measures that are likely to have a large impact on the Hungarian labour market in their revised form. There are some categories and sub-categories in the international classification that do not have any corresponding policies or subsidies either because they no longer exist or have never existed in Hungary. These will be mentioned only briefly.

Beside the overview of employment policies another aim of the study was to indicate government expenditure in this area. However, this was impossible because we could not consolidate expenditure from European Union co-financed projects – that are highly important – with other labour market policies into a single structure. Without this, detailed financial data would be misleading.

It should be emphasised that this study does not aim to provide an evaluation of policies or in other words an assessment of whether they had an effect on the labour market or not, and whether they are adequate (achieve the intended aims and are efficient) or not. We provide an overview of policy measures that under certain conditions *can* have an effect on the labour market based on some theoretical considerations *or* empirical results *or* the perception of policymakers.

Nevertheless the evaluation of specific policy measures is very important and to facilitate this we briefly present their possible mechanism of action, highlight any existing evaluations and attempt to point out any differences between them and the measures discussed in the evaluation studies that might modify its effect. The interested reader can then make the judgment. Considering that this is the first time the chapter is presented in this format, we also provide a brief overview of the situation before the changes. The system and policies are presented according to the situation in September 2011 and we acknowledge that there might be changes by the time the study is published. However, only policies that have actually been rolled out are presented, policy proposals and bills that have not been voted by the Parliament are not discussed here. For each measure we indicate when they come into force. The starting point of the study is September 2010.

Four questions to consider when analysing employment policy measures

We aimed for maximum clarity in the wording and tried to keep the length of study within reasonable limits. We also aimed to provide the most accurate picture possible. This meant that some compromises were necessary: we do mention all important policy changes, however briefly. Some of the text is presented in bullet points that hopefully will facilitate clearer understanding. We considered four questions:

– Answering the question *How does it work?* we provide the theoretical basis of the policy measure: who does what and why. This does not address implementation or efficiency and it is assumed that the measure serves its intended purpose. This question is not asked for labour market related but not direct employment policies because it would be too far-reaching and divert us from our topic.[2]

– For the question *What is the impact on employment?* we present general information on the effectiveness of the measure based on empirical results. It is important to highlight that for labour market policies the employment effect is the primary, intended aim, but the intended aim of labour market related policies is usually something else and the employment effect is not necessarily intended even if it is sometimes very strong.

– Under the heading *Situation in September 2010* we present the status quo on the 1st of September, 2010 according to the criteria outlined below.

– For the question *Changes between September 2010 and September 2011* we provide an overview of the most important changes. Considering the limitations of space this description does not aim for completeness for various reasons. On the one hand the system of financial assistance and measures is very fragmented in Hungary and presenting all relatively minor (in terms of access and expenditure) interventions would be a disproportionately huge task both for the authors and the readers of the chapter. Therefore where necessary we were selective both in terms of the employment effect and the scope of interventions. Second, there are so many rules for every intervention that presenting all of them would have made the already long text even longer (three or four times its current length) and thus very difficult to read. Third and most importantly our aim was not to present the legislation in detail, this can be found elsewhere, but to give an overview of the full range of measures and their most important characteristics. Therefore readers who are interested in the detailed rules for each measure should refer to the original legal texts.

Under the heading *Main legislation* we present the main laws and regulations governing the given area and any legal amendments down to the level of ministerial regulations and any other, publicly available, information on implementation. The main legislation is available free of charge on the Internet. Our main sources were the Hungarian Gazette (Magyar Közlöny; www.magyarkozlony.hu) and the Official Journal of the European Union, but there are other useful sources such as the on-line collection of current legislation that is available free of charge to anyone (http://mkogy.complex.hu). Legislation under the level of a ministerial regulation is not readily available. They are either available in a summary format for end users or can be obtained from the relevant authorities. Together with the exact reference to legislation we also provide the web addresses (where they exist) of relevant authorities to facilitate internet-based search.

Sources of main legislation

2 In most cases this is not very different from the original aim, but sometimes it is. For example studies analysing the original documents from the introduction of child care allowance clearly point it out that its introduction was motivated by the "peaceful" withdrawal of female workforce from the labour market. Today the same action is often justified with children's developmental needs.

COMPONENTS OF LABOUR MARKET AND LABOUR MARKET RELATED POLICIES

Labour market policy – all employment policy measures

Labour market policies are public interventions in the labour market that explicitly aim to improve the efficiency of the market, address disequilibria and typically selectively favour particular groups on the labour market. The term labour market policy is equivalent to the term employment policy commonly used in Hungary in its broadest meaning and it includes both active and passive policies as well as labour market services.

The "common denominator" of labour market policies of the EU and OECD member states is the *Labour Market Policy (LMP)* database, created under the direction of the Eurostat. This provides comparable data on expenditure and participants in labour market policies in each member state. The methodology of the database distinguishes three types of interventions that are termed 1. *services,* 2. *measures* and 3. *supports*. Based on section 1.2 of *European Commission* (2006, p. 6) these are defined as follows including the mixed interventions:

Services refer to labour market interventions related to the job-search activity of participants and where participation usually does not directly result in a change of labour market status (but often does indirectly). Services also cover functions of the Public Employment Service (PES) that are not directly linked to jobseekers. This includes placement and other services for employers, administrative functions, and other activities delegated to the PES.

Measures are labour market interventions where the main task of participants is not job-search and where participation usually (but not necessarily) results in a change in labour market status. These include activation programs such as training, wage subsidy and different forms of public works.

Supports refer to interventions that provide financial assistance, directly or indirectly, to individuals *for labour market reasons* or which compensate individuals for their disadvantage on the labour market. These include unemployment benefits such as the jobseeker's allowance and benefit or the means-tested income maintenance assistance.

Mixed interventions are those schemes that employ more than one intervention – that might be in different groups or categories.

Target groups of labour market policies

The target groups of labour market policy include the unemployed, employees at risk (those who are in employment but are at risk of involuntary job loss due to the economic circumstances of the employer, restructuring, or similar) and the inactive. The government delivers labour market policies primarily through specialist institutions that might include a public or private (or mixed) Employment Service and market-based service providers. Interventions have been classified according to the categories of LMP as follows.[3]

3 For the detailed methodology see *KSH* (2009).

Classification of labour market policy interventions by type of action
  Services
  1. Labour market services
  Measures
  2. Training
  3. Job rotation and job sharing
  4. Employment incentives
  5. Supported employment and rehabilitation / integration of people with reduced work capacity
  6. Direct job creation
  7. Start-up incentives
  Supports
  8. Out of work income maintenance and supports
  9. Early retirement
  Mixed interventions (complex programs)

Labour markets are also influenced indirectly by measures other than labour market / employment policies – for example by the tax system that influences the price of labour. If the government aims to promote the labour market inclusion of a group characterised by low employment levels then it might reduce the tax burden on their work. In most countries demand for unskilled labour as well as their work motivation is relatively sensitive to wage costs. In this context the government might increase employment by the appropriate calibration of the tax system; reducing the tax burden on lower wages. The definition of these indirect measures is based on a simplified, but still comparable, version of the LABREF database. Definitions follow Part 3 of *European Commission* (2005) and supplementary areas are defined as follows.

Policy measures with an indirect effect on the labour market

Labour market related policy measures, excluding LMPs
  10. Labour taxation
  11. Other transfers
  12. Job protection – contractual arrangements
  13. Old age and disability pensions system – disability supports
  14. Wage bargaining and wage regulation
  15. Migration and mobility related measures
  16. Management and evaluation of employment policy

Labour taxation. This includes personal income tax, social security contributions paid by employees and employers, coverage and rates.

Labour taxation

Other transfers. These include transfers that influence the cost and opportunity cost of work. The first includes means-tested benefits such as the housing assistance and travel to work schemes (e.g. those targeted at commuters) and the second includes assistance with child care.

Other transfers

Job protection and con-tractual arrangements

Job protection and contractual arrangements. These cover changes in the regu-latory environment of work contracts, particularly rights and responsibilities related to different types of contracts, permanent and temporary contracts, as well as rules governing dismissal of workers. We also include working time related measures here.

Old age pension, disability pension and disability as-sistance

Old-age and disability pension – disability assistance. This covers the avail-ability of old-age and disability pensions, their starting rate and increments, the conditions of early retirement.

Wage regulation

Wage bargaining and wage regulation. Includes the regulation of wage bar-gaining and any direct or indirect wage regulations that influence the level of wages nationally or regionally.

Mobility

Migration and mobility related measures. These include rules on the employ-ment of foreigners, selective immigration policies and the formal recognition of qualifications gained abroad. It also includes measures related to internal mobil-ity, such as measures influencing the share of rented housing and home ownership.

Employment policy insitutions

Institutions of management and evaluation of employment policy. These in-clude institutions that make and implement policies (the relevant ministry and particular units, the National Employment Service and its agencies, the Na-tional Development Agency or more recently the Ecostat Government Centre for Impact Assessment) and any changes related to them.

Labour market related policies might be – and if used consciously they are – tuned to the needs of specific target groups, but as a general principle they cover the whole of the population.

LABOUR MARKET POLICY MEASURES

The foundations of the Hungarian labour market policy were laid down by Act 4 of 1991, commonly known as the Employment Act. The policies set out by the Act are commonly referred to as employment policy measures in the Hungarian technical terminology.

Services

1. Labour market services

A) Services of the National Employment Service

Labour market integra-tion, matching

How does it work? Labour market services help the labour market integra-tion of the unemployed and other job seekers, and help employers to recruit and select their workforce. Services thus partly address the lack of informa-tion and partly enhance the adaptability of parties helping the matching of job seekers and employers.

Addressing lack of informa-tion and information as-symetry

What is the impact on employment? An efficient information provision ser-vice can improve the lack of information and information asymmetry and

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thus increase the flexibility of the labour market. This can directly or also indirectly increase employment by reducing wages through increased competition. Information services need to be provided on an on-going basis but for automated systems the cost of maintenance can remain well under the initial cost of investment. There are no empirical studies on the labour market impact of information services in Hungary. International results were reported for example by *Calmfors* (2004) and *Martin and Grubb* (2001). They found that information services had a positive effect but this could not be separated from sanctions and statutory functions.

Situation in September 2010. In Hungary labour market services can be accessed via the job centres and the website of the National Employment Service (NES) in two main forms:

a) *Information services*: are open services for job seekers providing ad hoc information and referral to opportunities for work, training and other forms of assistance; it also includes job brokerage services for employers.

b) *Client services*: Cover provision of individualised case management services (for example intensive counselling and guidance, job search assistance and personalised action plans) and follow-up for jobseekers. It also includes financial supports provided to jobseekers (such as the cost of travel to job interviews, other job search related costs etc.).

Information services and client services might cover various areas, for example the provision of labour market and employment information; job, career, job search and rehabilitation advice, local (area) employment services. The most important information service is job brokerage. It can be provided as self-service with direct access to information (i.e. websites such as http://www.munka.hu, http://epalya.hu and its more recent version http://eletpalya.munka.hu, or http://eures.europa.eu), or through specialist human services (e.g. job search clubs, guidance etc.). These can be provided on an individual basis or for groups of jobseekers. Information services can be provided independently or as part of guidance, a job fair, job brokerage or referral for training. They can be provided on job centre premises or on external premises such as *rehabilitation information centres*, *work information centres, job advisors* or the EUROFIT network that provides international work information, *employment information points* and the EURES network, the European job mobility service, European employment services. The network of career services provides advice for choosing and changing career.[4]

Some of the services for jobseekers and employers are provided jointly by the NES and its partner organisations or are contracted out to accredited service providers.[5] The NES does not have a statutory role in most services, however in the case of job brokerage it does because jobseekers can lose their eligibility for jobseeker's allowance if they do not accept suitable job offers.

Changes between September 2010 and September 2011. There were no substan-

Provision of information and individualised services

4 In the first phase of SROP 2.2 project the procedures of *Lifelong Guidance* were prepared. The National Career Orientation Portal has been operational since September 2010 that is the integrated career information portal of lifelong career guidance (http://eletpalya.munka.hu/).
5 The priority project SROP 2.6.1 *Establishing the system of service provider accreditation* ended on December 31, 2010. The partners of the project together with representatives of independent employment service providers developed definition and standards for 48 labour market services, defined accreditation criteria and procedures. More details can be found on the website of the project (http://www.tamop261.hu/)

tial changes during this period; the statute of the NES confirmed the activities of the NES in the provision of labour market services and all services were available.

Main legislation

The scope of labour market services are set out by Act 4 of 1991, Article 13/A, paragraph 2. The types of services are listed in MoE Ministerial Regulation no. 30/2000. (15. 11). Job brokerage is delegated to the NES by Article 7 of the Government Regulation no. 315/2010. (27. 12).

New legislation: Government Regulation no. 315/2010. (27. 12) on the Statute of the National Employment Service and the Employment Office (Official Journal, issue 9, 2011. February 8. pp. 1065–1068.

On-line resources: http://www.munka.hu/engine.aspx?page=allaskeresoknek, http://www.munka.hu/engine.aspx?page=munkaadoknak, http://www.ta-mop261.hu/.

B) Other activities of the National Employment Service

<p style="margin-left: 2em;">*Administrative and statutory roles*</p>

How do they work? Activities other than the provision of services by the employment service include administration, and they are often statutory or related to the management and implementation of policies at the local level. Accordingly they are concerned with the efficient management and implementation of policies.

<p style="margin-left: 2em;">*Client profiling, monitoring and sanctions*</p>

What is their impact on employment? Besides the provision of services, other activities of the employment service can also help re-employment of the unemployed if implemented efficiently. For example using client profiling to provide the most adequate services to different unemployed clients (e.g. in terms of education, work experience). Also adequate monitoring of job-search activity and sanctions for non-compliance can also be very useful – see *Card, Kluve and Weber* (2010) for more on this. There is limited information on the impact of other activities. The potential impact of their reform was examined by the evaluation study of the PES modernisation (*Cseres-Gergely & Scharle,* 2010). It was found that the development of services might have contributed to the positive impact of the modernisation; however it was not possible to isolate its impact. *Micklewright and Nagy* (2005) experimented with the implementation of stricter sanctions in Hungary. Their results showed that increased sanctions – that were still considerably less stringent than sanctions used in some other countries – had a more limited impact in Hungary than elsewhere.

Situation in September 2010. The three areas of the employment service's other activities are as follows:

<p style="margin-left: 2em;">*Administration, coordination, monitoring, evaluation, decision-making*</p>

1. *The administration of labour market measures*: the management / co-ordination of employers and services providers engaged as direct recipients in these measures, other activities related to the management and implementation of labour market *measures* – e.g. planning, co-ordination, monitoring, evaluation,

decision making, etc., and any other functions directly related to the provision of labour market measures but which cannot be attributed to a specific measure.

2. *The administration of labour market supports:* covers activities related to the administration and payment of supports and / or the supervision by the NES of other bodies that undertake the payment and administration functions. Activities include for example the registration and monitoring of beneficiaries (where not directly linked to on-going monitoring of job-search activity), and the payment of benefits, validation of claims, etc.

3. *Other services / activities*: covers all other services, activities and general overheads of the public employment service which are not covered in any other category of the LMP database. For example vocational health assessment, wage guarantees and issuing work permits for foreign workers.

Important stages in the individual case management of clients are the initial assessment, drawing up a jobseeker's action plan based on the needs and characteristics of the individual jobseeker, assessing the entitlement and eligibility for financial support and payment of support, the monitoring of job-search activity and the closure of the case or referral for social assistance (currently public works, income maintenance assistance or regular social assistance). The jobseeker's agreement was binding for those claiming financial supports from the PES until December 31, 2010 and those who breached the agreement lost their eligibility for the allowance/assistance. After signing the agreement jobseekers were required to attend interviews with their job centre advisor on a regular basis but no less than once every three months and report on their job-search activity. Not only jobseekers, but other clients of the job centre (such as people with reduced work capacity) were also required to sign a binding agreement.

Job search plan, jobseeker's agreement – compulsory until the end of 2010

Changes between September 2010 and September 2011. As of January 1, 2011 the seven independent regional job centres were transformed into 20 job centres and incorporated into the county government offices. An important change in the organisation of job centres after September 2011 was that about half of the staff has been dealing with the administration of public works.

The jobseeker's agreement has no longer been a requirement since January 1, 2011, nevertheless it is still useful (although not mandatory) to plan and record each step of the cooperation. Those claiming rehabilitation allowance are still required to sign a rehabilitation agreement.

Seven instead of tweny job centres, shorter period with no compulsory requirements

Main legislation

Activities related to registered unemployed (registered jobseekers) are set out by Act 4 of 1991 (Employment Act).

New legislation: Government Regulation no. 315/2010. (27. 12) on the Activities of the National Employment Service. Its budget is set out by Act 169 of 2010 on the 2011 budget of the Republic of Hungary. The statues for the new job centres were published in the Official Journal, 2011, issue 9. Ministry

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for National Economy Regulation (MfNER) no. 2/2011. (14. 1) on registering and de-registering as a jobseeker.

On-line resources: http://www.munka.hu.

Active labour market policies (Lmp measures)

2. Training programs

How do they work? Training programs aim to improve the employability of participants by providing new skills that are sought after on the labour market and increase the likelihood of finding or keeping a job, or increase participants' earnings potential

What is their impact on employment? Training can have an impact on employment if its curriculum is relevant and the participants are capable of learning new skills. In this case training can have a lasting positive impact on the employability of participants and possibly their earning potential which might help to increase employment without increasing public expenditure. *Kluve* (2010) argued that training programs are less effective forms of active measures if they do not improve considerably the employability of participants. The long term analysis of training programs by *Card, Kluve and Weber* (2010) slightly changed this picture by showing that adequately targeted training can have a positive effect, although this develops over a longer period of time. *O'Leary* (1998) analysed the effect of training programs in Hungary over a decade ago, and a similar analysis was presented by *Csoba, Nagy and Szabó* (2010) more recently (see also *Chapter 4* of *In Focus*). *Galasi, Nagy and Lázár* (1999) also addressed the effectiveness of training programs. Results from Hungary showed that training programs slightly improved the employability of participants; however none of the studies followed the participants as long as *Card, Kluve and Weber* (2010) to find significant positive labour market effects.

Situation in September 2010 (July – August 2010). Training supports can be claimed by jobseekers and employees at risk and the economically inactive. Entitlement and eligibility for the support is assessed by the job centre. The support can take various forms such as income maintenance assistance (or income support for those in work), the reimbursement of training and exam costs and expenses related to accommodation, food and travel.

Training can be aimed at improving the employability of unemployed or help employees to remain in work. Training can be provided by public or private providers.

Changes between September 2010 and September 2011. There were no changes in the structure and availability of training in this period, however a number of important decisions were made for the future.

The network of training institutions are to be re-organised. The nine independent regional training centres were merged into the Budapest Centre for

Aim: increasing employment prospects

Major institutional changes

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Labour Market Interventions (BCLMI) and thus ceased to exist as of December 18, 2011. The name of BCLMI changed to István Türr Training and Research Institute as of June 30, 2011. The Institute replaced the previous public agencies and took over its activities in the areas of training, regional and social development and public works.

With the reallocation of European Union resources (see the description of other measures and complex programs) a greater emphasis has been placed on training programs within Priority 2 – Improving adaptability – of the Social Renewal Operational Program (SROP). As opposed to programs under Priority 1 these are not managed by the employment service but the Managing Authority of the Human Resources Program.

Main legislation

Labour market training is regulated by Article 14 of Act 4 of 1991 (Employment Act) and Article 1 of Ministry of Labour (MoL) Regulation no. 6/1996. (16. 07.).

New legislation: Training centres are regulated by the Ministry of Public Administration and Justice (MoPAJ) Regulation no. 3/2011. (11. 02) and Article 6 of MoPAJ Regulation 19/2011. (24. 06) on its amendment. The action plan for Priority 2 of SROP is published in Government Regulation no. 1013/2011.

On-line resources: http://www.munka.hu/engine.aspx?page=allaskeresoknek_kepzes, http://www.munka.hu/engine.aspx?page=munkaadoknak_kepzes, http://www.tkki.hu.

3. Job rotation and job sharing

How does it work? These measures support the (re-)employment of the unemployed or people from other target groups by dividing the working hours of already existing jobs and thus allowing them to work.

Criterion of success: re-employment without crowding out others

What is the impact on employment? This measure can increase the employment level if the employment of additional workers on the same job does not result in the job loss of others. Job sharing is only possible if the job is suitable for sharing, the workers are motivated to job share and they are satisfied with their wages. If the wage adjustment cancels out the effect of increased employment then job sharing is not an effective employment policy measure (*Layard, Nickell and Jackman* 1991). The impact of job sharing is less clear-cut on smaller and dense labour markets as well as rigid wage structures.

Situation in September 2010. No job sharing and job rotation labour market measures existed in Hungary before the end of 2010.

Changes between September 2010 and September 2011. As of January 1, 2011 employers pay only 20% social security contributions instead of the 27% for eligible employees. To be eligible for the support the wages should be no more than 200% of the statutory minimum wage and the employee should be returning from child care leave. Further conditions are that the job should be

Reduced social security contributions for job sharers

shared between the returning employee and the worker who had been hired for their temporary replacement (or a new worker) and the working time should be shared equally between them (20 hours for each). These conditions should be met for at least one year. The support can be paid for up to three years and it cannot be combined with other supports or reliefs.

Main legislation
Article 8/B of 'Start' Act (Act 123 of 2004)
New legislation: Act 123 of 2010 on taxation.

4. Employment incentives

How does it work? The aim of employment incentives is to support the employment of unemployed people or other target groups or help to ensure the continued employment of workers at risk of involuntary job loss by covering some or all of the labour costs or reducing other costs associated with their employment.

Decreasing contributions for beneficiaris

What is the impact on employment? The main impact of employment incentives is that it is less costly for employers to recruit individuals from the target group that might help to increase employment levels. The other impact, although indirect but more important in the long run, is that it makes it possible for the target group to enter the labour market which might not be possible otherwise due to their disadvantaged situation. During the course of employment the employee and the employer can get to know the skills of the employee and thus it might also have a lasting impact after the end of the support. The effect of employment incentives is largely dependent on market conditions and their actual regulation, particularly its targeting and "crowding-out" effect. *O'Leary* (1998) analysed the effect of wage subsidy schemes in Hungary over a decade ago and a similar analysis was carried out more recently by *Csoba, Nagy and Szabó* (2010) (see also *Chapter 4* of *In Focus*). The authors concluded that the significant positive effect of wage subsidies was not primarily due to the design of the programs but to the fact that the participants had better than average employment prospects. To date there has been no empirical analysis of job retention support schemes in Hungary. The *OECD* (2009) expected that the measures used after the 2008 crisis would have a limited impact.

Subsidies to encourage hiring and retention of jobs

Situation in September 2010. There are many types of employment incentives; the two main types are recruitment incentives and employment maintenance incentives. The measures include support towards the cost of labour (wage subsidy, wage and contributions subsidy, contribution reliefs including the *Start, Start-extra, Start-plus and Start-region* schemes as well), supports towards certain forms of working (for example tele-work), and supports reducing to the cost of working (different travel-to-work schemes). The measures are managed by job centres where the claims should also be submitted. However incentives can also take an indirect form (such as the *Start*-card).

Changes between September 2010 and September 2011.

– Starting from 2011 the *Start-region* was phased out. This could be used as part of the *Start-extra* scheme for recruiting workers claiming income replacement assistance. Supports awarded prior to January 1, 2011 are paid until their expiry.

– As of January 1, 2011 part-time workers can also take part in *Start*-schemes.

– Restrictions were introduced on the entitlement conditions for the *Start-extra* scheme in 2011: apart from the long-term unemployed only people aged over 50 years with a basic level education and who had been registered as jobseekers for at least three months prior to enrolment in the scheme were entitled to take part.

– Applications for new *Start-plus* and *Start-extra* cards had to be submitted at the latest by December 31, 2011 and employers are eligible for contribution relief until December 31, 2013.

Main legislation

The rules of employment incentive schemes are set out in Articles 11 and 18 of Act 4 of 1991 (Employment Act), Articles 11 and 18 of MoL regulation no. 6/1996. (16. 07), Government Regulation no. 39/1998. (04. 03) and Act 123 of 2004 ("Start" Act).

New legislation: Government decree no. 1013/2011. (19. 01) on the Action Plan of the Social Renewal Operational Program for 2011–2013 that includes the detailed outline of Project SROP 1.2.1; Act 105 of 2011 on the Regulatory Alignment of Certain Labour Legislation and other Related Acts; Act 106 of 2011 on Public Works and the Amendment of Public Works and other Related Legislation; MfNER regulation no. 27/2010. (31. 12) on the Amendment of Certain MfNER Regulations in Relation to the Establishment of Government Offices.

On-line resources: http://www.munka.hu/engine.aspx?page=ma_tamogatas, http://www.munka.hu/engine.aspx?page=ak_tamogatasok, http://www.afsz.hu/engine.aspx?page=full_tamop121

5. Sheltered employment and rehabilitation

How does it work? These measures aim to develop the existing work capacity of people with reduced work capacity by providing adaptations and adequate services and facilitate their return to work or continued employment.

What is the impact on employment? The primary aim of rehabilitation is to develop existing skills and competencies of people with reduced work capacity that can prepare them to move on to work. It can also help to combat discrimination arising from prejudice or lack of information. After successful rehabilitation people can take up work on the open labour market or in special settings. If implemented adequately, rehabilitation can also increase the independence of people with reduced work capacity, who can perform at the same

Rehabilitation can promote the independence of people with reduced work capacity

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level as non-disabled workers, and this can increase the level of employment in the long run without increasing public expenditure. *Scharle* (2011) compared different forms of sheltered employment and rehabilitation in Hungary and found that the wage and other subsidies of sheltered workshops do not significantly improve the employment prospects of participants while the rehabilitation services of non-profit providers do.

How did it work previously? The distinction between sheltered employment and rehabilitation in Hungarian practice is as follows:

Sheltered employment: covers those sheltered work measures that have the aim of preparing people for integration into the open labour market: for example the physical adaptation of the workplace, both building and equipment, or the provision of mentors or other specialist assistants.

Rehabilitation: covers measures providing guidance, training and development that help participants to adjust to their disability or condition, develop competencies that prepare them to move on to work, and find and retain a suitable job and workplace.

Physical adaptations, workplace mentors

Two types of organisations can provide sheltered employment in Hungary: sheltered workshops and accredited rehabilitation employers.[6] It is a requirement for both types of organisations that a large proportion of their workforce has a reduced work capacity. The government provides two types of support towards the cost of rehabilitation: wage subsidy that can cover from 40 to 100 per cent of the wage and contributions, and assistance to work placement, job retention, vocational rehabilitation and the provision of assistants at the workplace. The other type of rehabilitation support is a cost reimbursement: the partial reimbursement of allowable and approved expenses directly related to the employment of people with reduced work capacity that the employer would not have incurred with the employment of non-disabled workers. This can be claimed by sheltered employers only. Job centres make the decision about the payment of rehabilitation wage subsidy.

Wage subsidy and vocational rehabilitation subsidy

Rehabilitation is supported via European Union programs and ad hoc grant programs for non-profit organisations. The SROP priority project 1.1.1 *Promoting the rehabilitation and employment of people with reduced work capacity* provides services and support to help labour market (re-)integration and job retention. The priority project is implemented by the public employment service. The process of rehabilitation is closely related to the payment of rehabilitation allowance that is paid for those with a 50–79% loss of work capacity. This is discussed in more detail under heading 13 *Old age and disability pensions – disability supports.*

Priority projects are implemented by local offices of job centres

Changes between September 2010 and September 2011. The accreditation of employers of people with reduced work capacity was carried out by the Employment Office since its introduction (on November 1, 2005). As of January 1, 2011 this, together with other activities related to the payment of public sub-

6 Accredited employers are those that have received a special accreditation to employ people with reduced work capacity. There are different levels of accreditation (basic or rehabilitation, and high level or conditional).

sidies, has been the responsibility of the National Rehabilitation and Social Office (NRSO) together with other public bodies.

Main legislation

Government regulation no. 177/2005. (02. 09) on Public Subsidies for the Employment of Workers with Reduced Work Capacity; Ministry of Employment and Labour (MoEL) regulation no. 15/2005. (02. 09) on the Activities of the Employment Office in Relation to Rehabilitation; Government regulation no. 176 /2005. (02. 09) on the Accreditation of Organisations Employing Workers with Reduced Work Capacity and the Inspection of Accredited Employers; and MoEL regulation no. 14/2005. (02. 09) on the Procedure and Requirements of the Accreditation Process.

New legislation: Government regulation no. 121/2011. (15. 07) Amending Government Regulation no. 177/2005. (02. 09) on Public Subsidies for the Employment of Workers with Reduced Work Capacity; Government regulation no. 332/2010. (27. 12) Amending Certain Government Regulations in Relation to the Activities of the National Rehabilitation and Social Office; Ministry of National Resources (MoNR) regulation no. 46/2011. (15. 07) Amending MoEL Regulation no. 15/2005. (02. 09) on the Assessment of Eligibility for Public Subsidy for the Employment of Workers with Reduced Work Capacity; MoNR regulation no. 25/2010. (30. 12) Amending Certain Ministerial Regulations in Relation to the Activities of the National Rehabilitation and Social Office.

On-line resources: http://www.munka.hu/engine.aspx?page=ma_tamogatas&switch-content=ma_tamogatas_megvaltozott_munka-kepz_091026&switch-zone=Zone1&switch-render-mode=full; http://www.orszi.hu/html/pdf/tajekoztatok/Megvaltozott_munkakepesseguek_foglal-koztatasanak_tamogatasa_2011.pdf

6. Direct job creation

How does it work? These programs create new jobs, usually of community benefit or socially useful, in order to create employment opportunities for the long-term unemployed or people who are otherwise struggling to find work. The jobs are usually in the public or non-profit sector, but projects of community interest or similar within the private sector may also be eligible and no distinction should be made. Therefore this covers all forms of public works schemes – municipal and communal public works as well as centrally organised public works programs.

Jobs are created mainly in the public sector and in the non-profit sector

What is the impact on employment? The primary employment effect of direct job creation is that workers in non-market jobs are considered employed and count towards the employment rate. Nevertheless the indirect and possibly the most important effect of direct job creation might be that it provides an opportunity for people to enter the labour market. Labour market integration

Criterion of success: labour market integration

is facilitated by adequate services and supports as well as the nature of work – among others by providing relevant work experience. *O'Leary* (1998) analysed the effect of public works schemes in Hungary over a decade ago and a similar analysis was carried out more recently by *Csoba, Nagy and Szabó* (2010) (see also *Chapter 4* of *In Focus*). The *Road to Work Program* was examined by *Budapest Institute* and *Hétfa* (2011). None of these studies found a positive employment effect over the studied period.

Situation in September 2010. Until December 31, 2010 the public works scheme Road to Work was in effect. In this program participants were paid means-tested income maintenance assistance if they signed on as jobseekers with the jobcentre and were willing to accept job offers, including public works. There were also some municipal and centrally organised public works projects until the end of 2010.

Changes between September 2010 and September 2011. The previous system of public works was replaced by a completely new system in 2011. A new four-pillar public works program replaced the three types of public works – centrally organised, community and municipal public works. The four pillars are: short-term public works, longer term public works, mobility within public works and nationwide public works programs.[7] Employers can be – apart from the state – local councils, churches, social cooperatives and some specified businesses (water companies, forest management, national rail network). The program was overseen by the Ministry for National Economy in the first half of 2011, but from July 1, 2011 this was taken over by the Ministry of the Interior. As of September 1, 2011 the regulatory framework of public works were aligned with the conditions of unemployment assistance. A new type of employment relationship was created, the public works contract that removes participants of a public works program from the coverage of labour legislation in many aspects (such as the statutory minimum wage). The previous income maintenance assistance was replaced by the income maintenance assistance.

Different types of assistance are available for public works programs. Assistance can be paid for short- and long-term and nationwide public works program. Public interest agency work is also eligible for assistance if it employs people claiming income replacement assistance and also provides training and mentoring. In these cases the assistance equals to the amount of public works minimum wage. Furthermore, any employer recruiting workers claiming income replacement assistance is eligible for assistance; these workers should be paid the statutory minimum wage and there is also a requirement of continued employment.

Main legislation

The status quo on December 31, 2010 was set out by Government regulation no. 23/2001 on Assistance for Public Works. The financial framework for 2011 was defined by Act 169 of 2010 on the 2011 Budget of the Republic of Hungary.

Road to Work: public works programs

Four pillars of the new public works program

New type of employment contract: public works contract with public works wage

7 The minister responsible for public works can launch pilot schemes for short term, longer term and national public works programs. Pilot schemes are implemented in water management, agriculture, waste management (clearing up illegal waste dumping sites), the maintenance of unpaved roads used for agricultural purposes, road maintenance, winter employment.

New legislation: Rules after January 1, 2011 were laid down by Government regulation no. 375/2010 (31. 12) on Assistance for Public Works; rules after September 1, 2011 were defined by Act 106 of 2011 that also amended a number of other acts such as the Employment Act and Labour Code. Further rules can be found in: Government regulation no. 170/2011. (24. 08) on Wage Setting and Statutory Minimum Wage in Public Works and Government regulation no. 171/2011. (24. 08) on the Amendment of Certain Government Regulations in Relation to Public Works.

On-line resources: http://www.munka.hu/engine.aspx?page=nfsz_kozfoglalkoztatas

7. Start-up incentives

How does it work? Start-up measures provide financial support to promote entrepreneurship by encouraging the unemployed and other target groups to start their own business or to become self-employed.

What is the impact on employment? Unemployed people successfully starting their own business will reduce the unemployed count and increase the level of employment, potentially by employing others. According to the evaluation by *O'Leary* (1998) business start-up schemes significantly improved the labour market situation of participants. *Galasi, Lázár and Nagy* (2003) found the highest re-employment rates among participants of business start-up schemes. However results were explained by the more favourable than average characteristics of beneficiaries.

Business start-up can reduce the number of unemployed

Situation in September 2010. The target group of business start-up measures can include registered jobseekers and people claiming rehabilitation allowance who become self-employed, set up a company or become an agricultural producer.

The assistance can be paid as an interest-free non-repayable capital grant or repayable working capital loan and / or a non-repayable assistance up the amount of the statutory minimum wage and assistance towards the cost of business advisory services.

Self-employment as a private entrepreneur, as part of a business corporation or as an agricultural producer

Changes between September 2010 and September 2011. The measure has been unchanged for years and there were no changes in this period either.

Main legislation

The measure is regulated by Article 17 of Act 4 of 1991 (Employment Act) and Article 10 of MoL regulation no. 6/1996. (16. 07).

On-line resources: http://www.munka.hu/engine.aspx?page=ak_tamogatasok.

Supports

8. Unemployment (jobseeker's) benefits

How does it work? Unemployment benefits and supports aim to compensate individuals for loss of wage or salary through the provision of cash benefits when a person is capable of working and available for work but is unable to find suitable employment. Entitlement to unemployment benefit is normally conditional upon the beneficiary actively seeking work but, in certain cases – for example older workers – the condition may be relaxed.

What is the impact on employment? People who lose their job usually face a loss of earnings for some months if they are not willing to take up a new job that is less favourable than the one they have just lost. The impact of unemployment benefit is not clearcut: on the one hand it provides out-of-work income that might reduce willingness to work. On the other hand adequate assistance – level and duration – allows more efficient job-search and thus reduces the duration of unemployment, increases employment and leads to better job-matching than in the absence of assistance. *Galasi and Nagy* (2002), *Micklewright and Nagy* (1995), *Köllő and Nagy* (1995), *Wolff* (2001) wrote about the impact of unemployment benefit on employment. These studies showed that shortening the duration of the benefit period did not or only slightly increased labour supply while the financial situation of claimants deteriorated substantially.

Situation in September 2010. There were two types of benefit:

1. *Unemployment assistance:* is paid to (former) workers satisfying criteria for membership in an unemployment insurance scheme. It is often paid only for a limited period.

2. *Unemployment assistance*: is usually paid to workers who either fail to satisfy criteria for membership in an unemployment insurance scheme (have not paid contributions for long enough) or who have exhausted insurance-based unemployment benefit entitlement. Unemployment assistance is normally means tested.

Between November 1, 2005 and August 31, 2011 there were three types of unemployment benefit and assistances. These were primarily insurance-based provisions with some means-tested elements. The public employment service was responsible for the administration of both supports. There was a gradual shift towards the requirement of job search or as a minimum, cooperation with the job centre in the eligibility conditions for social assistance during the 2000s, and this is still the case. Unemployment benefits are directly linked to the current public works scheme; they are managed by local councils that require claimants (apart from people claiming regular social assistance) to cooperate with the employment service. The main characteristics of supports are summarised in *Table 1*.

Shortening the benefit period has only slightly increased labour supply but the financial situation of claimants got significantly worse

Table 1: Main characteristics of jobseeker's and working age benefits and supports between September 1, 2010 and August 31, 2011*

Benefit	Entitlement conditions	Minimum	Maximum
Jobseeker's allowance			
Phase 1 (half of the benefit period or up to 91 days)	A minimum of 365 days of contribution payment within the previous four years (employee, self-employed, business owner who has paid business contribution)	Sixty per cent of taxable wage, no less than 60% of the statutory minimum wage applicable on the first day of benefit period: 46,800 HUF / month – 1,560 HUF / day	Sixty per cent of taxable wage, no more than 120% of the statutory minimum wage applicable on the first day of benefit period: 93,600 HUF / month – 3,120 HUF / day
Phase 2 (the remaining benefit period, up to 179 days)	More than 365 days of contribution payment within the previous four years	Sixty per cent of the statutory minimum wage applicable on the first day of benefit period: 46,800 HUF / month – 1,560 HUF / day	
Jobseeker's assistance			
Type 1: 90 days; 180 days for people aged over 50	Entitled to Jobseeker's Allowance for no less than 180 day but has exhausted benefit entitlement and not found a job	Forty per cent of the minimum wage: 31,200 HUF / month – 1,040 HUF / month	
Type 2: 90 days	Has been employed for 200–365 days within the previous four years.		
Type 3: up to old age pension age but no more than five years	Within five years from old age pension age and has received Jobseeker's Allowance for at least 140 days but has exhausted benefit entitlement.		
Income maintenance assistance (until December 31, 2010)	If more than one of the following apply: lack of job vacancies, low income, has exhausted entitlement for *Jobseeker's Assistance,* available to start work and willingness to cooperate with the job centre and accept suitable jobs in the previous year	The minimum amount of old age pension: 28,500 HUF / month	
Income replacement assistance (Between January 1 and August 31, 2011)	Participation in work or labour market program for at least 30 days, willingness to accept any job.		
Regular social assistance	Reduced work capacity (long term condition, aged 55 or over, lack of suitable childcare for child(ren) aged under 14, other conditions as set out in the regulation) and on a low income (also do not have savings above a certain amount), exhausted entitlement to *Jobseeker's Assistance,* not required to cooperate with the NES	Dependent on *family income* but up to the net full-time minimum wage (60,600 HUF / month)	

* The amounts indicate rates applicable on August 31, 2011.

Changes between September 2010 and September 2011. The system of unemployment (jobseeker's) benefits changed radically as of September 1, 2011: the higher amount and benefit period of Jobseeker's Allowance was reduced significantly and there were also changes in the entitlement conditions. Type 1 (paid after Jobseeker's Allowance) and Type 2 (200 days of employment) of Jobseeker's Assistance were phased out. Entitlement conditions to Type 3 assistance changed and now it can be paid only to people within five years of old age pension age.

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With the introduction of the new public works scheme social benefits changed too. The Income Replacement Assistance was replaced by O*ut-of-work Assistance* with stricter entitlement conditions. The characteristics and rates of new jobseeker's and social supports as of September 1, 2011 are presented in *Table 2*.

Table 2: Main characteristics of jobseeker's and other working age supports as of September 1, 2011

Benefit	Entitlement conditions	Amount
Jobseeker's Allowance (benefit period minimum 36, maximum 90 days)	Paid contributions for at least 360 days within the previous five years, a 10-day contribution period corresponds to one day benefit period.	Sixty per cent of the taxable wage, up to 100% of the statutory minimum wage effective on the first day of benefit period: 78,000 HUF / month – 2,600 HUF / day
Pre-pension Jobseeker's Assistance	Within five years from old age pension age and has received Jobseeker's Allowance for at least 90 days but has exhausted benefit entitlement within the previous three years, has enough qualifying years for old age pension	Forty per cent of the statutory minimum wage: 31,200 HUF / month – 1,040 HUF / day
Out-of-work Assistance	Eligible for working age assistance, except those eligible for regular social assistance. Participation in work or labour market program for at least 30 days, willingness to accept any job and keeps living environment clean if required by the local council	The minimum amount of old age pension: 28,500 HUF / month
Regular social assistance	No change	Dependent on *family income* but up to the net full-time minimum wage (60,600 HUF / month)

[*] Entitlement to benefits can be gained through employment, self-employment or business ownership provided they satisfied the requirement of paying unemployment contributions.

Main legislation

Unemployment benefits are set out in Chapter 5 of Act 4 of 1991 (Employment Act) and Article 25.1 of Act 3 of 1993 on Social Administration and Social Provisions. Social assistance is regulated by Act 3 of 1993 and Government regulation no. 63/2006. (27. 03) on Detailed Rules for Claiming, Awarding and Paying Cash and In-Kind Benefits.

New legislation: Act 106 of 2011 on Public Works and the Amendment of Public Works and other Related Legislation.

On-line resources: http://www.munka.hu/engine.aspx?page=allaskeresoknek_munkanelkuli_ellatasok

9. Early retirement

Partial early retirement for those whose chances of re-employment are small

How does it work? These programs facilitate the full or partial early retirement of older workers who are assumed to have little chance of finding a job or whose retirement facilitates the placement of an unemployed person or a person from

another target group. This does not include pension paid to beneficiaries over the standard retirement age as established in the reference pension scheme or pre-retirement pension that is discussed in more detail under *Old age pensions*.

What is the impact on employment? Although conditional early retirement increases the level of inactivity the obligation to replace a retiree reduces unemployment in the short run. This measure has not been studied in Hungary, however analysing the long-term effect of early retirement *Layard, Nickell and Jackman* (1991) concluded that if it is used extensively its short-term effect soon disappears through wage adjustment and unemployment increases again.

Situation in September 2010. This measure no longer exists in Hungary, it is mentioned here as a matter of interest. (Previously the early pension was a similar measure.) Two types of early retirement:

1. *Conditional early retirement*: facilitates the early retirement of older workers and obliges the employer to replace the retiree with an unemployed person or a person from another target group.

2. *Unconditional early retirement:* facilitates the early retirement of older persons and, for those retiring from employment, where there is no obligation for the employer to replace the retiree. Unconditional early retirement supports can only be included when they offer benefits due to unemployment or to job reduction caused by economic measures such as the restructuring of an industrial sector or of a business enterprise.

Changes between September 2010 and September 2011. No changes in this area.

Mixed interventions (complex programs)

Mixed interventions encompass the joint and synergic application of more than one of the above measure and support. They are distinguished from a simple combination of measures by using the potential synergies of different measures that enhance their positive effect.

The main building blocks of mixed interventions are the labour market policy measures presented above; so at least the same measure-specific effects can be expected. However in well-designed mixed interventions the components enhance each other's effects. This might also mean that measures which have no effect or negative effect on their own, might have a positive effect as part of a mixed intervention. Evaluation studies of labour market policies often point out that isolated programs are not effective (enough). However, a common conclusion is that well-designed complex programs can potentially be effective in cases where individual measures failed to achieve any results (*Kézdi and Hudomiet,* 2008). The impact of complex programs in Hungary has not yet been studied.

The most important complex programs of the studied period were co-financed by the EU within the framework of the Social Renewal Operational

Program (SROP). These were SROP 1.1.1 (*Promoting the Rehabilitation and Employment of People with Reduced Work Capacity*) and SROP 1.1.2/1.1 (*Decentralised Programs for the Employment of Disadvantaged People in the Convergence Regions / Promoting the Employment of Disadvantaged People in the Central Hungary Region*) and SROP 1.1.3 (Road to the World of Work). SROP project 1.1.1 supports people with reduced work capacity, project 1.1.2 and project 1.1.4 supports young entrants, people aged 50 years or over, low-educated and returning to work after having a child / children. The only target group of project 1.1.3 are registered jobseekers receiving social assistance (i.e. income maintenance assistance and later income replacement assistance).

Main complex programs with EU funding – SROP

The participants of SROP program 1.1.1 can chose services and supports from a range of measures that support training, work experience and work practice through supported employment, work trials, and self-employment. These are accompanied by supports and services that help the rehabilitation and improve the employability and adaptability of participation. The direct objective of SROP program 1.1.2 is to support the labour market entry of disadvantaged people using mixed interventions that are tailored to individual characteristics and local opportunities and demands. The program started on January 1, 2008 and ended on April 30, 2011. After April 20, 2009 jobseekers who had lost their job as a result of the economic recession also became eligible to enrol. The program was re-launched on May 1, 2011 including new target groups such as people claiming income replacement assistance and out-of-work assistance.

Participants of SROP programs, 1.1.2, 1.1.3 and 1.1.4 can access the whole range of LMP measures, and they are also eligible to receive a reimbursement of their expenditures (e.g. travel costs) to access the selected services. However in some cases there is no synergy between the individual program components.

Main legislation

SROP priority projects 1.1.1, 1.1.2 and 1.1.4 are set out in Government decree no. 1013/2011. (19. 01) on the Action Plan of the Social Renewal Operational Program for 2011–2013

LABOUR MARKET RELATED POLICY MEASURES

Labour markets are also influenced indirectly by measures other than labour market / employment policies – for example by the tax system that influences the price of labour. The definition of these indirect measures is based on a simplified, but still comparable, version of the LABREF database.

10. Labour taxation

Tax system

Corporate incomes and labour taxation

What is the impact on employment? Taxes influence prices on the labour market and they directly reduce the income of the affected parties. The extent of

this is usually dependent on the wage elasticity of labour demand and supply, which is influenced by the distribution of the tax burden between the employer and the employee, as well as the taxes influencing the revenue of the company at the given output. This chapter considers corporate taxes and taxes on labour. Income tax increases the wage cost and reduces the net income that in turn reduces demand for labour. The tax rate on labour and capital influences their share in production. Not only the rate but the structure of income tax is important: the different tax burden on certain groups can influence the structure of the labour supply. As an indirect labour market effect, it can be expected that services financed from tax revenues contribute to the operation of the economy including the labour market, for example by providing adequate infrastructure and public services. If there is no substantive relationship between taxation and public services, then tax morale declines and undeclared employment rises. It is important to note that work can be remunerated in many ways and many of these are exempt from corporation and income tax: for example business income that is not paid out, simplified business tax or the income of some primary producers in agriculture. Many of these are relevant in employment but are not discussed here.

Scharle et al. (2010) considered the effect of taxes on labour supply. The labour demand of the business sector according to industries was discussed by *Kőrösi* (2005) and according to education levels by *Kertesi and Köllő* (2002). *Bakos, Benczúr and Benedek* (2008) analysed the impact of income reporting, however it was not possible to separate the impact of labour supply and underreporting of income. The general finding of these studies was that both the price and elasticity of labour demand was similar to those in developed market economies, and among high earners a medium wage elasticity of labour supply was measured (that could not be separated from the effect of income reporting).

Situation in September 2010. The corporation tax is payable on the taxable revenue of the company and its rate was 10% up to 250 million forints and 19% above that (effective from July 1, 2010). In economic terms the taxable revenue is the company's profit, the exact definition is laid out in the law. The self-employed and corporations can also opt for the simplified business tax. Its rate is 30% of the turnover and it redeems all other taxes. The tax on saving interests is 20%.

There were two personal income tax rates in 2010 and the taxable income was based on the so-called "semi supergross" income (127% of the pre-tax wage) that is the total amount of the pre-tax wage and employee contributions. Income tax rates and tax-brackets are as follows: 21.6% for an annual income up to 3,937 million forints (17% of the taxable income), and 40.6% including additional tax on incomes above that (32% of the taxable income without that). People earning less than 3,188 million forints per year are entitled to write off 15,100 forints per month from their pre-tax wage which reduces

Dual-rate taxation in 2010

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the effective lower tax rate. This is gradually reduced up to an annual income of 4,698 million forints, which is the upper limit for this allowance. There are various income tax reliefs, but their extent does not significantly influence the tax burden for the majority of taxpayers.

Changes between September 2010 and September 2011. Corporate tax and income tax changed in 2011. There are still two rates for corporate tax, but the tax bracket for the 10% rate were extended to 500 million forints, and above this the tax rate is 19%. Thus the tax burden of employers with taxable revenue between 250 and 500 million forints nearly halved. The tax on saving interest was reduced to 16%.

Income tax reliefs and tax credits

There were important changes in the system of personal income tax. First, the two rates were replaced by a single rate that is 20.3% of the pre-tax wage (16% of the taxable income). Moreover, families with children receive considerable tax relief: families with one child / two children can write off 62,500 forints, families with three or more children 206,240 forints per month from their taxable income. The relief can be shared by both parents so it might automatically reduce the tax burden of the second earner just returning to work.[8] The amount that can be written off the taxable income by lower earners was reduced to 12,110 forints per month and can be used up to an annual taxable income of 2.75 million forints and then it is gradually reduced up to an annual income of 3.96 million forints. Thus, changes have a mixed effect. First, the nominal tax rate was reduced slightly in the previous lower tax bracket and significantly in the previous upper tax bracket. Second, reducing the amount that can be written off the taxable income by lower earners increases their effective tax rate, which ultimately increases their tax burden. Third, the income tax of families with children decreased significantly regardless of the effect of the above changes, and if their taxable income is large enough they might not even have to pay income tax.

8 It is important to note that the discount can be used jointly by both parents therefore it does not create a gap between the marginal tax rate of first and second earners (for example parents returning to work after caring for children) over a broad income range.

Apart from changes to taxation, the rules of simplified employment were reviewed too. People who work under the terms of simplified employment need to fill in a tax return form and pay income tax only if they had other sources of taxable income or their total annual income was more than 840,000 forints.

Main legislation

Corporation tax: Act 81 of 1996; personal income tax: Act 117 of 1995

New legislation: Amendment of Tax Law: Act 123 of 2010; Amendment of Simplified Employment: Act 75 of 2010

On-line resources: http://www.apeh.hu/adokulcsok_jarulekmertekek/fizetendo_jar

Contributions

Link between contribution payment and services received – motivation

What is the impact on employment? Contributions, similarly to taxes, influence prices on the labour market and reduce the income of the affected parties.

Their effect is similar to that of taxes (see description above). As an indirect labour market effect it can be expected that systems financed by contribution payments help to maintain and improve the work capacity of the population. Also, personalised future entitlements based on contribution payments might enhance willingness to pay compared to taxes as the use of tax revenues is more difficult to trace. However, if there is no clear relationship between contribution payments and the services received, then undeclared work or different employment statuses (business owner, subcontractor, consultancy, simplified employment etc.) become more common, particularly for second jobs.

Situation in September 2010: The rates of employer's and employee's contributions in 2010 are summarised in *Table 3.*

Table 3: Employer's and employee's contribution as a percentage of pre-tax wages

			Per cent
Contributions paid by employers			
Social security contribution	Pension contribution		24.0
	Health care and labour market contribution	Health care services	1.5
		Health benefits	0.5
		Labour market contribution	1.0
Pre-retirement pension contribution[*]			13.0
Contributions paid by employees			
Pension contribution[**]			9.5
Health care and labour market contribution	Health care services		4.0
	Health benefits		2.0
	Labour market contribution		1.5

[*] Twenty-five per cent of the pre-retirement pension contribution is paid by the state budget, therefore employers and self-employed pay only 9.75%. This contribution is paid only by people employed in certain professions.
[**] Contributions paid by members and non-members of voluntary pension funds are not shown separately.
Source: adapted from nav.hu.

Changes between September 2010 and September 2011. With the reform of the pension system as of January 1, 2011 the previously separate statutory contributions (paid from the pre-tax wage of earners) to the state and private pension pillars were replaced by a single contribution. The rate increased from a combined 9.5% to 10% and contributions paid from other incomes – simplified employment, simplified business tax – increased accordingly too. There were no other changes, previous rates and taxable bands remain in effect.

In a separate reform, the rules of simplified employment changed to allow the payment of a flat-rate contribution – 500 or 1,000 forints per day. If somebody only works in simplified employment, they are not insured but they qualify for a pension, health provision for work-related accidents and unemployment assistance.

Single pension contribution

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Main legislation

The pension system, including payment of all types of contributions and eligibility for private pension are set out in Act 80 of 1997, the simplified business tax is set out in Act 120 of 2005 on simplified contribution payments.

New legislation: pension reform: Act 100 of 2010 on the Freedom of Choice of Pension Funds; Act 101 of 2010 on the Amendment of Certain Laws on Private Pension Contributions; simplified employment: Act 75 of 2010; Changes in Contribution Rates: Act 123 of 2010 on the Amendment of Tax Law and Accounting Law.

On-line resources: http://www.apeh.hu/adokulcsok_jarulekmertekek/fizetendo_jar

11. Other transfers

Means-tested social assistance

Direct and indirect effects of social transfers

What is the impact on employment? Means-tested social cash benefits reduce labour supply in two ways. First, they provide an income without work; although this is a disincentive to work but it is in accordance with their aims. However, their perverse effect is that they impose a high tax on earnings around the means testing limits and can lead to welfare trap – for more on this see *Semjén* (1996) and *Cseres-Gergely and Scharle* (2008). Social transfers that influence prices or can only be spent on certain goods interfere with individual choice that might also be related to the labour market. This distortion can be explicit (for example cooked meal vouchers can increase demand for cooked meals), a direct side effect (for example instead of the provision of social housing supporting house building and home ownership might reduce geographical mobility) or an indirect side effect (for example if transport capacities are limited the universal and unlimited free travel of old age pensioners can create obstacles for travelling to work).

Situation in September 2010. The number of social benefits in Hungary is very high – there are approximately 350 different types of assistance available (see *Cseres-Gergely et al.*, 2009). These are typically limited in scope and they have a moderate labour market impact. Two main types of transfers that have significant impact on the labour market, child care benefits and regular social assistance – increasingly becoming integrated into the unemployment assistance system – are discussed separately.

Changes between September 2010 and September 2011. There were no significant changes in minor transfers, but changes in housing assistance might be worth highlighting. Previously housing assistance could only be used to pay for winter fuel but as of September 1, 2011 it can also be used to pay for rent, utility bills and other housing related costs.

Main legislation

Act 3 of 1993 on Social Administration and Social Provisions.

New legislation: Act 171 of 2010 Amending Certain Social, Child Protection, Family Benefits and Disability-Related Acts.

Child care benefits

What is the impact on employment? The labour market effect of cash benefits – similarly to other social assistance – reduces labour supply in the target group. However, benefits related to the number of qualifying years can increase willingness to work before claiming the assistance. The primary effect of these benefits is that they can reduce child poverty and that has an indirect employment effect: reducing future labour market disadvantages (this is a strong effect but it develops over a very long term, see for example *Carneiro and Heckman* [2003]). The impact of cash benefits on the labour market was discussed by *Bálint and Köllő* (2008). They found that cash benefits had a negative impact on the employment prospects of mothers returning to work and they also hampered the trend of wage increase that started at the beginning of their career. Non-cash assistance, on the contrary, improves labour market prospects for women.

Situation in September 2010. The main child care provisions can be grouped into three categories *(Table 4)*. The first group includes benefits that provide an income replacement during times when labour market participation is limited: these include the maternity benefit, child care allowance (depending on the legislation in force), child care pay and child care assistance. The second group includes assistance that rewards labour market participation: these are different forms of tax credits and reliefs. The third group includes assistance targeted at families that are not linked to labour market status: such as the family benefit and the child care allowance (depending on the legislation in force). Maternity benefit and child care pay are the highest amount, while child care allowance, child care assistance and family benefit are paid at lower rates but for a longer period. Their primary target group is expectant mothers, mothers who have just given birth or are caring for children, therefore they are mainly affected by their secondary effects (except for the family benefit).[9] The amount and importance of tax credits is limited but they have a wider target group that includes fathers and mothers as well.

The most important child care service is nursery provision for which all children under three are eligible however its availability is extremely limited.

Changes between September 2010 and September 2011. There were various changes in the system of child care assistance after January 1, 2011. Firstly, child care allowance and child care assistance regulations that entered into force on May 1, 2010 were abolished with a retroactive effect and previous benefit periods were restored. These benefits did not rise in 2011 compared to their 2010-level. The family benefit was split into two benefits: child benefit and schooling benefit (for children of compulsory school age). In the latter case if parents fail to make sure that their children receive school education and at-

Can reduce child poverty and future labour market disadvantages

Parental leave and family benefits

9 Both child care allowance and child care pay can be claimed by fathers and grandparents, although their take-up is minimal: according to the CSO's Labour Force Survey 2.4% of people receiving child care allowance and 1.2% of recipients of child care pay were men.

The amount of benefits will not increase, tax credits given a more prominent role

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tend school regularly they might lose their eligibility for the benefit. A strong emphasis was placed on tax credits and reliefs that increased significantly more than other provisions. There were no changes in the availability or eligibility for nursery provision. The possibility to take up paid work while receiving child care allowance was restricted to 30 hours per week or full-time if working from home, while people claiming child care assistance can now work up to 30 hours compared to 20 hours previously.

Table 4: Main child care provisions in September 2010

	Maternity assistance	Maternity benefit	Child care allowance	Child care pay	Child care assistance	Family benefit	Family tax credit	Nursery
Entitlement conditions	Legal residency in Hungary, at least four antenatal care visits	Previous contribution payment: 180 days within the two years before claiming the benefit for claims before May 1, 2010, 365 days for claims after that. Paid during maternity leave, up to 168 days	Universal entitlement after May 1, 2010, paid up to the second birthday of the child, previously until the third birthday	Previous contribution payment: 180 days within the two years before claiming the benefit for claims before May 1, 2010, 365 days for claims after that.	Universal entitlement, for parents caring for 3 or more children. As of May 1, 2010 it can be claimed from the second (previously third) birthday of the youngest child until the child reaches 8	Caring for a child or young person – own or adopted – aged under 20	Caring for at least three children, taxable band dependent on number of children (three children: 8,580,7000 forints; seven children: 12,400,000 forints)	Universal entitlement for children aged 0–3; eligibility: mother is not claiming child care pay and there are places available locally. Local councils with more than 10,000 inhabitants are obliged to provide nursery
Rate	One-off flat rate payment, 225% of the minimum state pension (64,125 forints in 2010)	Paid according to rules on sick leave but only if there is a loss of income. Seventy per cent of the daily average wage in the year before the child is born; no upper limit applies	At the rate of minimum state pension (28,500 forints in 2010 and 2011). Flat-rate, does not depend on the number of children except for twins.	Seventy per cent of the daily average wage in the year before the child is born, up to twice the statutory minimum wage	At the rate of minimum state pension (28,500 forints in 2010 and 2011). Flat-rate, does not depend on the number of children except for twins	The amount increases with the number of children. 12,200 forints a month for one child, 14,800 forints per child for three or more children. Higher amounts for children with long term condition and single parents.	4,000 forints per child and per month, amount dependent on total income	–
Other advantages	–	Qualifies for social security benefits	Qualifies for social security benefits	Qualifies for social security benefits	Qualifies for social security benefits	–	–	–
Work permitted	Not applicable	Not permitted	Not permitted until the first birthday of child, no restrictions afterwards	Not permitted except for work under intellectual property rights	Up to 20 hours per week or no restriction if working from home	Not applicable	Not applicable (but it can only be used if paying income tax)	Due to limited capacities it is often a *de facto* requirement and proof of contract of employment is required
Other conditions	Various exemptions, special conditions		–	–	–	–	–	–
Related expenses		–	–	–	–	Non-taxable but taken into account when calculating taxable income	–	Financial contribution often required from parents

Table 5: Main child care provisions in September 2011

	Maternity assistance	Maternity benefit	Child care allowance	Child care pay	Child care assistance	Family benefit	Family tax credit	Nursery
Entitlement conditions	Legal residency in Hungary, at least four antenatal care visits	Previous contribution payment: 365 days within the two years before claiming the benefit. Paid during maternity leave, up to 168 days.	Universal entitlement, until the child reaches 3	Previous contribution payment: 365 days within the two years before claiming the benefit	Universal entitlement, for parents caring for 3 or more children, from the third birthday of the youngest child until the child reaches 8.	Caring for a child or young person – own or adopted – aged under 20	Caring for a child or children	Universal entitlement for children aged 0–3; eligibility: mother is not claiming child care pay and there are places available locally. Local councils with more than 10,000 inhabitants are obliged to provide nursery
Rate	One-off flat rate payment, 225% of the minimum state pension (64,125 forints in 2011)	Paid according to rules on sick leave but only if there is a loss of income. Seventy per cent of the daily average wage in the year before the child is born; no upper limit applies.	At the rate of minimum state pension (28,500 forints in 2010 and 2011). Flat-rate, does not depend on the number of children except for twins.	Seventy per cent of the daily average wage in the year before the child is born, up to twice the statutory minimum wage	At the rate of minimum state pension (28,500 forints in 2010 and 2011). Flat-rate, does not depend on the number of children except for twins.	The amount increases with the number of children. 12,200 forints a month for one child, 14,800 forints per child for three or more children. Higher amounts for children with long term condition and single parents.	Amount can be written-off from taxable income: first and second child 62,500 forints per child per month, from third child upwards 206,250 forints per month	–
Other advantages	–	Qualifies for social security benefits	Qualifies for social security benefits	Qualifies for social security benefits	Qualifies for social security benefits	–	–	–
Work permitted	Not applicable	Not permitted	Not permitted until the first birthday of child, up to 30 hours after that or no restrictions if working from home	Not permitted except for work under intellectual property rights	Up to 30 hours per week or no restriction if working from home		Not applicable (but it can only be used if paying income tax)	Due to limited capacities it is often a *de facto* requirement and proof of contract of employment is required
Other conditions	–	Various exemptions, special conditions				For children of compulsory school age the benefit can be withdrawn or paid in kind if fails to attend school		–
Related expenses	–	Taxable but no contribution payment is required	–	–	–	Non-taxable but taken into account when calculating taxable income	–	Financial contribution often required from parents

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Main legislation

Social assistance is set out in Act 3 of 1993, taxes in Act 117 of 1995, contributions and qualifying for pensions in Act 80 of 1997. For child care provisions see Act 31 of 1997, for family supports see Act 84 of 1998.

New legislation: Act 171 of 2010.

12. Contracts of employment, labour law

Flexible regulation according to OECD's Employment Protection Index

What is the impact on employment? The impact of labour law can range from simply defining employment relationships to shifting the balance of bargaining power on the labour market. A legal framework that gives strong rights to employees over wage settlement, not only protects from employers but also provides more security for workers who are more embedded in the structures of the labour market. A more permissive regulation on the other hand favours "outsiders" and employers. Labour law does not extend to illegal employment so stricter conditions might push workers who are unwilling to commit themselves to a formal employment relationship towards undeclared work. Hungary ranked 11th on the OECD's employment protection index: with a score of 1.82 compared to the OECD average of 2.11, Poland's 2.01, Slovakia's 2.45 and the Czech Republic's 3.0 value (lower scores indicating more flexibility). We have no information about the impact of the legal environment but we can draw some conclusions based on the behaviour of the labour market – *Kőrösi* (2005) suggested that its flexibility was average by international comparison. *Horváth and Szalai* (2008) analysed the flexibility of the Hungarian labour market and they concluded that inflexibility was not the result of the institutional structure but the low probability of transition between labour market statuses and weaknesses of institutions supporting this transition.

Separate legislation for the business sector and the public sector

Situation in September 2010. Labour law is highly complex; its discussion would go beyond the scope of this chapter. One of the main features of labour law is that a different set of rules apply for private and public sector employment – and within this for public sector workers and civil servants. These rules cover the majority of lawfully employed workers: out of the 3.781 million workers in 2010, 3,317 worked 60 hours or more a week (CSO Stadat), the majority of them all year round. Various studies put the extent of undeclared work at around 15% of total employment (e.g. *Elek et al.,* 2009) and the protection of labour law does not extend to them. At the same time in some groups of workers the number of seasonal workers, workers with second jobs and domestic workers is above the average and atypical forms of employment, part time work and agency work are increasing rapidly. Simplified employment is a distinct legal category.

Reviewing the regulation of simplified employment

Changes between September 2010 and September 2011. The government reviewed the regulation of simplified employment. The use of this form of employment is limited by activity, frequency of work and size of the employer. In the case of simplified employment the general rules on working time, paid

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leave, agency work, sick leave and reference period. However according to the reviewed regulation pay should be no less than the statutory minimum wage – this was not explicit in the previous regulation. The amendment of the labour code entered into force in the first half of 2011. It is worth highlighting some of the changes: the default length of the probationary period is 30 days, this can be extended to three months in a contract of employment or to six months in a collective agreement; new rules allow more flexibility in setting the weekly reference period and without changes in the wage. Paid leave became more flexible and temporary agency work was defined more clearly emphasising the temporary nature of work and the obligation of equal pay for work of equal value. There were also changes in the strike law that created an obligation to provide a satisfactory service during strikes in sectors of key importance. This includes utility companies and public transport companies.

It is very important because it will probably affect many people that special rules apply for public works participants in a number or areas as of September 1, 2011 as a result of the integration of public works into labour market and social provisions. Notably permanent contracts of employment will no longer be the standard in public works however there is no probationary period and assistance should be offered with travel to work or accommodation if further away.

Special rules for public works programs

Main legislation

Act 22 of 1992 (Labour Code), Act 33 of 1992 on the Legal Status of Public Sector Workers, Act 23 of 1992 on the Legal Status of Civil Servants.

New legislation: Act 75 of 2010 on Simplified Employment and Government regulation no. 223/2010 on the Implementing of Regulations of the Act; Agriculture: Government regulation no. 218/2011 on Simplified Employment; Act 178 of 2011 on Strike Action; Act 105 of 2011 on the Regulatory Alignment of Certain Labour Legislation and Other Related Acts.

13. Old age and disability pension – disability assistance

Old age pension

What is the impact on employment? Pensions, similarly to benefits, provide an income without actual work for eligible people and thus depending on its elasticity reduces labour supply. The extent of the reduction in labour supply depends, among other things, on the size of the pension (or often its relative size to potential earnings from work). The timing of this effect depends on the entitlement conditions, mainly the pension age. If the pension age is low from a labour market perspective and people can retire without a penalty (malus) then the pension system might cause disruptions: if people can retire "too early" and with "too favourable" conditions then people who are otherwise capable of working will exit the labour market. Withdrawal from the labour market might be encouraged by a secure income without work or there might be legal restrictions on work.

"Too early" and "too good" conditions encourage the early exit of people who are capable of working

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The link between pension contribution and actual pension should be clear

Three pillars: pay as you go public, compulsory private pension and voluntary private pension

Two pillars instead of three

An indirect labour market effect might be that old age security might reduce willingness to save. If there is no substantive relationship between the amount of pension contributions and the size of pension (or the worker does not see this relationship), then the worker might try to avoid the burden of contribution payment and work illegally or if it is a secondary income, finds legal alternatives, for example operates as a business. Finally, some special pension arrangements can have further effects: it can be part of the remuneration package offered to the worker and provide further incentives to accept inconveniences of certain jobs and thus facilitate the filling of these positions. *Cseres-Gergely* (2008) analysed the labour market effect of the main characteristics of the pension system in Hungary and found that both the availability and the replacement rate of pensions had a significant impact on the likelihood of retirement.

Situation in September 2010. During most of 2010 the pension system comprised of three "pillars": the first pillar the pay-as-you-go state pillar, the second pillar the compulsory private pension fund and the third pillar the voluntary private pension fund. Contribution to the first two pillars was obligatory; participation in the third pillar as well as the amount of contribution was voluntary. Compulsory pension contributions have been discussed in the section on Taxation above. The increase of pensions during payment is set by the government based on a combination of price and wage increases. The rate of increase was set in 2010 as the average of consumer price index and wage increase if the growth of GDP is 3.5% or above. However, if the growth rate of GDP is smaller than this, pensions are increased according to the consumer price index. Compulsory private pensions have not yet been paid and annual increases of private pensions are not regulated.

People are entitled to old age pension if they reach a certain age and have enough qualifying years. The starting pension is calculated according to a formula that is primarily based on post-1988 employment history. There are no eligibility conditions attached to the payment of old age pensions. Pre-pensions can be paid at a reduced rate if the claimant does not have enough qualifying years. Nevertheless the regulations set fairly general conditions and as a result the majority of workers retire before the nominal state pension age without reducing the amount of their pension. People receiving pre-pension are only permitted a limited amount of work: if their annual earnings exceed 18 times the statutory minimum wage the payment of pension must be suspended until they reach state pension age.

Different from the pre-pension is the pre-retirement pension that can be paid to people in hazardous or dangerous jobs. For these workers there are job-specific pension ages that should not be considered as exceptions but are part of their work contract.

Changes between September 2010 and September 2011. There were fundamental changes in the pension system in the autumn of 2010 and these were

particularly unfavourable for people contributing to compulsory private pension funds. As of January 1, 2011 members of these funds have been obligated to pay the full contribution to the state pension pillar but this does not count as a qualifying period for them. Although they were given the opportunity to leave the private pension fund and return to the state-only system where their contributions are used in full. As a result of these changes the second pillar basically ceased to exist, there were only about 100,000 members left and no new membership is possible. As of January 2011 women can retire regardless of their age if they have enough qualifying years and no longer pay social security contributions. The number of qualifying years required to retire is reduced by one year for five children and by a further year for each additional child up to seven years.

Main legislation

Act 81 of 1997 on social security pensions.

New legislation: Act 154 of 2010 on Changes in the Second Pillar; Act 170 of 2010 on the Amendment of Certain Pension Related Acts and Related Laws (this includes changes in pension entitlement for women). Government regulation no. 353/2010 on Pension and Accident-Related Pension Increases.

On-line resources: http://www.onyf.hu.

Disability pension – disability provision

What is the impact on employment? Disability pension, similarly to old age pension and benefits provide an income without work and thus reduce labour supply as well as the number of hours worked. Its indirect effects are similar to those of the old age pension but probably more limited because it is less likely to happen. The size of its effect strongly depends on its availability and amount. *Scharle (*2008) looked at the relationship between the number of disability pension claims and the labour market situation using geographical data and found a significant negative relationship between the employment rate and the number of disability pension claims.

Situation in September 2010. People are entitled to disability pension if they have enough qualifying years and lost more than 79% of their work capacity, or between 50 and 79% of their work capacity and they cannot be rehabilitated. For accident-related disability pensions previous contribution payment is not necessary. A further condition is that claimants are out of work or if they work they are earning less than twice the disability pension or less than the statutory minimum wage. The starting pension is based on the length of the qualifying period. Disability pensions are increased in the same manner as the old age pensions. If the re-assessment of disability finds that the loss of work capacity is less than 79%, entitlement to disability pension stops.

People with a loss of work capacity between 50–79% are eligible for rehabilitation allowance for the length of rehabilitation – up to three years. The

amount of this is 120% of the disability pension the claimant would be entitled to, and no less than 120% of the minimum rate of disability pension. To be eligible for the allowance people have to participate in vocational rehabilitation and cooperate with the employment service.

Changes between September 2010 and September 2011. There were no significant changes in disability pensions in the studied period.

Main legislation

Act 84 of 2007 on Rehabilitation Contribution, Government regulation no. 353/2010 on Pension and Accident-Related Pension Increases.

On-line resources: http://www.orszi.hu/index.php?ID=76

14. Wage bargaining and wage regulation, interest representation

What is the impact on employment? The impact of wage bargaining and wage regulation heavily depends on their characteristics (the level of coverage: national, sectoral or company-level collective agreement), whether it facilitates or hinders the adjustment of wages to the equilibrium value – defined by other factors – and also the structure of the national economy and its level of integration into the global economy. Therefore there is no one optimum model (*Calmfors,* 1993).

Different rates of minimum wage for different groups of employees

A special institution of wage regulation is the statutory or contractual minimum wage which is the lowest wage an employee or specific groups of employees must be paid. The employment effect of this is usually negative but it can be neutral if the employer has considerable market strength (*Manning,* 2003). The impact of wage setting on employment has not been explored in Hungary. The effect of wage coordination on employment during the economic crisis was briefly discussed by *Köllő* (2011). The impact of the statutory minimum wage on employment was analysed by *Köllő* (2001), *Reizer* (2011) and relevant results are also reported by *Kézdi and Kónya* (2009).

Tripartite National Interest Conciliation Council

Situation in September 2010. There is a dual system of wage bargaining in Hungary. Public sector pay is defined by a separate pay scale in the annual state budget. Wages in the business sector – apart from the statutory minimum wage mentioned above – are decided freely through decentralised negotiations. The lowest amount of pay is limited by the statutory minimum wage set at different levels for skilled and unskilled workers since 2006. The minimum wage was negotiated in the tri-partite National Interest Conciliation Council (NICC) with representatives of the government, employers and employees before January 1, 2011. Union membership is low in Hungary and instead of the sectoral wage negotiations, common in some parts of Western Europe (although there are some of these in Hungary as well), wages are influenced predominately by company level collective agreements. The impact of these on wages however, is not significant (*Neumann,* 2001), and is more common in dense markets and state owned companies (*Kertesi and Köllő* 2003).

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Changes between September 2010 and September 2011. There were two important changes in the system of wage bargaining in 2010. First, the National Interest Conciliation Council ceased to exist and was replaced by the National Economic and Social Council. This replaces tri-partite negotiations with a multi-partite system that includes churches, chambers and representatives of non-governmental organisations. Second, the minimum wage is no longer decided in negotiations but is set by the government. Furthermore there is a new, indirect institution of government intervention: employers that do not compensate their workers (earning up to 300,000 forints a month) for any decline in net wages after changes in taxation will be excluded from public procurements and subsidies for two years. Another important change is that the statutory minimum wage does not apply to public works participants but is set separately by the government. Its amount was 57,000 forints a month in 2011, 73% of the statutory minimum wage.

Main legislation

Act 22 of 1992 on the Labour Code, Act 7 of 1989 on Strike Action, Act 73 of 2009 on the National Interest Conciliation Council, Act 74 of 2009 on Sectoral Dialogue Committees and Meso-Level Social Dialogue.

New legislation: Act 93 of 2011 on the National Economic and Social Council, Government regulation no. 337/2010 on the Statutory Minimum Wage, Government regulation no. 352/2010 on the Salary Compensation of Public Sector Workers, Act 99 of 2011 on Amending Certain Laws to Encourage the Wage Increase of Low-Paid Workers, Act 106 of 2011 on Public Works and the Amendment of Public Works Related Regulations, Government regulation no. 170/2011 on Wage Setting and Statutory Minimum Wage in Public Works, Act 178 of 2011 on the Amendment of Act 7 of 1989 on Strike Action.

On-line resources: http://www.liganet.hu/

15. Measures related to migration and mobility

What is the impact on employment? The primary effect of internal, external and temporary mobility, migration and commuting is that they influence the geographical distribution of labour. Its impact on employment is strongly related to the velocity of capital mobility and price adjustment and flexibility. If this is fast then areas with a high migration output would shortly become attractive for capital investment and relocation of workers. If this is slow, then increased mobility can preserve the disadvantaged situation of these areas. International experience suggests that if this compensating mechanism is very slow and changes that could substantially reduce existing disparities can be measured in decades (*Cseres-Gergely,* 2003, *Hárs,* 2011). Our understanding of the recent relationship between mobility and the labour market in Hungary is very limited, but it is likely that the direction and extent of mobility in the 1990s was influenced by economic incentives (local wages and unemploy-

Multi-partite National Economic and Social Council

Limited mobility

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ment (*Cseres-Gergely,* 2005, 2002). There has been no evaluation of mobility schemes to date.

Situation in September 2010. Schemes designed to influence mobility are typically small scale and provide assistance for travel to work arrangements, living costs and recruitment of workers. There are no special programs to support international labour mobility; the information system supporting labour mobility within Europe has been discussed under section 1 on labour market services. Citizens of the European Economic Area and recognised refugees do not need a work permit to take up employment in Hungary, however they need to register themselves at the local job centre.[10] Others can be employed with a valid work permit for which the first step is the publication of the vacancies. There is a simplified procedure to renew existing work permits.

EU Blue Card

Changes between September 2010 and September 2011. The citizens of Hungary can take up employment in Austria and Germany without any restrictions as of May 1, 2011. The EU Blue Card can be used in Hungary from 2011 – this entitles skilled migrants from outside the EU to live and work in a Member State under certain conditions.

Mobility can be enhanced by changes in the housing assistance that can now be used to pay for rent as well rather than for winter fuel only.

Main legislation

Act 4 of 1991 on Promoting Employment and Unemployment Benefits, Government Regulation no. 39/1998. (04. 03) on Supports to Reduce the Cost of Travel to Work for Workers, and Government regulation no. 355/2007 on the Recruitment of Workers and Transitional Provisions on the Free Movement of Workers in Hungary, Government regulation no. 355/2009 on the Employment of Third Country Nationals in the Republic of Hungary, and Ministry of Social Affairs and Employment (MoSAE) regulation no. 16/2010 on Issuing Work Permits for Third Country Nationals in Hungary.

New legislation: Government regulation no. 168/2011 on Issuing the EU Blue Card and the Amendment of Certain Migration-Related Government Regulations.

16. Management, funding and evaluation of employment policy

The management of employment policy sets the policy objectives, elaborates programs, monitors implementation and coordinates evaluation. An important part of this is the allocation of funding to policy measures and deciding about the evaluation of policies – whether it should be continuous monitoring or pre- or post-evaluations.

What is the impact on employment? Effective employment policy that also takes into account the economic context can increase employment and reduce unemployment contributing to the growth of the economy. To ensure that policy interventions are effective they need to be based on the understanding

10 But this often does not happen in the absence of sanctions.

of the existing situation, the potential impact of possible interventions needs to be considered and the appropriate interventions need to be selected and implemented. The relationship between policy making and labour market outcomes has not been investigated empirically.

Situation in September 2010. The top level management of Hungarian employment policy was the state secretariat responsible for employment policy within the Ministry for National Economy. The state secretariat covers two main policy areas: vocational and adult education and training (served by a department and a ministerial commissioner) and employment policy. This field is served by the department of employment strategy and methods and a department responsible for the management of labour market programs and the Labour Market Fund. These units support the implementation of political decisions and prepare policy proposals as required. They are responsible for the regulation of employment programs and the policy management of SROP priorities 1 and 2. They also managed certain public works programs (until June 2011). The Public Employment Service with its regional job centres, local job offices and the central Employment and Social Office supported their work. The employment service had a dual aim: the administration of unemployment benefits and the provision of services to eligible job seekers on the one hand, and the implementation of employment policy at the local level on the other. The activities of employment policy were supported by various agencies such as the National Family- and Social Affairs Institute.

The system was entirely financed from the Labour Market Fund in 2010 that provided funding for the majority of employment policy measures.

Changes between September 2010 and September 2011. There were a number of important changes in this period. The name of the PES changed to National Employment Service (NES) and the Employment and Social Office is now called the Employment Office. The re-structuring of regional job centres took place in two phases. First they were divided into priority and non-priority county job centres (the 170 local job offices were temporarily put under the management of the latter) and merged into county government offices. As of October 1, 2010 county offices were again responsible for the management of the local job offices in their own catchment area. The role and possibility of the Employment Office to influence policy making and propose measures increased according to its new statute.

With the launch of the new public works program the earlier distinction between different types of public works schemes ceased to exist from July 1, 2011. The Ministry of Interior became responsible for this program, although the local administration is carried out by the employment service. The allocation of funding to employment policy within the state budget changed significantly: a number of items are no longer funded by the Labour Market Fund and as a result of the re-structuring the NES no longer has its own budget – except for

Employment policy institutions

Organisational changes

Single public works program under the management of the Ministry of Interior

Major changes in funding

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the Employment Office: the budget of job centres and offices were merged into the budget of government offices.

The government adopted the action plan for the new SROP programs that sets out the most important components of employment policy for the coming years with hundreds of millions of forints allocated to them.

On January 1, 2011 the Ecostat Government Centre for Impact Assessment was established with the objective of assisting government policy making in all areas with analytical services, ex ante and ex post program evaluations.

As of January 1, the name of the National Rehabilitation and Social Assessment Institute was changed to the National Rehabilitation and Social Office. The new regulation expanded the scope of activities and authority of the office. The Office is a forensic and rehabilitation assessment authority, social authority and is also responsible for the inspection of services.

There were changes in the government's labour market research structure: the National Family and Social Affairs Institute is no longer involved in labour market research and labour market researchers were transferred to the Employment Office.

Main legislation

Government regulation no. 1250/2010 on the Draft National Reform Program for the Implementation of Europe 2020 Strategy and the Preparation of the Final Action Plan, Government regulation no. 1114/2011 on the National Reform Program of Hungary and its Implementation, Act 153 of 2010 on the Amendment of Certain Acts in Preparation for the 2011 Budget, Act 169 of 2010 on the 2011 Budget, Government regulation no. 357/2010 on the Amendment of Certain Government Regulations on Social Services in Relation to the Amendment of Act 171 of 2010, Government decree no. 1246/2011 on SROP Priority Project 1.1.2 "Improving the employability of disadvantaged people (decentralised programs in Convergence regions)", Government decree no. 1148/2011 on Government Measures in Relation to the Introduction of Electronic Exchange of Data Based on EC regulation no. 883/2004 on the Coordination of Social Security Systems, Government Regulation no. 331/2010 on the National Rehabilitation and Social Office, 332/2010. (27. 12) Amending Certain Government regulations in Relation to the Activities of the National Rehabilitation and Social Office.

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STATISTICAL
DATA

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Statistical tables on labour market trends that have been published in The Hungarian Labour Market Yearbooks since 2000 can be downloaded in full from the website of the Institute of Economics: http://adatbank.mtakti.hu/tukor

DATA SOURCES

ALMPs	Active Labour Market Policies
CIRCA	Communication & Information Resource Centre Administrator
NMH	NLO [National Labour Office]
NMH BT	NLO Wage Survey
NMH REG	NLO Unemployment Register
NMH SREG	NLO Unemployment Benefit Register
NMH PROG	NLO Short-term Labour Market Projection Survey
KSH	Table compiled from regular CSO-publications [Central Statistical Office]
KSH IMS	CSO institution-based labour statistics
KSH MEF	CSO Labour Force Survey
KSH MEM	CSO Labour Force Account
MPA	Labour Market Fund
NAV	NTCA [National Tax and Customs Administration]
NEFMI	Ministry of National Resources
NEFMI STAT	Ministry of National Resources, Educational Statistics
NFSZ	NEO [National Employment Service]
NFSZ IR	NFSZ and NMH integrated tracking system
NGM	Ministry of National Economy
NSZ	Population Census
NYUFIG	Pension Administration
ONYF	Central Administration of National Pension Insurance
TB	Social Security Records

EXPLANATION OF SYMBOLS

(–)	Non-occurence
(..)	Not available
(n.a.)	Not applicable

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Table 1.1: Basic economic indicators

Year	GDP[a]	Industrial production[a]	Export[a]	Import[a]	Real earnings[a]	Employment[a]	Consumer price index[a]	Unemployment rate
1989	100.7	95.0	100.3	101.1	99.7	98.2	117.0	..
1990	96.5	90.7	95.9	94.8	94.3	97.2	128.9	..
1991	88.1	81.6	95.1	105.5	93.0	92.6	135.0	..
1992	96.9	84.2	101.0	92.4	98.6	90.3	123.0	9.8
1993	99.4	103.9	86.9	120.9	96.1	93.8	122.5	11.9
1994	102.9	109.7	116.6	114.5	107.2	98.0	118.8	10.7
1995	101.5	104.6	108.4	96.1	87.8	98.1	128.2	10.2
1996	100.5	103.2	104.6	105.5	95.0	99.1	123.6	9.9
1997	104.1	111.1	129.9	126.4	104.9	100.1	118.3	8.7
1998	104.7	112.5	122.1	124.9	103.6	101.4	114.3	7.8
1999	104.1	110.4	115.9	114.3	102.5	103.2	110.0	7.0
2000	104.9	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	104.1	103.2	105.9	105.1	113.6	100.1	105.3	5.8
2003	104.0	106.9	109.1	110.1	109.2	101.3	104.7	5.9
2004	104.5	107.8	118.4	115.2	98.9	99.4	106.8	6.1
2005	103.2	106.8	111.5	106.1	106.3	100.0	103.6	7.2
2006	103.6	109.9	118.0	114.4	103.5	100.7	103.9	7.5
2007	100.8	107.9	115.8	112.0	95.4	99.9	108.0	7.4
2008	100.8	100.0	104.2	104.3	100.8	98.8	106.1	7.8
2009	93.3	82.2	87.3	82.9	97.6	97.5	104.2	10.0
2010	101.2	110.5[b]	116.8	115.0	101.5	100.0	104.9	11.2

[a] Previous year = 100.
[b] Manufacturing production index: based on sub-annual data, subsample of at least 5 employees, 2001–2009: without water and waste management, including entreprises with less than 5 employees.
Source: Employment: 1989–1991: *KSH MEM*; 1992–: *KSH MEF*. Other data: *KSH*; import-export: volume index.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent01_01

Figure 1.1: Annual changes of basic economic indicators
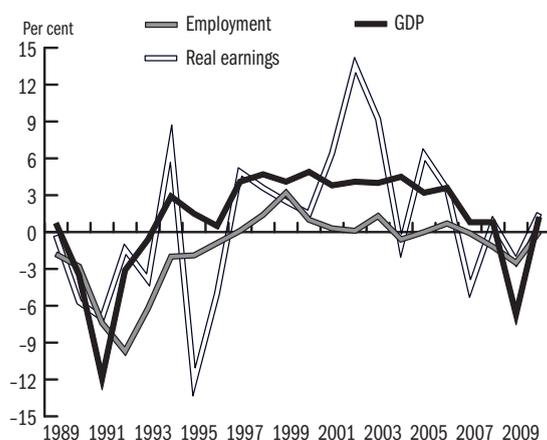
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena01_01

Figure 1.2: Annual GDP time series (2000 = 100%)
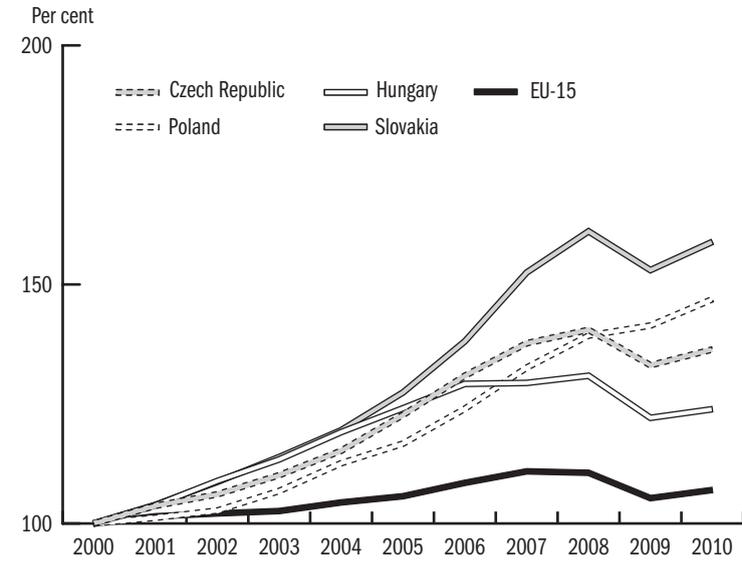
Source: *Eurostat.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena01_02

Figure 1.3: Employment rate of population aged 15–64
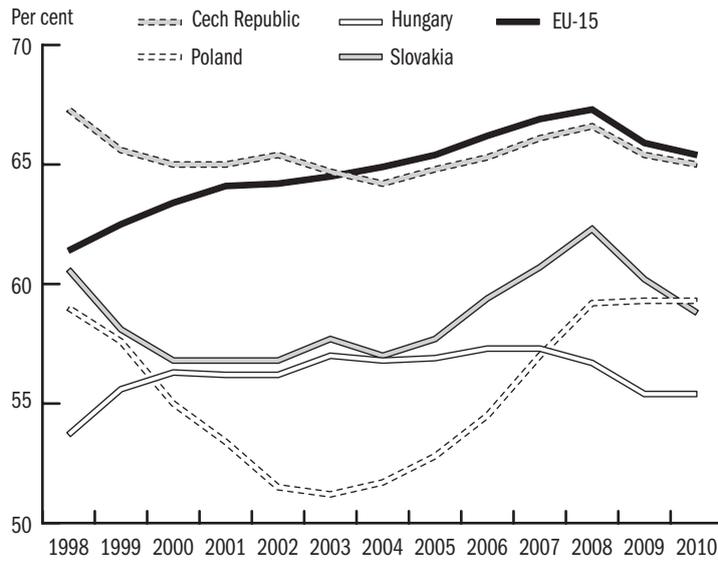
Source: *Eurostat.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena01_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
1995	10,337	99.6	–0.1	6,986.9	0.48	0.21
1998	10,280	99.1	–0.2	6,980.0	0.47	0.21
1999	10,253	98.8	–0.3	6,969.6	0.47	0.21
2000	10,221	98.5	–0.3	6,961.3	0.47	0.21
2001	10,200	98.3	–0.2	6,963.3	0.46	0.22
2002	10,175	98.1	–0.2	6,962.8	0.46	0.22
2003	10,142	97.8	–0.3	6,949.4	0.46	0.22
2004	10,117	97.5	–0.3	6,943.5	0.46	0.23
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	6,931.3	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

[a] January 1st. Recalculated on the basis of Population Census 2001.
[b] (population age 0–14 + 65 and above) / (population age 15–64)
[c] (population age 65 and above) / (population age 15–64)
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent02_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
1995	1,891.7	1,610.1	4,250.6	1,126.2	1,458.0	10,336.7
2000	1,729.2	1,526.5	4,291.4	1,143.4	1,531.1	10,221.6
2001	1,692.0	1,480.1	4,338.5	1,144.7	1,545.0	10,200.3
2002	1,660.1	1,436.9	4,378.0	1,147.9	1,551.9	10,174.9
2003	1,633.7	1,392.5	4,390.8	1,166.1	1,559.2	10,142.4
2004	1,606.1	1,355.0	4,401.6	1,186.9	1,567.1	10,116.7
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

[a] January 1st. Recalculated on the basis of Population Census 2001.
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent02_02

Figure 2.1: Age structure of the Hungarian population, 1980, 2011

1980

Males   Females

2011

Males   Females

90 000   60 000   30 000   0   30 000   60 000   90 000   90,000   60,000   30,000   0   30,000   60,000   90,000
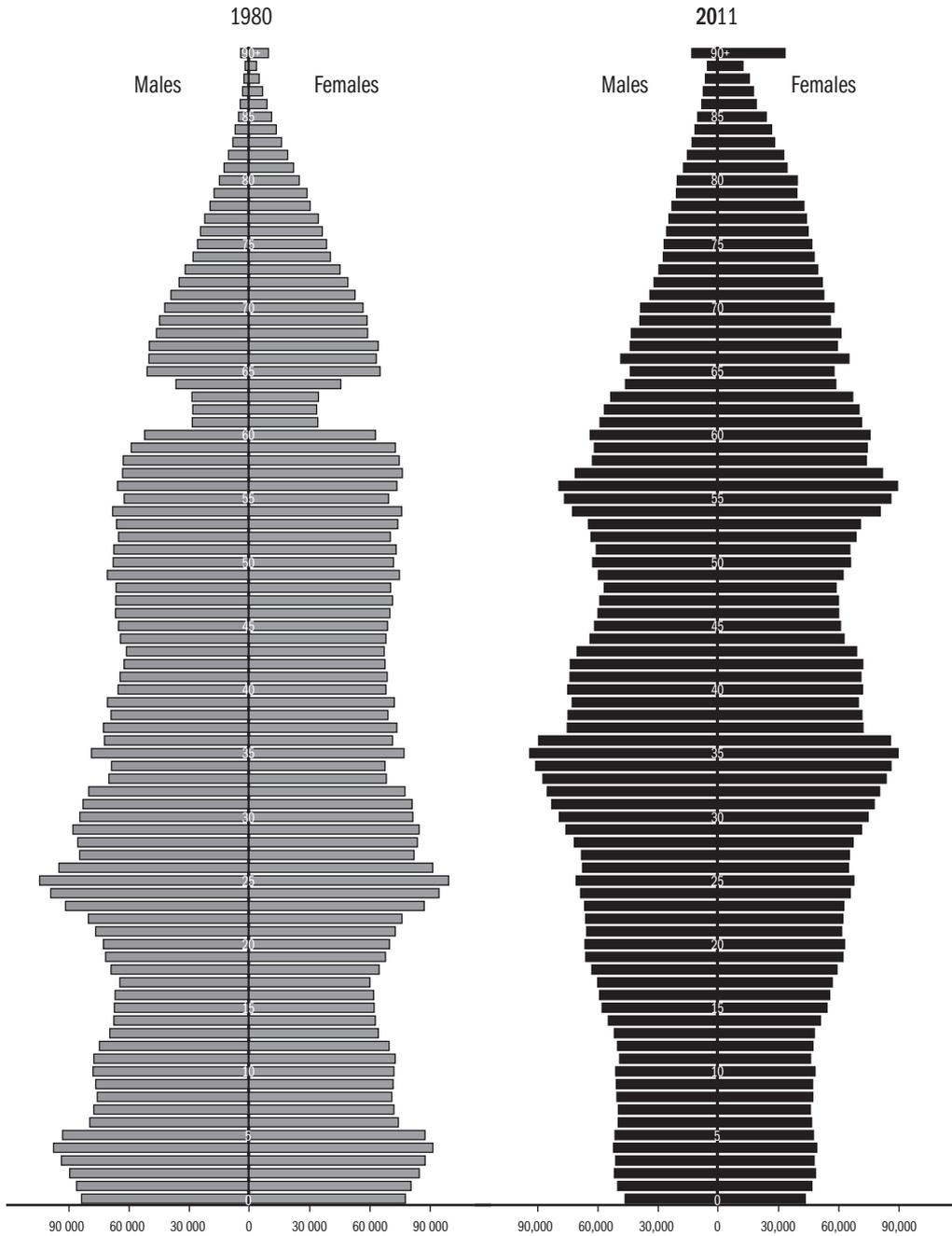
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena02_01

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Table 2.3: Male population by age groups, in thousands[a]

Year	0–14	15–24	25–59	60–64	65+	Total
			years old			
1980	1,205.4	749.9	2,475.6	170.5	587.3	5,188.7
1990	1,090.4	740.3	2,366.9	259.9	527.5	4,984.9
1997	933.0	822.4	2,366.2	233.9	560.5	4,916.0
1998	916.8	815.4	2,375.5	229.3	564.7	4,901.8
1999	901.5	805.0	2,383.2	226.1	568.6	4,884.4
2000	885.0	780.9	2,403.8	224.8	570.8	4,865.2
2001	865.7	757.0	2,425.2	228.9	574.2	4,851.0
2002	850.1	733.9	2,446.1	233.0	573.8	4,837.0
2003	836.8	711.3	2,456.5	239.9	574.0	4,818.5
2004	823.0	691.9	2,470.3	244.4	574.5	4,804.1
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

[a] January 1st. Recalculated on the basis of Population Census 2001.
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent02_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			
1980	1,135.8	714.5	2,232.8	365.3	1,072.4	5,520.8
1990	1,040.1	705.2	2,144.4	327.6	1,172.5	5,389.9
1997	891.4	784.8	2,155.6	318.3	1,235.1	5,385.3
1998	876.0	777.6	2,156.0	324.4	1,243.9	5,378.0
1999	861.0	768.2	2,159.3	326.7	1,253.8	5,369.0
2000	844.3	745.6	2,170.5	334.8	1,261.3	5,356.5
2001	826.3	723.1	2,193.4	330.4	1,276.1	5,349.3
2002	810.0	703.0	2,211.6	328.6	1,284.7	5,337.9
2003	796.9	681.2	2,217.4	330.7	1,297.8	5,323.9
2004	783.1	663.1	2,220.8	338.5	1,307.1	5,312.6
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

[a] January 1st. Recalculated on the basis of Population Census 2001.
Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent02_04

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Table 3.1: Labour force participation of the population above 14 years, in thousands[a]

| Year | Population of male 15–59 and female 15–54 | | | | | | | | Population of male above 59 and female above 54 | | | |
| | Employed | Unem-ployed | Inactive | | | | | Total | Employed | Unem-ployed | 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	3,679.6	308.8	432.9	810.9	270.0	500.7	2,014.5	6,002.9	250.5	8.4	2,268.0	2,526.9
2007	3,676.6	303.7	426.8	832.6	267.2	475.8	2,002.4	5,982.7	249.5	8.2	2,296.1	2,553.8
2008	3,631.4	318.5	408.6	819.6	279.8	493.1	2,001.1	5,951.0	248.1	10.7	2,327.7	2,586.5
2009	3,516.8	406.4	364.5	814.6	278.7	529.3	1,987.1	5,910.3	265.1	14.3	2,348.0	2,627.4
2010	3,485.7	455.2	338.7	814.6	267.0	500.7	1,921.0	5,861.9	295.5	19.6	2,356.0	2,671.1

[a] Annual average figures.

Note: Up to 1999 the weighted figures are based on the 1990 population census, since 2000 the data is updated based on the 2001 population census. 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, so it includes the institutional population not observed by MEF.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_01

Table 3.2: Labour force participation of the population above 14 years, males, in thousands[a]

Year	Population of male 15–59								Population of male 60 and above			
	Employed	Unem-ployed	Inactive					Total	Employed	Unem-ployed	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	2,076.5	163.6	268.1	404.1	7.0	239.3	918.5	3,158.4	60.5	1.0	770.9	832.8
2007	2,082.6	163.2	267.7	412.3	3.8	225.2	909.0	3,154.8	60.4	1.0	779.0	840.4
2008	2,052.0	173.4	266.3	408.2	4.8	240.4	919.7	3,145.1	58.8	0.9	791.7	851.4
2009	1,983.6	232.3	241.8	410.8	4.6	261.6	918.8	3,134.4	61.6	1.3	800.7	863.6
2010	1,960.1	262.5	228.3	410.2	4.6	254.0	897.1	3,119.7	62.6	1.9	813.6	878.1

[a] Annual average figures.

Note: Up to 1999 the weighted figures are based on the 1990 population census, since 2000 the data is updated based on the 2001 population census. 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, so it includes the institutional population not observed by MEF.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_02

Table 3.3: Labour force participation of the population above 14 years, females, in thousands[a]

| Year | Population of female 15–54 | | | | | | | | Population of female 55 and above | | | |
| | Employed | Unem-ployed | Inactive | | | | | Total | Employed | Unem-ployed | 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	1,603.1	144.8	164.8	406.8	263.0	262.0	1,096.6	2,844.5	189.6	7.4	1,497.1	1,694.1
2007	1,594.0	140.5	159.1	420.3	263.4	250.6	1,093.4	2,827.9	189.1	7.2	1,517.1	1,713.4
2008	1,579.4	145.1	142.3	411.4	276.0	252.7	1,082.4	2,806.9	189.3	9.8	1,536.0	1,735.1
2009	1,533.5	174.1	122.7	403.8	274.1	267.7	1,068.3	2,775.9	203.5	13.0	1,547.3	1,763.8
2010	1,525.6	192.8	110.4	404.4	262.4	246.6	1,023.8	2,742.2	233.0	17.7	1,542.3	1,793.0

[a] Annual average figures.

Note: Up to 1999 the weighted figures are based on the 1990 population census, since 2000 the data is updated based on the 2001 population census. 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, so it includes the institutional population not observed by MEF.

Source: Pensioners: 1980–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_03

Table 3.4: Labour force participation of the population above 14 years, per cent

| Year | Population of male 15–59 and female 15–54 | | | | | | | | Population of male above 59 and female above 54 | | | |
| | Employed | Unem-ployed | Inactive | | | | | Total | Employed | Unem-ployed | 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
1996	58.3	6.5	8.4	12.2	4.8	9.9	35.2	100.0	4.5	0.3	95.3	100.0
1997	58.4	5.6	8.9	12.4	4.8	9.9	35.9	100.0	4.2	0.3	95.5	100.0
1998	59.5	5.0	9.7	11.5	4.9	9.3	35.4	100.0	3.9	0.3	95.8	100.0
1999	61.3	4.7	8.9	11.2	4.9	9.1	34.0	100.0	4.8	0.1	95.1	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	5.1	7.2	13.5	4.5	8.3	33.6	100.0	9.9	0.3	89.8	100.0
2007	61.5	5.1	7.1	13.9	4.5	7.9	33.5	100.0	9.8	0.3	89.9	100.0
2008	61.0	5.3	6.9	13.8	4.7	8.3	33.6	100.0	9.6	0.4	90.0	100.0
2009	59.5	6.9	6.2	13.8	4.7	9.0	33.6	100.0	10.1	0.5	89.4	100.0
2010	59.5	7.8	5.8	13.9	4.6	8.5	32.8	100.0	11.1	0.7	88.2	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1995–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990: *NMH REG,* 1995–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_04

Figure 3.1: Labour force participation of population at male 15–59 and female 15–54, total
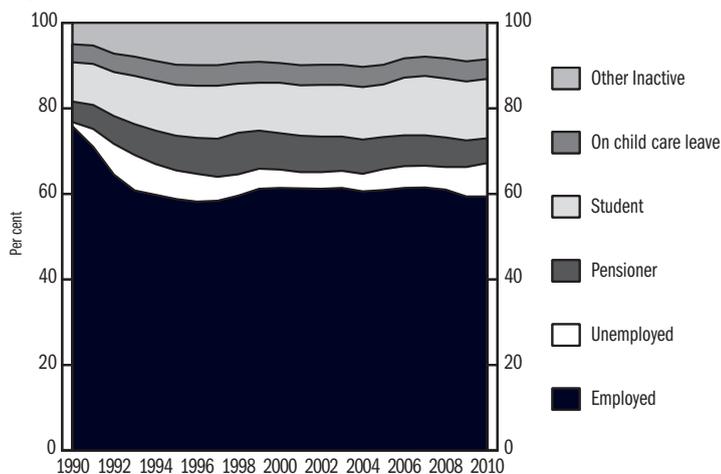
Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena03_01

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Table 3.5: Labour force participation of the population above 14 years, males, per cent

	Population of male 15–59								Population of male 60 and above			
			Inactive									
Year	Employed	Unem-ployed	Pensioner	Full time student	On child care leave	Other inactive	Inactive total	Total	Employed	Unem-ployed	Pensioner, other 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
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	65.7	5.2	8.5	12.8	0.2	7.6	29.1	100.0	7.3	0.1	92.6	100.0
2007	66.0	5.2	8.5	13.1	0.1	7.1	28.8	100.0	7.2	0.1	92.7	100.0
2008	65.2	5.5	8.5	13.0	0.2	7.6	29.2	100.0	6.9	0.1	93.0	100.0
2009	63.3	7.4	7.7	13.1	0.1	8.3	29.3	100.0	7.1	0.2	92.7	100.0
2010	62.8	8.4	7.3	13.1	0.1	8.1	28.8	100.0	7.1	0.2	92.7	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1996–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990: *NMH REG,* 1996–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_05

Figure 3.2: Labour force participation of population at male 15–59
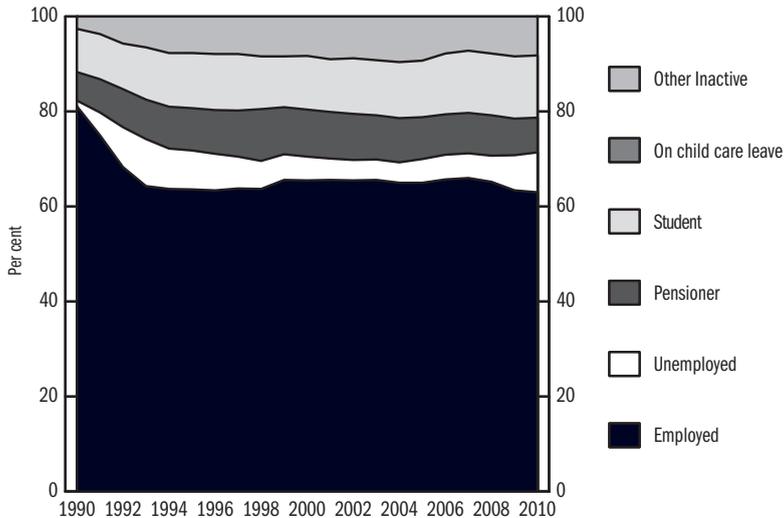
Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena03_02

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Table 3.6: Labour force participation of the population above 14 years, females, per cent

Year	Population of female 15–54								Population of female 55 and above			
			Inactive									
	Employed	Unem-ployed	Pensioner	Full time student	On child care leave	Other inactive	Inactive total	Total	Employed	Unem-ployed	Pensioner, other 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
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	56.4	5.1	5.8	14.3	9.2	9.2	38.6	100.0	11.2	0.4	88.4	100.0
2007	56.4	5.0	5.6	14.9	9.3	8.9	38.7	100.0	11.0	0.4	88.6	100.0
2008	56.3	5.2	5.1	14.7	9.8	9.0	38.6	100.0	10.9	0.6	88.5	100.0
2009	55.2	6.3	4.4	14.5	9.9	9.6	38.5	100.0	11.5	0.8	87.7	100.0
2010	55.6	7.0	4.0	14.7	9.6	9.0	37.5	100.0	13.0	1.0	86.0	100.0

Source: Pensioners: 1980–90: *NYUFIG,* 1996–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990: *NMH REG,* 1996–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_06

Figure 3.3: Labour force participation of population at female 15–54
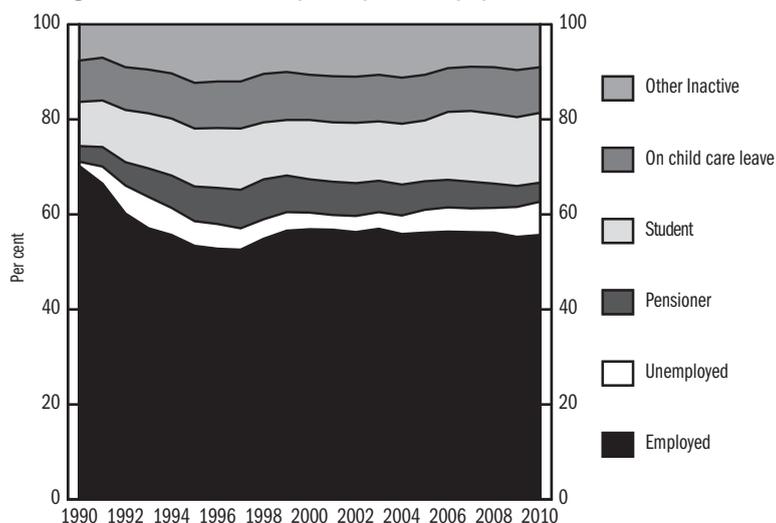
Source: Pensioners: 1990–91: *NYUFIG,* 1992–: *KSH MEF.* Child care recipients: Up to 1997 *TB* and estimation, after 1997 *MEF.* Unemployment: 1990–91: *NMH REG,* 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena03_03

Table 3.7: Population aged 15–64 by labour market status (self-categorised), in thousands

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Together												
In work	3,710.8	3,778.9	3,827.4	3,827.1	3,843.6	3,834.4	3,852.2	3,864.1	3,857.2	3,800.7	3,715.3	3,709.8
Unemployed	473.5	448.1	414.5	410.4	431.8	451.0	488.2	468.1	448.3	481.4	592.5	676.0
Student, pupils	753.9	749.9	739.9	763.1	767.7	783.8	792.0	847.8	870.4	868.9	864.5	861.8
Pensioner	1,079.7	991.8	990.8	940.4	856.4	800.3	755.6	617.8	568.6	611.0	600.9	579.3
Disabled	195.5	223.8	251.0	284.4	338.3	370.4	359.7	520.4	560.3	530.0	495.5	482.1
On child care leave	289.0	272.4	272.3	278.3	281.7	274.7	272.4	273.5	279.7	292.4	290.5	280.5
Dependent	167.5	165.9	170.7	160.4	135.1	133.3	134.6	116.1	111.9	106.2	105.6	100.4
Out of work for other reason	113.1	133.6	184.7	185.7	181.7	178.4	160.0	108.0	103.3	103.6	106.4	79.3
Total	6,783.0	6,764.4	6,851.3	6,849.8	6,836.3	6,826.3	6,814.7	6,815.8	6,799.7	6,794.2	6,771.2	6,769.2
Males												
In work	2,042.7	2,075.4	2,089.5	2,090.2	2,087.3	2,082.8	2,088.3	2,105.0	2,108.9	2,074.0	2,013.1	1,989.1
Unemployed	286.1	270.4	255.2	239.3	244.2	247.7	265.2	251.6	241.9	257.5	334.2	376.5
Student, pupils	375.9	371.4	363.6	380.9	383.7	391.1	398.5	418.9	430.2	431.5	432.9	431.2
Pensioner	426.4	388.6	386.3	368.1	337.4	322.5	304.5	236.0	205.2	233.8	235.1	240.4
Disabled	106.0	120.4	134.2	148.1	169.9	184.5	178.7	250.4	269.9	259.4	237.1	231.0
On child care leave	3.9	3.8	4.0	4.9	4.7	4.9	6.1	5.5	4.1	5.8	6.0	6.7
Dependent	6.5	5.3	6.3	5.1	5.3	6.0	7.0	5.8	6.6	7.2	7.3	10.3
Out of work for other reason	67.4	77.6	100.8	101.2	97.5	89.6	80.1	54.9	52.1	52.1	50.1	36.1
Total	3,314.9	3,312.9	3,339.9	3,337.8	3,330.0	3,329.1	3,328.4	3,328.1	3,318.9	3,321.3	3,315.8	3,321.3
Females												
In work	1,668.1	1,703.5	1,737.9	1,736.9	1,756.3	1,751.6	1,763.9	1,759.1	1,748.3	1,726.6	1,702.2	1,720.7
Unemployed	187.4	177.7	159.3	171.1	187.6	203.3	223.0	216.5	206.4	223.8	258.3	299.5
Student, pupils	378.0	378.5	376.3	382.2	384.0	392.7	393.5	428.9	440.2	437.4	431.6	430.6
Pensioner	653.3	603.2	604.5	572.3	519.0	477.8	451.1	381.8	363.4	377.2	365.7	338.9
Disabled	89.5	103.4	116.8	136.3	168.4	185.9	181.0	270.0	290.4	270.6	258.4	251.1
On child care leave	285.1	268.6	268.3	273.4	277.0	269.8	266.3	268.0	275.6	286.7	284.5	273.9
Dependent	161.0	160.6	164.4	155.3	129.8	127.3	127.6	110.3	105.3	99.1	98.3	90.1
Out of work for other reason	45.7	56.0	83.9	84.5	84.2	88.8	79.9	53.1	51.2	51.4	56.3	43.1
Total	3,468.1	3,451.5	3,511.4	3,512.0	3,506.3	3,497.2	3,486.3	3,487.7	3,480.8	3,472.8	3,455.3	3,447.9

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_07

Table 3.8: Population aged 15–64 by labour market status (self-categorised), per cent

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Together												
In work	54.7	55.9	55.9	55.9	56.2	56.2	56.5	56.7	56.7	55.9	54.9	54.8
Unemployed	7.0	6.6	6.0	6.0	6.3	6.6	7.2	6.9	6.6	7.1	8.8	10.0
Student, pupils	11.1	11.1	10.8	11.1	11.2	11.5	11.6	12.4	12.8	12.8	12.8	12.7
Pensioner	15.9	14.7	14.5	13.7	12.5	11.7	11.1	9.1	8.4	9.0	8.9	8.6
Disabled	2.9	3.3	3.7	4.2	4.9	5.4	5.3	7.6	8.2	7.8	7.3	7.1
On child care leave	4.3	4.0	4.0	4.1	4.1	4.0	4.0	4.0	4.1	4.3	4.3	4.1
Dependent	2.5	2.5	2.5	2.3	2.0	2.0	2.0	1.7	1.6	1.6	1.6	1.5
Out of work for other reason	1.7	2.0	2.7	2.7	2.7	2.6	2.3	1.6	1.5	1.5	1.6	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
Males												
In work	61.6	62.6	62.6	62.6	62.7	62.6	62.7	63.2	63.5	62.4	60.7	59.9
Unemployed	8.6	8.2	7.6	7.2	7.3	7.4	8.0	7.6	7.3	7.8	10.1	11.3
Student, pupils	11.3	11.2	10.9	11.4	11.5	11.7	12.0	12.6	13.0	13.0	13.1	13.0
Pensioner	12.9	11.7	11.6	11.0	10.1	9.7	9.1	7.1	6.2	7.0	7.1	7.2
Disabled	3.2	3.6	4.0	4.4	5.1	5.5	5.4	7.5	8.1	7.8	7.2	7.0
On child care leave	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2
Dependent	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Out of work for other reason	2.0	2.3	3.0	3.0	2.9	2.7	2.4	1.6	1.6	1.6	1.5	1.1
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	48.1	49.4	49.5	49.5	50.1	50.1	50.6	50.4	50.2	49.7	49.3	49.9
Unemployed	5.4	5.1	4.5	4.9	5.4	5.8	6.4	6.2	5.9	6.4	7.5	8.7
Student, pupils	10.9	11.0	10.7	10.9	11.0	11.2	11.3	12.3	12.6	12.6	12.5	12.5
Pensioner	18.8	17.5	17.2	16.3	14.8	13.7	12.9	10.9	10.4	10.9	10.6	9.8
Disabled	2.6	3.0	3.3	3.9	4.8	5.3	5.2	7.7	8.3	7.8	7.5	7.3
On child care leave	8.2	7.8	7.6	7.8	7.9	7.7	7.6	7.7	7.9	8.3	8.2	7.9
Dependent	4.6	4.7	4.7	4.4	3.7	3.6	3.7	3.2	3.0	2.9	2.8	2.6
Out of work for other reason	1.3	1.6	2.4	2.4	2.4	2.5	2.3	1.5	1.5	1.5	1.6	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

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent03_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
1993	3,827.0	93.7	–6.3	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	–0.8	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	3.1	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	3,930.1	96.3	0.7	46.0
2007	3,926.2	96.2	0.0	46.0
2008	3,879.4	95.0	–1.2	45.4
2009	3,781.9	92.6	–2.4	44.3
2010	3,781.2	92.6	0.0	44.3

[a] Per cent of the population above 14 year.
Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: 1980–90: *KSH MEM,* 1993–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_01

Figure 4.1: Employed
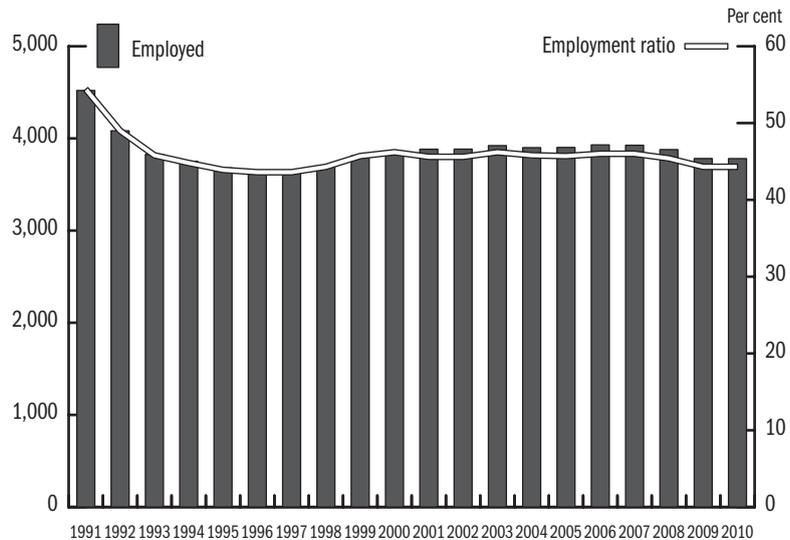
Source: 1991: *KSH MEM*, 1992–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena04_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
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	2,137.4	96.4	1,792.7	96.1	45.6
2007	2,143.0	96.6	1,783.2	95.6	45.5
2008	2,110.8	95.2	1,768.6	94.9	45.6
2009	2,044.9	92.2	1,737.0	93.2	45.9
2010	2,022.6	91.2	1,758.6	94.4	46.5

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: 1980–90: *KSH MEM,* 1993–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_02

Figure 4.2: Employment by gender
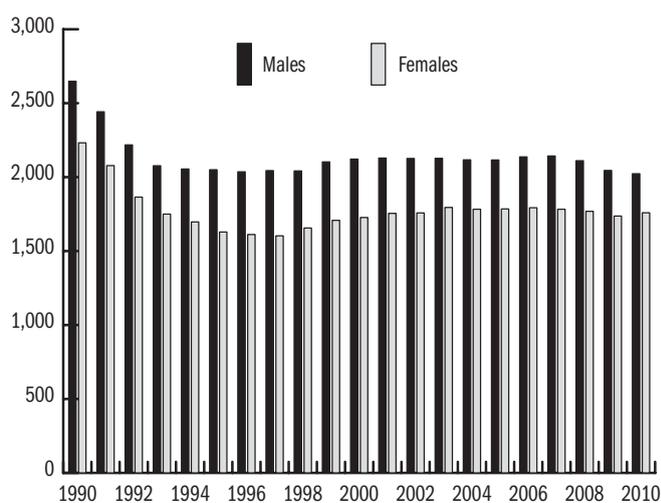
Source: 1990–1991: *KSH MEM*, 1992–: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena04_02

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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				
1980	5.1	12.6	55.4	10.2	8.0	8.7	100.0
1990	5.0	10.8	64.1	8.6	6.8	4.7	100.0
1996	2.5	11.6	69.3	9.6	5.6	1.4	100.0
1997	2.3	12.3	68.9	9.9	5.4	1.2	100.0
1998	2.3	13.4	67.6	10.3	5.1	1.3	100.0
1999	1.9	13.2	67.1	10.5	5.6	1.6	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	6.6	68.5	13.0	8.4	2.9	100.0
2007	0.5	6.5	68.7	13.0	8.5	2.8	100.0
2008	0.5	6.3	69.0	13.1	8.3	2.8	100.0
2009	0.4	5.6	69.6	12.2	9.2	3.0	100.0
2010	0.3	5.7	69.3	12.0	9.6	3.1	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: 1980–90: Census based estimates. 1996–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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			
1980	5.3	9.7	61.8	10.7	12.5	100.0
1990	5.2	8.6	66.2	10.0	10.0	100.0
1996	2.4	9.9	72.2	11.0	4.5	100.0
1997	2.0	10.8	72.2	10.5	4.5	100.0
1998	2.3	12.2	71.2	10.5	3.8	100.0
1999	1.7	12.1	70.2	11.6	4.4	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	6.4	67.6	15.4	10.2	100.0
2006	0.4	6.1	66.8	16.2	10.6	100.0
2007	0.3	5.8	67.3	16.0	10.6	100.0
2008	0.3	5.5	67.4	16.1	10.7	100.0
2009	0.3	5.4	67.2	15.4	11.7	100.0
2010	0.3	5.3	66.3	14.8	13.2	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: 1980–90: Census based estimates. 1996–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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
1980	40.8	32.3	18.2	8.7	100.0
1990	37.6	30.5	20.1	11.8	100.0
1997	20.1	39.4	26.5	14.1	100.0
1998	20.3	39.4	25.7	14.7	100.0
1999	16.8	41.5	26.8	14.9	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	40.8	28.3	18.6	100.0
2007	11.8	40.8	28.7	18.7	100.0
2008	11.7	39.4	29.0	19.8	100.0
2009	10.9	38.6	30.1	20.3	100.0
2010	10.7	38.2	30.6	20.5	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999, slight changes have occurred in the categorisation system by highest education level.
Source: 1980–90: Census based estimates. 1997–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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
1980	53.1	12.3	27.5	7.2	100.0
1990	43.4	13.4	31.4	11.8	100.0
1997	25.1	20.6	37.9	16.4	100.0
1998	23.6	20.2	38.2	18.0	100.0
1999	20.6	20.3	40.6	18.5	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	14.3	20.7	40.1	24.9	100.0
2007	13.6	21.2	40.1	25.1	100.0
2008	13.3	20.3	39.3	27.1	100.0
2009	12.5	19.9	39.2	28.4	100.0
2010	12.4	20.2	38.7	28.7	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999, slight changes have occurred in the categorisation system by highest education level.
Source: 1980–90: Census based estimates. 1997–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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
1995	2,978.9	84.2	167.9	391.8	3,622.8
1996	2,961.2	79.0	151.8	413.1	3,605.1
1997	2,989.7	68.9	137.4	414.3	3,610.3
1998	3,088.5	55.8	132.5	397.9	3,674.7
1999	3,201.3	42.5	111.8	435.9	3,791.5
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	3,431.4	4.8	126.7	367.2	3,930.1
2007	3,439.7	4.4	123.2	358.9	3,926.2
2008	3,405.1	2.3	122.5	349.5	3,879.4
2009	3,309.9	2.0	136.8	333.2	3,781.9
2010	3,317.5	3.0	140.0	320.7	3,781.2

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Conscripts are excluded.
Source: 1995–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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
1995	82.2	2.3	4.6	10.8	100.0
1996	82.1	2.2	4.2	11.5	100.0
1997	82.8	1.9	3.8	11.5	100.0
1998	84.0	1.5	3.6	10.8	100.0
1999	84.4	1.1	2.9	11.5	100.0
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

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Conscripts are excluded.
Source: 1995–: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_08

Table 4.9: Composition of employed persons by sector,[a] by gender, per cent

	2008			2009			2010		
	Males	Females	Together	Males	Females	Together	Males	Females	Together
Agriculture, forestry and fishing	4.8	1.7	3.4	5.0	1.8	3.5	5.0	1.6	3.4
Mining and quarrying	0.4	0.0	0.2	0.4	0.0	0.2	0.6	0.1	0.4
Manufacturing	27.6	19.7	23.7	26.8	18.3	22.7	26.1	18.3	22.2
Electricity, gas, steam and air conditioning supply	1.4	0.5	1.0	1.7	0.6	1.2	1.5	0.7	1.1
Water supply; sewerage, waste management and re-mediation activities	2.0	0.7	1.4	2.0	0.6	1.3	2.3	0.6	1.4
Construction	12.8	1.3	7.3	12.3	1.2	7.0	11.7	1.2	6.6
Wholesale and retail trade; repair of motor vehicles and motorcycles	11.9	16.1	13.9	11.4	15.9	13.6	11.4	16.1	13.6
Transportation and storage	9.6	3.9	6.9	9.6	4.1	6.9	10.1	3.8	7.1
Accommodation and food service activities	3.1	4.9	4.0	3.1	4.8	3.9	3.2	5.0	4.1
Information and communication	2.9	1.8	2.4	2.8	1.7	2.3	3.0	1.7	2.4
Financial and insurance activities	1.4	3.4	2.4	1.5	3.6	2.5	1.3	3.6	2.4
Real estate activities	0.4	0.5	0.5	0.4	0.6	0.5	0.4	0.5	0.4
Professional, scientific and technical activities	2.1	3.7	2.8	2.2	3.4	2.8	2.4	3.4	2.9
Administrative and support service activities	2.9	2.5	2.7	3.4	2.7	3.1	3.3	2.8	3.0
Public administration and defence; compulsory social security	7.8	9.1	8.4	8.3	10.2	9.2	8.5	9.8	9.1
Education	3.7	14.9	9.0	4.0	15.3	9.4	4.1	15.0	9.4
Human health and social work activities	2.5	11.5	6.8	2.6	11.5	6.9	2.8	12.2	7.3
Arts, entertainment and recreation	1.5	1.7	1.6	1.4	1.6	1.5	1.3	1.7	1.5
Other services	1.2	2.1	1.6	1.1	2.0	1.6	1.0	2.0	1.5
Total	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/2012ent04_09

Table 4.10: Employed in their present job since 0–6 months, per cent

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Hungary	8.2	8.5	6.8	7.2	6.3	6.6	7.2	6.8	7.0	6.7	7.5	7.6	7.4	7.9

Source: MEF, IV. quarterly waves.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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		
2000	20.2	7.0	23.5	22.5	26.8
2001	18.5	7.5	24.3	23.0	26.7
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

[a] Firms employing 5 or more workers.
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_11

Table 4.12: 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
1992	14.6	64.7	82.8	71.8	48.7	17.1	9.9	58.9
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	4.2	43.9	83.3	70.3	58.6	19.2	4.3	58.0
2007	3.7	43.8	83.7	70.7	58.2	18.9	4.7	58.0
2008	3.5	42.2	83.1	71.2	55.1	16.8	4.9	57.2
2009	2.5	36.6	80.5	70.5	57.1	17.2	5.0	55.5
2010	2.1	36.8	79.6	69.6	57.4	16.9	4.8	54.9

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_12

Table 4.13: Employees of the competitive sector[a] by the share of foreign ownership, per cent

Share of foreign ownership	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
100%	17.5	19.0	17.7	16.5	17.7	18.6	19.0	19.4	20.4	17.5	19.2
Majority	11.7	11.0	9.2	8.8	7.8	8.5	7.5	7.4	6.4	6.3	5.4
Minority	5.3	4.9	3.6	3.9	3.8	3.1	2.2	2.9	2.2	1.7	1.9
0%	65.5	65.1	69.5	70.8	70.7	69.8	71.3	70.3	71.0	74.6	73.5

[a] Firms employing 5 or more workers.
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_13

Figure 4.3: Employees of the corporate sector by firm size and by the share of foreign ownership
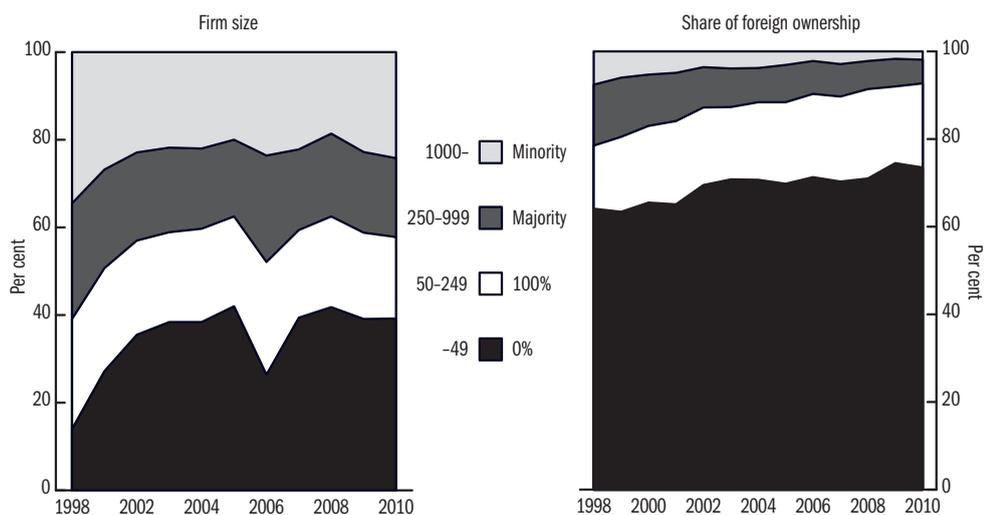
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena04_03

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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
1992	16.0	54.0	72.2	58.4	18.2	10.7	5.3	46.6
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	33.9	67.5	67.9	42.6	8.9	1.6	44.4
2007	2.1	32.5	67.8	68.3	40.0	9.7	2.1	44.3
2008	1.9	31.0	67.7	68.7	38.7	10.0	2.3	44.0
2009	1.5	30.0	66.6	68.5	41.1	10.0	2.2	43.4
2010	1.9	30.3	66.5	69.7	46.9	9.8	2.5	43.9

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_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
1993	35.6	75.8	71.8	86.3	60.0
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	31.5	75.2	67.5	85.7	63.8
2007	31.6	74.6	67.5	85.9	64.0
2008	31.3	72.6	66.5	84.7	63.0
2009	29.0	69.9	65.1	83.1	61.1
2010	28.7	68.1	64.6	82.1	60.4

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_15

Figure 4.4: Activity rate by age groups, males aged 15–64, quarterly
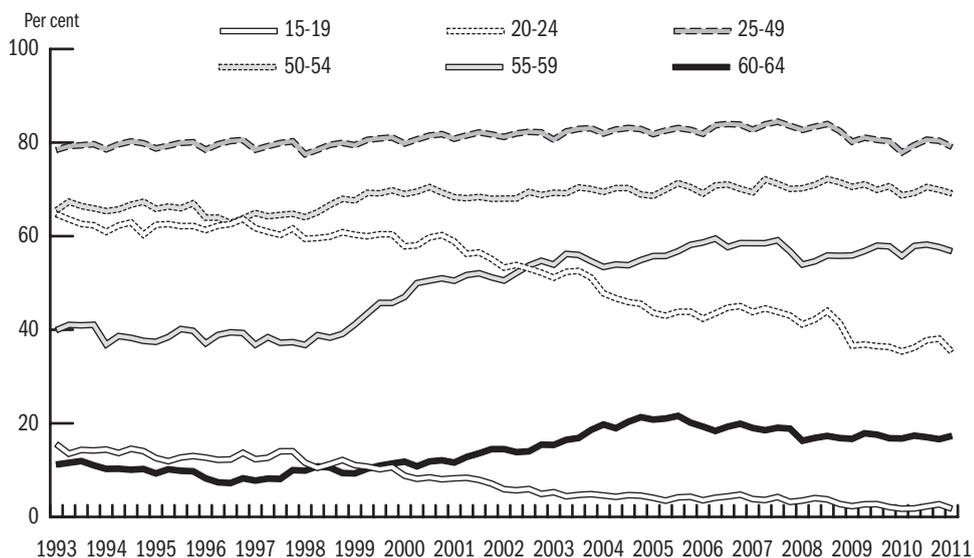
Source: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena04_04

Figure 4.5: Activity rate by age groups, females aged 15–64, quarterly
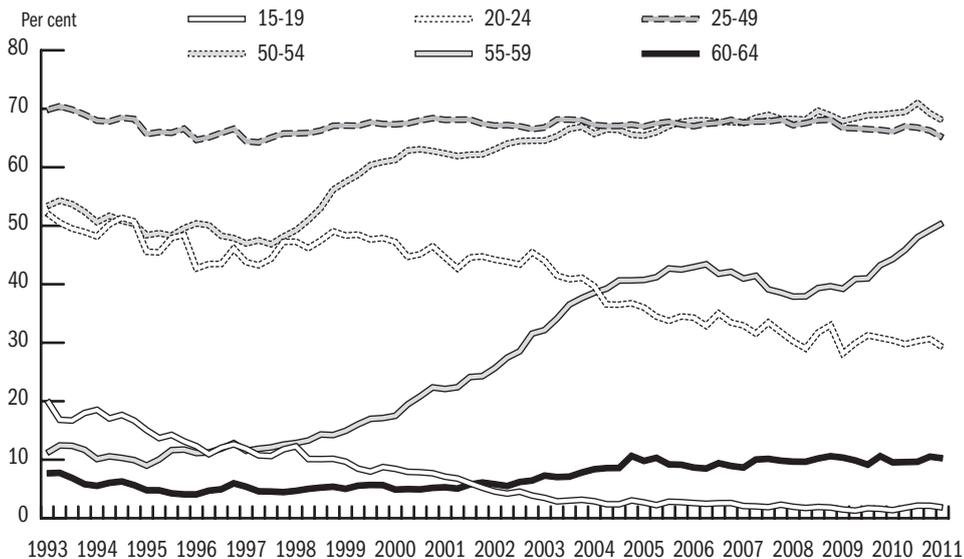
Source: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena04_05

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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	24.5	58.2	57.5	77.6	51.1
2007	24.0	57.8	57.2	75.4	50.9
2008	23.9	55.5	56.4	75.5	50.6
2009	23.0	54.3	54.9	74.4	49.9
2010	23.6	56.4	54.3	74.6	50.6

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent04_16

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	
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	7.2	7.8	7.5	46.8
2007	7.1	7.6	7.4	48.2
2008	7.6	8.1	7.8	47.6
2009	10.3	9.7	10.0	43.0
2010	11.6	10.7	11.2	50.9

[a] Long term unemployed are those who have been without work for 12 months or more, the denominator does not include those starting new jobs.
Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_01

Figure 5.1: Unemployment rates by gender
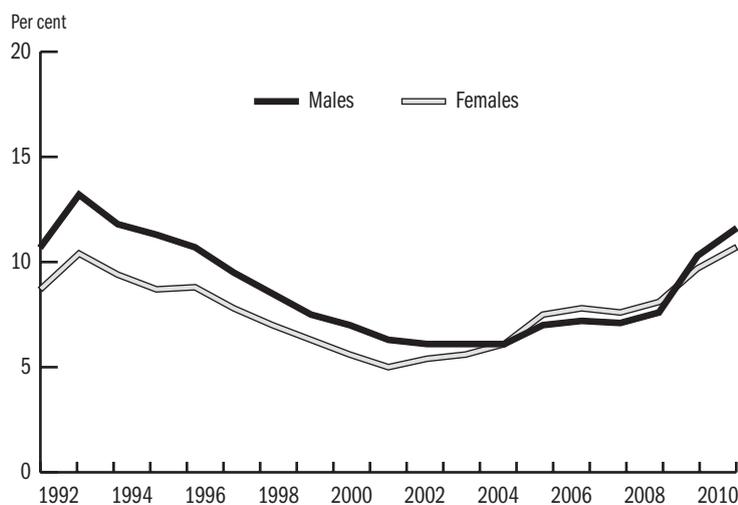
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena05_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
1993	20.3	15.0	9.7	2.9	13.5
1998	14.6	9.1	5.9	2.2	8.5
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	5.2	2.7	7.2
2007	18.4	6.8	5.1	2.4	7.1
2008	19.8	7.6	5.3	2.3	7.6
2009	24.4	10.6	7.7	3.8	10.3
2010	26.9	12.1	8.4	4.9	11.6

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999 slight changes have occurred in the categorisation system by highest education level.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_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
1993	39.0	40.8	17.3	2.8	100.0
1994	37.3	42.7	15.8	4.3	100.0
1995	37.7	44.0	14.7	3.6	100.0
1996	37.6	44.0	15.1	3.3	100.0
1997	38.9	43.7	15.4	2.0	100.0
1998	37.4	42.0	17.2	3.4	100.0
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	40.0	20.0	6.6	100.0
2007	34.9	38.8	20.3	6.0	100.0
2008	35.2	39.4	19.8	5.6	100.0
2009	31.0	40.1	21.9	7.0	100.0
2010	30.1	40.2	21.5	8.2	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999 slight changes have occurred in the categorisation system by highest education level.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_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
1993	14.6	12.8	8.1	3.2	10.4
1998	11.6	7.8	5.8	1.8	7.0
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	15.8	10.1	6.4	2.8	7.8
2007	16.0	9.4	6.2	3.3	7.6
2008	17.5	9.5	6.9	3.2	8.1
2009	21.6	12.4	7.7	4.1	9.7
2010	22.8	12.6	9.5	4.5	10.7

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999 slight changes have occurred in the categorisation system by highest education level.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_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
1993	45.8	22.6	27.4	4.2	100.0
1994	44.4	23.1	29.4	3.1	100.0
1995	41.0	24.3	29.7	5.0	100.0
1996	38.2	24.9	31.6	5.4	100.0
1997	44.2	23.2	28.4	4.2	100.0
1998	41.6	22.7	31.4	4.3	100.0
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	31.5	27.5	32.5	8.5	100.0
2007	31.2	26.6	31.7	10.5	100.0
2008	32.2	24.3	33.3	10.2	100.0
2009	32.1	26.1	30.3	11.4	100.0
2010	30.5	24.3	34.0	11.2	100.0

Note: Up to 2000 data are weighted on the basis of the 1990 Population Census. Since 1999 slight changes have occurred in the categorisation system by highest education level.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_05

Figure 5.2: Intensity of quarterly flows between labour market status, population between 15–64 years
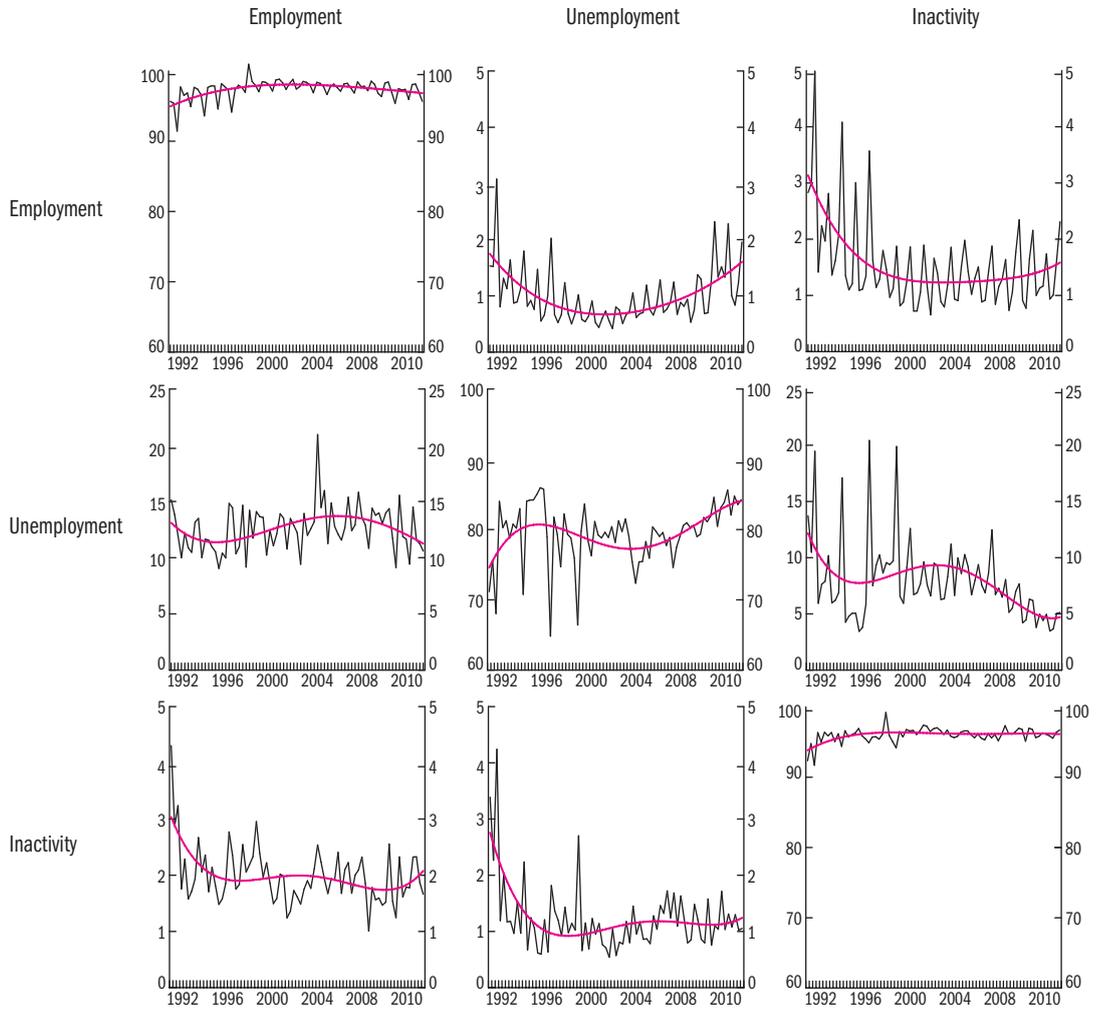
Note: The calculations were carried out for the age group between 15–64 based on KSH labour
force survey microdata. The probability of transition is given by the number of people who tran-
sitioned from one status to the other in the quarter, divided by the initial size of the group in the
previous quarter, 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/2012ena05_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	13.3	50.7	48.3	51.9	17.4	41.5	26.6	58.8	308.5
2007	13.8	49.4	44.3	50.1	12.7	43.3	26.0	64.9	304.5
2008	13.7	50.4	47.8	53.5	13.4	39.6	27.2	74.8	320.4
2009	18.8	71.9	67.0	77.4	18.1	51.2	19.8	88.4	412.6
2010	16.9	64.9	63.1	84.3	23.6	75.9	43.3	95.4	467.4

[a] Not including those unemployed who will got a new job within 30 days; since 2003: within 90 days.
Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_06

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Figure 5.3: Unemployment rate by age groups, males aged 15–59, quarterly
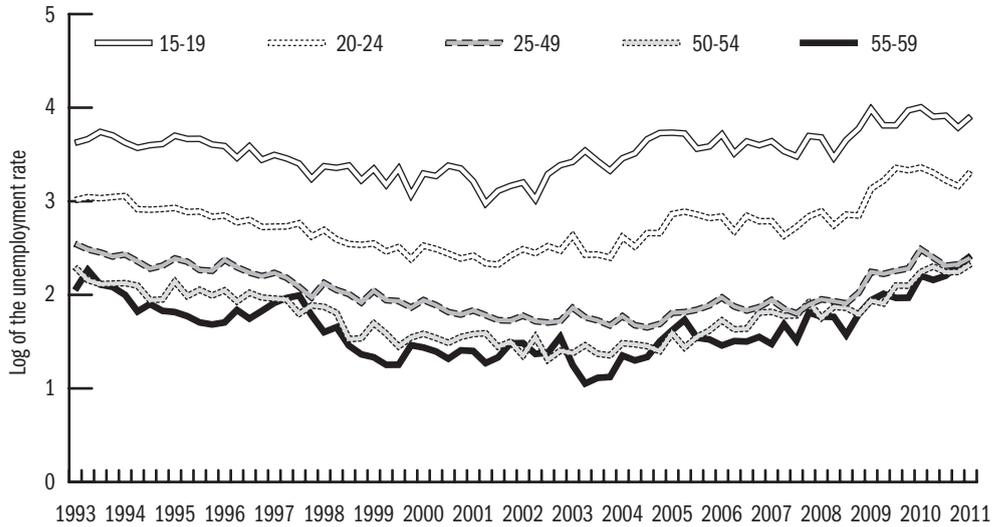
Source: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena05_03

Figure 5.4: Unemployment rate by age groups, females aged 15–59, quarterly
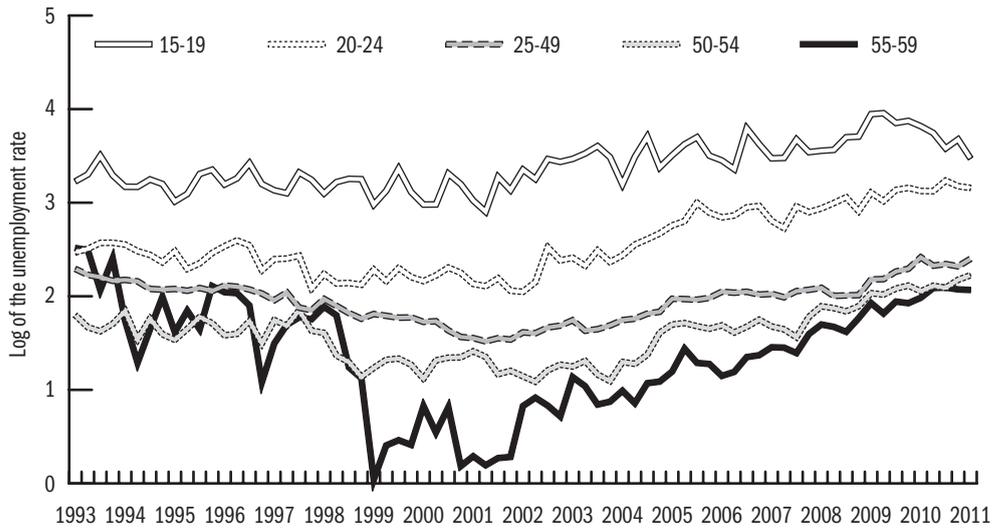
Source: *KSH MEF.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena05_04

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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	–	..	..	..	..
1993	671.8	12.9	518.9	11.9	141.3	21.3
1994	568.4	11.3	451.2	10.7	124.7	19.4
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	316.8	7.5	64.1	19.1
2007	426.9	9.7	311.9	7.4	57.6	18.0
2008	442.3	10.0	329.2	7.8	61.0	19.9
2009	561.8	12.8	420.7	10.0	79.2	26.4
2010	582.7	13.3	474.8	11.2	79.2	26.6

[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: *NMH;* LFS unemployment: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_07

Figure 5.5: Registered and LFS unemployment rates
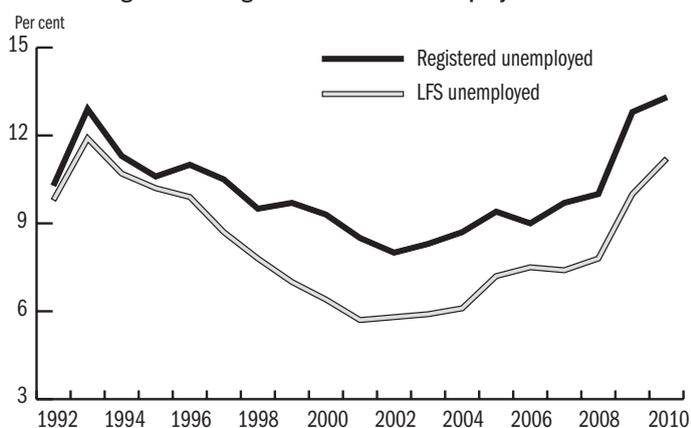
Note: Since 1st of November, 2005: database of registered jobseekers.
Source: Registered unemployment/jobseekers: *NMH;* LFS unemployment: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena05_05

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Table 5.8: Composition of the registered unemployed[a] by educational attainment, yearly averages, per cent

Educational attainment	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
8 grades of primary school or less	41.2	40.8	40.6	40.4	41.0	42.0	42.4	42.7	42.3	41.9	42.0	42.4	43.3	40.1	39.3
Vocational school	35.1	35.6	36.0	35.7	34.9	34.1	33.5	32.9	32.3	32.4	32.1	31.5	30.9	32.5	31.4
Vocational secondary school	12.7	12.8	12.9	13.2	13.2	13.1	13.2	13.1	13.4	13.5	13.4	13.3	13.1	14.4	15.0
Grammar school	8.3	8.0	7.9	8.0	8.0	7.7	7.6	7.5	7.7	7.9	8.0	8.2	8.2	8.5	9.1
College	2.0	2.0	1.9	2.0	2.1	2.2	2.4	2.7	3.1	3.2	3.3	3.3	3.3	3.2	3.7
University	0.8	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.2	1.2	1.5
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

[a] Since 1st of November, 2005: registered jobseekers. From the 1st of November, 2005 the Employment Act changed the definition of registered unemployees to registered jobseekers.
Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_08

Table 5.9: The distribution of registered unemployed school-leavers[a] by educational attainment, yearly averages, per cent

Educational attainment	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
8 grades of primary school or less	4.6	20.2	23.4	25.3	26.8	31.1	33.7	34.7	35.2	36.1	38.2	40.1	41.3	37.7	35.2
Vocational school	41.9	35.7	34.1	30.9	27.8	23.7	20.6	20.4	20.2	20.5	19.7	18.1	17.3	18.9	18.9
Vocational secondary school	27.0	23.9	24.2	25.0	25.4	25.3	25.5	23.2	22.1	21.5	20.3	20.7	21.2	23.1	23.9
Grammar school	21.8	15.5	14.0	13.6	13.7	12.6	11.6	10.8	10.7	10.8	11.7	12.8	13.3	13.7	14.3
College	3.6	3.5	3.4	4.0	4.8	5.5	6.2	7.7	8.1	7.8	6.9	5.8	4.9	4.5	4.8
University	1.1	1.1	1.0	1.2	1.5	1.8	2.4	3.3	3.6	3.4	3.0	2.5	2.0	2.1	2.8
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	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: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_09

Table 5.10: Registered unemployed[a] by economic activity as observed in the LFS, per cent

Year	Employed	LFS-unemployed	Inactive	Total
1992	5.1	71.6	23.3	100.0
1993	10.0	63.6	26.4	100.0
1994	14.4	54.5	31.1	100.0
1995	11.8	53.7	34.5	100.0
1996	13.7	51.8	34.5	100.0
1997	18.7	44.1	37.2	100.0
1998	24.8	35.1	40.1	100.0
1999	6.7	55.8	37.5	100.0
2000	4.7	54.3	41.0	100.0
2001	6.5	45.2	48.3	100.0
2002	4.4	47.4	48.2	100.0
2003	9.4	44.1	46.5	100.0
2004	3.0	53.5	43.5	100.0
2005	2.3	59.7	38.0	100.0
2006	3.9	58.7	37.5	100.0
2007	3.7	62.6	33.7	100.0
2008	3.7	63.1	33.2	100.0
2009	3.7	67.5	28.8	100.0
2010	3.0	71.1	25.9	100.0

[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: Up to 2000 data are weighted on the basis of the 1990 Population Census. The data pertain to those who consider themselves registered jobseekers in the KSH MEF. From 1999 those who reported that their last contact with the employment center 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/2012ent05_10

Table 5.11: Selected time series of registered unemployment, monthly averages, in thousands and per cent

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Registered unemployment[a]	671.7	568.4	507.7	500.6	470.1	423.1	409.5	390.5	364.1
Of which: School-leavers	59.7	62.1	54.5	46.2	42.4	32.5	29.9	26.0	26.8
Non school-leavers	612.0	506.2	453.2	454.4	427.7	390.6	379.6	364.4	337.4
Male	395.3	333.0	293.8	284.1	267.1	233.4	221.4	209.7	196.4
Female	276.4	235.3	213.8	216.5	203.0	189.7	188.1	180.8	167.7
25 years old and younger	174.8	153.3	134.2	124.0	105.8	89.9	85.4	79.1	75.6
Manual workers	556.0	467.6	414.3	407.4	386.3	349.0	336.8	321.2	302.0
Non manual workers	115.8	100.7	93.4	93.2	83.8	74.1	72.7	69.3	62.1
Unemployment benefit recipients[b]	404.8	228.9	182.8	171.7	141.7	130.7	140.7	131.7	119.2
Unemployment assistance recipients[c]	89.3	190.3	210.0	211.3	201.3	182.2	148.6	143.5	131.2
Unemployment rate[d]	12.9	11.3	10.6	11.0	10.5	9.5	9.7	9.3	8.5

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	1993	1994	1995	1996	1997	1998	1999	2000	2001
Shares within registered unemployed, per cent									
School-leavers	8.9	10.9	10.7	9.2	9.0	7.7	7.3	6.7	7.3
Male	58.8	58.6	57.9	56.7	56.8	55.2	54.1	53.7	53.9
25 years old and younger	26.0	27.0	26.4	24.8	22.5	21.3	20.9	20.3	20.8
Manual workers	82.8	82.3	81.6	81.4	82.2	82.5	82.3	82.2	82.9
Flows, in thousands									
Inflow to the Register	48.6	42.3	45.7	52.8	56.1	55.4	57.2	54.1	57.0
Of which: School-leavers	7.6	7.8	8.0	7.5	9.2	9.8	9.3	8.0	7.8
Outflow from the Register	51.2	51.7	47.6	54.3	57.3	60.4	57.2	56.8	59.4
Of which: School-leavers	6.6	7.9	8.5	8.9	9.0	11.0	9.4	8.2	7.7
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Registered unemployment[a]	344.7	357.2	375.9	409.9	393.5	426.9	442.3	561.8	582.7
Of which: School-leavers	28.5	31.3	33.8	40.9	38.7	40.4	41.4	49.3	52.6
Non school-leavers	316.2	325.9	342.2	369.1	354.7	386.5	400.9	512.5	530.1
Male	184.6	188.0	193.3	210.4	200.9	219.9	228.3	297.9	305.0
Female	160.1	169.2	182.6	199.5	192.5	207.0	214.0	263.9	277.7
25 years old and younger	71.1	71.6	71.4	78.9	75.8	80.3	75.9	104.3	102.8
Manual workers	286.3	296.2	308.5	336.2	321.9	..	..	..	..
Non manual workers	58.4	61.0	67.4	73.7	71.6	..	..	..	..
Unemployment benefit recipients[b]	114.9	120.0	124.0	134.4	151.5	134.6	136.5[e]	202.1	187.7
Unemployment assistance recipients[c]	113.4	116.2	120.4	133.4	121.8	133.0	147.5	156.0	167.8
Unemployment rate[d]	8.0	8.3	8.7	9.4	9.0	9.7	10.0	12.8	13.3
Shares within registered unemployed, per cent									
School-leavers	8.3	8.8	9.0	10.0	9.8	9.5	9.4	8.8	9.0
Male	53.5	52.6	51.4	51.3	51.1	51.5	51.6	53.0	52.3
25 years old and younger	20.6	20.0	19.0	19.2	16.5	18.8	17.2	18.6	17.6
Manual workers	83.1	82.9	82.1	82.0	81.8	..	..	..	..
Flows, in thousands									
Inflow to the Register	56.0	54.8	57.8	60.7	50.8	51.4	54.0	69.0	65.3
Of which: School-leavers	7.8	7.7	7.6	8.2	7.0	6.2	6.3	7.5	7.9
Outflow from the Register	55.8	53.5	54.4	59.8	51.4	48.4	51.3	58.4	66.4
Of which: School-leavers	7.5	7.6	7.1	7.9	7.1	6.0	6.2	6.7	7.5

[a] Since 1st of November, 2005: registered jobseekers instead of registered unemployed. (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 recepients.

[c] Only recipients who are in the NMH register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to 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.

[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: *NMH REG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_11

Table 5.12: Monthly entrants to the unemployment register[a], monthly averages, in thousands

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
First time entrants	17.0	13.4	12.8	11.2	11.2	10.4	10.0	10.5	10.8	8.6	8.0	7.1	8.3	7.2
Previously registered	39.2	42.0	44.4	42.9	45.8	45.6	44.8	47.3	50.0	42.2	43.4	46.9	60.7	58.1
Together	56.1	55.4	57.2	54.1	57.0	56.0	54.8	57.8	60.7	50.8	51.4	54.0	69.0	65.3

[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: *NMH REG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_12

Figure 5.6: Entrants to the unemployment register, in thousands
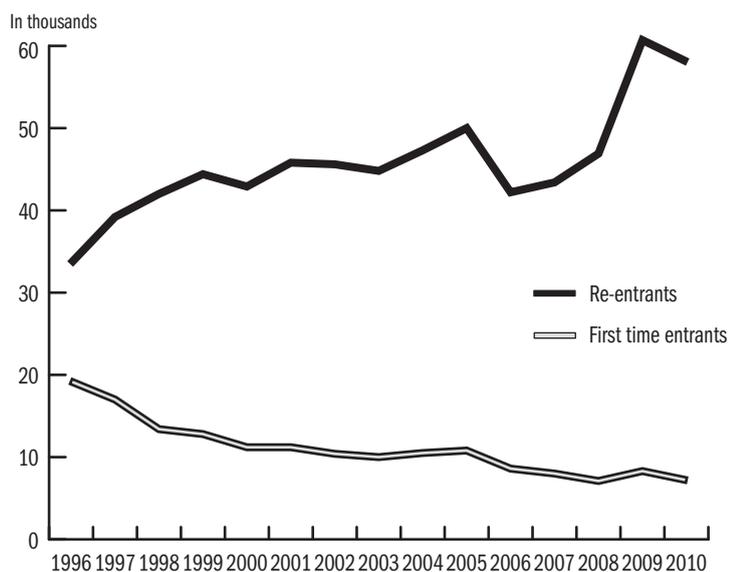
Source: *NMH REG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena05_06

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Table 5.13: Benefit recepients and participation in active labour market programs

Year		Unemploy- ment benefit[a]	Regular social assistance[b]	UA for school- leavers	Do not receive provision	Public work[c]	Retraining[c]	Wage sub- sidy[c]	Other pro- grammes[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

[a] Since 1st of November, 2005: jobseeker benefit recepients.

[b] Only recipients who are in the NMH register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to 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.

[c] Up to 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 employlment, 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 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.

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 programs ≈100.0.

Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_13

Table 5.14: The number of registered unemployed[a] who became employed on subsidised and non-subsidised employment[b]

	2004		2005		2006		2007		2008		2009		2010	
	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent	Persons	Per cent
Subsidised employment	119,448	40.5	137,136	42.7	130,081	37.4	104,842	32.7	118,703	34.0	170,464	40.0	198,974	38.5
Non-subsidised employment	175,393	59.5	184,389	57.3	217,606	62.6	215,686	67.3	230,558	66.0	255,356	60.0	317,622	61.5
Total	294,841	100.0	321,525	100.0	347,687	100.0	320,528	100.0	349,261	100.0	425,820	100.0	516,596	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] Yearly total.
Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_14

Table 5.15: The ratio of those who are employed among the former participants of ALMPs, per cent

Active labour market programmes	1997[a]	1998[a]	1999[a]	2000[a]	2001[a]	2002[a]	2003[a]	2004[a]	2005[a]	2006[a]	2007[a]	2008[a]	2009[b]	2010[b]
Suggested training programmes[c]	46.3	46.8	46.8	48.4	45.4	43.3	43.0	45.5	43.8	41.1	37.5	42.2	40.4	49.4
Accepted training programmes[d]	51.1	51.5	50.0	52.0	49.3	45.8	46.0	45.6	51.4	50.9	47.6	48.0	41.9	48.8
Retrainig of those who are employed[e]	90.4	94.7	94.8	94.9	94.2	92.7	93.3	92.1	90.4	..	92.3	93.9	..	59.9
Support for self-employment[f]	88.1	91.7	90.5	89.4	89.2	90.7	89.6	90.7	89.6	86.4	87.6	83.6	73.1	76.4
Wage subsidy programmes[g]	66.3	59.1	59.7	62.3	59.7	62.9	62.0	64.6	62.6	62.3	63.4	65.0	72.4	90.9
Work experience programmes[h]	65.7	59.1	55.8	57.9	64.5	66.9	66.1	66.5	66.8	66.6	66.3	74.6	..	..
Further employment programme[i]	72.1	75.1	68.5	73.8	71.6	78.4	78.2	71.5	70.9	65.0	77.5	–	..	..

[a] Three months after the end of programmes.
[b] Six months after the end of programmes.
[c] Suggested training: group traning programmes for jobseekers organized by the NFSZ.
[d] Accepted training: participation in programmes initiated by the jobseekers and accepted by NFSZ for full or partial support.
[e] 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.
[f] Support to help entrepeneurship: support of jobseekers in the amount of the monthly minimum wage or maximum HUF 3 million lumpsum support (to be repaid or not), aimed at helping them become individual entrepreneurs or self-employed.
[g] 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.
[h] Work experience programmes: to aid first time jobseekers (new entrants) for 6–9 months, the support covers the wage and 50–80% of additional work-related costs. Discontinued from December 31, 2006.
[i] 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: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_15

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Table 5.16: Distribution of registered unemployed,[a] unemployment benefit recipients[b]
and unemployment assistance recipients[c] by educational attainment

Educational attainment	1995	2001	2004	2005	2006	2007	2008	2008[e]	2009	2010
Registered unemployed										
8 grades of primary school or less	43.6	42.3	42.7	41.8	41.5	42.8	43.8	–	40.0	39.2
Vocational school	34.5	34.2	32.2	32.6	32.3	31.5	30.7	–	33.1	31.4
Vocational secondary school	11.7	13.0	13.4	13.6	13.6	13.2	12.8	–	14.4	15.0
Grammar school	7.9	7.7	7.8	8.0	8.2	8.2	8.1	–	8.3	9.1
College	1.5	2.1	2.8	2.9	3.2	3.1	3.2	–	3.0	3.7
University	0.7	0.7	1.0	1.0	1.2	1.2	1.2	–	1.1	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	–	100.0	100.0
	482.7	359.6	350.7	388.1	359.6	402.7	415.6	–	549.0	546.0
Unemployment benefit recipients[d]										
8 grades of primary school or less	36.9	29.7	28.9	28.2	25.4	25.4	24.4	26.3	25.7	24.1
Vocational school	36.6	40.7	39.2	39.3	39.5	37.4	37.0	39.2	39.4	36.2
Vocational secondary school	14.9	16.7	17.7	17.9	18.7	19.2	19.3	18.3	18.5	19.7
Grammar school	8.3	9.0	9.3	9.5	10.1	10.9	11.0	10.6	10.1	11.6
College	2.2	2.9	3.6	3.7	4.5	5.0	6.0	5.7	4.5	5.8
University	1.0	1.0	1.3	1.4	1.8	2.1	2.3	2.1	1.7	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	164.1	110.3	100.3	104.9	91.5	119.3	92.5	126.9	200.5	165.8
Unemployment assistance recipients[c]										
8 grades of primary school or less	56.8	55.5	61.1	60.4	60.1	60.3	60.3	–	59.4	56.4
Vocational school	30.6	30.0	27.6	27.8	27.7	27.1	26.5	–	26.6	27.4
Vocational secondary school	6.9	7.4	6.1	6.4	6.5	6.8	6.8	–	7.5	8.6
Grammar school	4.5	5.1	4.2	4.3	4.5	4.4	4.7	–	4.8	5.6
College	0.8	0.9	0.8	0.9	1.0	1.1	1.2	–	1.2	1.5
University	0.3	0.3	0.2	0.2	0.3	0.3	0.4	–	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	–	100.0	100.0
	220.7	136.9	114.6	127.8	116.5	130.9	145.8	–	144.1	161.7

[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.

[c] Only recipients who are in the NMH register. Those receiving the discontinued income support supplement were included in the number of those receiving income support supplement up to 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.

[d] After 1st of November, 2005: jobseeking support. Does not contain those receiving unemployment aid prior to pension in 2004.

[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: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_16

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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, %
1993	580,880	32.1	..	2003	297,640	26.7	65.2
1994	485,045	27.8	..	2004	308,027	27.4	64.6
1995	370,941	27.7	..	2005	329,738	27.2	63.0
1996	408,828	24.2	58.4	2006	234,273	33.2	53.7
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				

[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: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_17

Table 5.18: The distribution of the total number of labour market training participants[a]

Groups of training participants	1997	1998	1999	2000	2001	2002	2003
Participants in suggested training	44,988	48,558	52,045	52,198	53,447	46,802	45,261
Participants in accepted training	26,522	26,906	28,311	30,949	32,672	31,891	28,599
One Step Forward (OFS) programme	–	–	–	–	–	–	–
Non-employed participants together	71,509	75,465	80,356	83,147	86,211	78,693	73,859
Of which: school-leavers	21,658	24,359	25,260	22,131	20,592	19,466	18,320
Employed participants	4,484	4,139	4,408	5,026	5,308	4,142	9,036
Total	75,993	79,604	84,764	88,173	91,519	82,835	82,895
	2004	2005	2006	2007	2008	2009	2010
Participants in suggested training	33,002	29,252	36,212	32,747	48,561	41,373	50,853
Participants in accepted training	19,406	9,620	7,327	5,766	4,939	8,241	6,853
One Step Forward (OFS) programme	–	–	–	270	59,347	11,169	2,316
Non-employed participants together	52,407	38,872	43,539	38,783	112,847	60,783	57,706
Of which: school-leavers	12,158	9,313	1,365	1,111	18,719	21,103	12,030
Employed participants	7,487	4,853	3,602	3,467	37,466	12,496	336
Total	59,894	43,725	47,141	42,250	150,313	73,279	60,358

[a] The data contain the number of those financed from the MPA decentralized employment base, as well as those involved in training as a part of the HEFOP 1.1 and the TÁMOP 1.1.2 programs.

Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_18

Table 5.19: Employment ratio of participants ALMPs by gender, age groups and educational attainment
for the programmes finished in 2010, per cent

	Non-employed participants			Supported self-employment[a]	Wage subsidy programme
	suggested training	accepted training	total		
By gender					
Males	51.0	50.7	51.0	77.2	90.5
Females	47.8	46.8	48.0	75.7	91.5
By age groups					
–20	43.6	46.0	44.1	76.9	90.9
20–24	54.2	52.1	54.1	77.5	98.2
25–29	55.4	54.5	55.6	80.6	92.5
–29 together	53.8	52.7	53.9	79.3	95.9
30–34	51.6	50.1	51.6	77.9	93.1
35–39	49.1	44.4	48.5	78.1	93.8
40–44	47.2	44.9	47.0	75.3	87.3
45–49	43.8	46.2	44.2	72.7	85.6
50–54	39.2	44.7	39.7	67.7	88.8
55+	36.5	39.2	37.0	76.4	83.9
By educational attainment					
Less than primary school	35.7	31.5	35.1	80.0	78.6
Primary school	43.2	41.8	43.1	65.6	88.3
Vocational school for skilled workers	50.8	52.3	50.9	77.2	90.1
Vocational school	45.9	45.1	45.9	72.3	89.3
Special vocational school	..	..	..	..	..
Vocational secondary school	53.5	54.5	53.7	78.0	95.1
Technicians secondary school	59.0	53.0	58.0	77.3	94.9
Grammar school	48.1	45.8	48.2	75.9	91.7
College	53.9	48.6	53.4	79.4	97.1
University	52.8	49.7	53.2	78.7	94.3
Total	49.4	48.8	49.5	76.4	90.9

[a] Survival rate.
Note: 6 months after the end of each programme.
Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_19

Table 5.20: The distribution of the yearly number of labour market training participants,
according to the type of traning, per cent

Types of training	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Approved qualification	80.4	77.9	79.8	79.6	78.8	78.7	77.6	78.3	75.1	72.9	71.5	69.0	65.8	63.6	65.2
Non-approved qualifica-tion	15.8	16.0	14.4	14.7	14.7	14.0	13.6	12.6	15.0	14.5	16.9	19.9	22.8	26.4	25.4
Foreign language learning	3.8	6.1	5.7	5.7	6.5	7.3	8.8	9.1	9.9	12.6	11.5	11.1	11.4	10.0	9.4
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	100.0	100.0	100.0

Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_20

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Table 5.21: The distribution of those entering into the training programmes by age groups and educational level

	2003	2004	2005	2006	2007	2008	2009	2010
Total number of entrants	45,092	25,760	27,727	26,459	25,353	42,710	37,467	39,780
By age groups, %								
–20	10.4	9.0	9.7	8.7	7.0	8.1	4.9	3.8
20–24	24.1	22.3	23.1	23.0	24.7	26.9	25.1	23.9
25–44	54.7	54.9	52.3	52.0	51.3	48.3	51.5	52.4
45–49	6.5	7.9	7.8	7.8	8.0	7.0	8.5	8.8
50+	4.3	5.9	7.1	8.4	9.2	9.7	10.0	11.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
By level of education, %								
Less than primary school	1.3	1.7	2.3	1.2	1.6	2.1	7.5	3.0
Primary school	23.1	23.8	26.3	25.1	24.0	28.1	22.8	24.5
Vocational school	26.9	26.6	25.7	26.8	24.5	21.9	22.0	25.5
Vocational and technical secondary school	25.7	24.5	23.3	23.5	23.9	22.6	24.8	23.7
Grammar school	15.5	14.2	14.4	15.0	16.3	15.9	15.3	15.8
College, university	7.6	9.2	8.1	8.4	9.8	9.4	7.6	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent05_21

Table 6.1: Nominal and 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
1991	17,934	12,948	130.0	125.5	135.0	93.0
1992	22,294	15,628	125.1	121.3	123.0	98.6
1993	27,173	18,397	121.9	117.7	122.5	96.1
1994	33,939	23,424	124.9	127.3	118.8	107.2
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	87,645	55,785	113.5	111.4	109.8	101.5
2001	103,553	64,913	118.0	116.2	109.2	106.4
2002	122,482	77,622	118.3	119.6	105.3	113.6
2003	137,187	88,751	112.0	114.3	104.7	109.2
2004	145,520	93,715	106.0	105.6	106.8	99.0
2005	158,343	103,149	108.8	110.1	103.6	106.3
2006	171,239	110,896	108.1	107.5	103.9	103.5
2007	185,004	114,112	108.0	103.0	108.0	95.4
2008	198,964	122,267	107.5	107.0	106.1	100.8
2009	199,775	124,086	100.5	101.7	104.2	97.6
2010	202,576	132,628	101.4	106.9	104.9	101.9

Source: *KSH IMS*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent06_01

Figure 6.1: Annual changes of gross and net real earnings
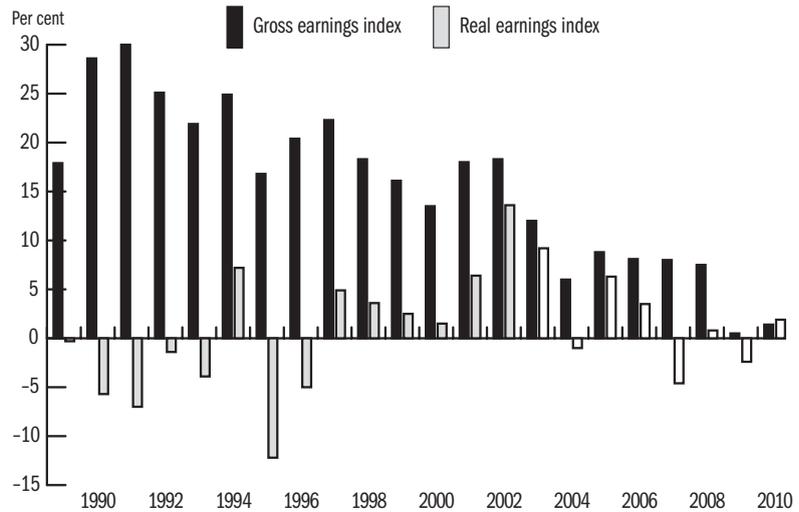
Source: *KSH IMS*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena06_01

Table 6.2.a: Gross earnings ratios in the economy, HUF/person/month

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture, forestry and fishing	59,362	72,261	84,542	89,446	97,219	103,190	112,388	122,231	133,570	137,101	143,861
Mining and quarrying	109,046	124,755	135,770	142,882	158,945	171,465	190,530	202,985	225,650	244,051	233,985
Manufacturing	88,031	100,964	113,707	123,914	136,354	145,997	158,597	172,277	183,081	190,331	200,748
Electricity, gas, steam and air conditioning supply	133,658	153,100	176,269	198,733	223,541	243,039	265,912	294,241	321,569	345,035	363,900
Water supply; sewerage, waste management and remediation activities	83,938	95,214	108,585	119,341	129,486	140,699	151,912	164,572	178,049	181,818	193,605
Construction	64,288	79,368	86,324	94,193	100,124	106,608	117,626	136,301	146,475	152,204	153,003
Wholesale and retail trade; repair of motor vehicles and motorcycles	78,417	91,303	106,709	115,922	122,538	131,068	145,243	158,077	171,780	175,207	185,695
Transportation and storage	87,473	100,148	112,577	124,419	137,526	149,068	162,091	173,776	186,376	196,350	200,111
Accommodation and food service activities	55,276	66,358	77,756	87,115	90,089	95,823	102,908	112,222	120,600	122,561	122,691
Information and communication	169,984	203,466	234,040	250,308	273,606	288,876	306,792	328,902	358,217	366,752	368,115
Financial and insurance activities	189,818	217,018	241,654	274,081	324,295	349,809	401,580	390,511	431,601	427,508	433,442
Real estate activities	89,468	94,671	111,627	122,087	126,388	134,409	145,550	159,225	169,845	177,747	182,747
Professional, scientific and technical activities	110,626	136,522	149,544	167,758	182,970	200,830	212,963	244,998	281,150	292,974	297,559
Administrative and support service activities	73,108	89,575	102,693	107,250	113,276	119,555	128,486	139,127	147,125	149,131	145,574
Public administration and defence; compulsory social security	104,288	131,731	167,856	180,866	184,357	207,356	223,009	253,335	267,657	234,696	243,401
Education	81,160	97,580	128,536	162,293	159,803	181,444	191,211	193,250	204,600	194,958	195,928
Human health and social work activities	68,372	78,796	103,149	129,995	130,509	144,100	151,889	160,050	169,977	161,265	142,337
Arts, entertainment and recreation	75,318	87,630	112,894	137,826	141,957	154,312	161,416	183,898	183,813	179,199	179,981
Other service activities	66,946	80,752	91,198	103,554	127,136	133,846	140,893	153,512	157,950	160,375	150,045
National economy, total	87,750	103,554	122,481	137,193	145,523	158,343	171,351	185,018	198,741	199,837	202,576
Of which:											
– Business sector	88,424	102,834	116,596	127,032	138,926	148,555	162,531	177,415	192,044	200,304	206,848
– Budgetary institutions	86,573	105,944	136,844	160,844	161,559	182,185	193,949	206,225	219,044	201,632	196,186

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/2012ent06_02a

Table 6.2.b: Gross earnings ratios in the economy, per cent

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture, forestry and fishing	67.6	69.8	69.0	65.2	66.8	65.2	65.6	66.1	67.2	68.6	71.0
Mining and quarrying	124.3	120.5	110.8	104.1	109.2	108.3	111.2	109.7	113.5	122.1	115.5
Manufacturing	100.3	97.5	92.8	90.3	93.7	92.2	92.6	93.1	92.1	95.2	99.1
Electricity, gas, steam and air conditioning supply	152.3	147.8	143.9	144.9	153.6	153.5	155.2	159.0	161.8	172.7	179.6
Water supply; sewerage, waste management and remediation activities	95.7	91.9	88.7	87.0	89.0	88.9	88.7	88.9	89.6	91.0	95.6
Construction	73.3	76.6	70.5	68.7	68.8	67.3	68.6	73.7	73.7	76.2	75.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	89.4	88.2	87.1	84.5	84.2	82.8	84.8	85.4	86.4	87.7	91.7
Transportation and storage	99.7	96.7	91.9	90.7	94.5	94.1	94.6	93.9	93.8	98.3	98.9
Accommodation and food service activities	63.0	64.1	63.5	63.5	61.9	60.5	60.1	60.7	60.7	61.3	60.6
Information and communication	193.7	196.5	191.1	182.4	188.0	182.4	179.0	177.8	180.2	183.5	181.7
Financial and insurance activities	216.3	209.6	197.3	199.8	222.8	220.9	234.4	211.1	217.2	213.9	214.0
Real estate activities	102.0	91.4	91.1	89.0	86.9	84.9	84.9	86.1	85.5	88.9	90.2
Professional, scientific and technical activities	126.1	131.8	122.1	122.3	125.7	126.8	124.3	132.4	141.5	146.6	146.9
Administrative and support service activities	83.3	86.5	83.8	78.2	77.8	75.5	75.0	75.2	74.0	74.6	71.9
Public administration and defence; compulsory social security	118.8	127.2	137.0	131.8	126.7	131.0	130.1	136.9	134.7	117.4	120.2
Education	92.5	94.2	104.9	118.3	109.8	114.6	111.6	104.4	102.9	97.6	96.7
Human health and social work activities	77.9	76.1	84.2	94.8	89.7	91.0	88.6	86.5	85.5	80.7	70.3
Arts, entertainment and recreation	85.8	84.6	92.2	100.5	97.5	97.5	94.2	99.4	92.5	89.7	88.8
Other service activities	76.3	78.0	74.5	75.5	87.4	84.5	82.2	83.0	79.5	80.3	74.1
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	100.8	99.3	95.2	92.6	95.5	93.8	94.9	95.9	96.6	100.2	102.1
– Budgetary institutions	98.7	102.3	111.7	117.2	111.0	115.1	113.2	111.5	110.2	100.9	96.8

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/2012ent06_02b

Table 6.3: Regression-adjusted earnings differentials

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Male	0.1800	0.1600	0.1620	0.1410	0.1480	0.1490	0.1500	0.1520	0.1810	0.1720	0.1460	0.1480
Less than primary school	-0.6030	-0.5740	-0.4870	-0.4550	-0.4110	-0.3900	-0.4800	-0.4090	-0.4350	-0.4030	-0.5580	-0.3700
Primary school	-0.4660	-0.4120	-0.3650	-0.3640	-0.3550	-0.3670	-0.3730	-0.3830	-0.4160	-0.4050	-0.4500	-0.3740
Vocational school	-0.3210	-0.2780	-0.2530	-0.2730	-0.2550	-0.2650	-0.2750	-0.2840	-0.2940	-0.2800	-0.3020	-0.2440
College, university	0.5300	0.5570	0.5310	0.5400	0.6190	0.5870	0.5900	0.5790	0.5620	0.5560	0.6220	0.5750
Estimated labour market experience	0.0248	0.0250	0.0212	0.0213	0.0216	0.0237	0.0238	0.0254	0.0256	0.0250	0.0258	0.0231
Square of estimated labour market experience	-0.0004	-0.0004	-0.0003	-0.0003	-0.0003	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004	-0.0004
Public servant	-0.1990	-0.1230	-0.1140	-0.0581	0.1120	0.1600	0.1130	0.0918	0.0031	0.0224	-0.1310	-0.0589

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.

All equation specifications control for industrial classification. We do not include the parameter estimates of the industrial classification variables, since the classification changed several times between 1998 and 2009. The region parameters can be seen in Table 9.6.

Reference category: women, with leaving certificate (general education certificate), not in the public sector, working in the Central-Transdanubia region.

Source: *NMH BT.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent06_03

Figure 6.2: The percentage of low paid workers by gender, per cent
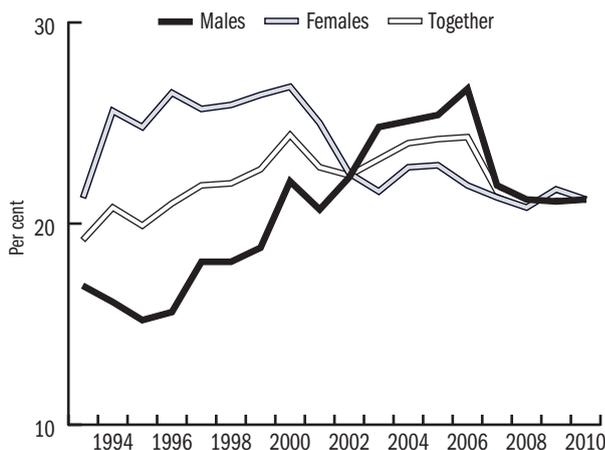
Source: *NMH BT.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena06_02

Table 6.4: Percentage of low paid workers[a] by gender, age groups, level of education and industries

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
By gender															
Males	15.6	18.1	18.1	18.8	22.1	20.7	22.3	24.8	25.1	25.4	26.7	21.9	21.2	21.1	21.2
Females	26.5	25.7	25.9	26.4	26.8	25.0	22.5	21.6	22.8	22.9	21.9	21.3	20.8	21.7	21.2
By age groups															
–24	37.8	39.1	37.7	37.9	37.0	35.5	37.6	39.9	43.9	44.2	46.3	40.1	34.6	38.9	38.2
25–54	19.4	20.2	20.6	21.3	22.8	21.9	21.8	22.3	23.6	24.0	24.2	21.4	20.6	21.0	20.9
55+	11.0	11.8	12.7	17.2	19.8	18.1	16.2	15.3	16.5	16.5	16.4	15.8	15.5	17.6	18.1
By level of education															
8 grades of primary school or less	40.1	40.6	42.9	43.9	43.4	40.4	38.3	37.1	39.6	41.2	40.1	41.4	41.3	47.4	43.4
Vocational school	23.7	27.0	26.9	28.6	31.2	29.4	32.1	35.4	35.7	36.8	37.9	32.9	32.1	33.5	33.3
Secondary school	13.1	14.0	14.2	15.4	18.8	18.0	16.5	17.7	18.6	18.6	19.7	16.1	15.4	16.4	17.3
Higher education	3.2	3.0	3.4	3.2	4.7	4.7	3.6	3.5	3.9	3.8	4.3	2.5	2.4	2.3	2.9
By industries[b]															
Agriculture, forestry, fishing	30.1	36.7	36.7	38.1	38.0	34.3	37.9	37.3	37.1	37.5	41.6	37.9	36.6	36.7	34.6
Manufacturing	15.8	18.5	18.9	18.9	20.0	19.1	19.4	25.4	24.7	22.1	24.1	20.8	23.5	23.0	20.5
Construction	26.7	32.7	32.6	36.7	42.9	41.7	44.8	49.8	51.2	50.2	55.2	43.1	37.5	38.1	43.0
Trade, repairing	31.7	36.0	37.7	36.8	42.8	41.3	44.0	49.0	49.3	51.5	49.4	40.9	35.9	35.2	36.4
Transport, storage, communication	8.5	8.8	8.8	9.0	11.3	10.6	10.5	13.6	12.6	13.8	15.1	13.2	14.6	11.2	13.3
Financial intermediation	17.0	19.9	19.9	21.1	25.3	22.6	20.7	23.1	23.9	24.6	26.2	20.9	20.0	20.5	20.7
Public administration and defence, compulsory social security	25.9	19.0	15.5	16.0	13.7	13.8	9.3	6.6	8.2	6.0	6.3	7.4	6.7	8.7	8.8
Education	25.6	21.7	23.2	23.8	21.5	22.6	16.0	4.8	6.9	8.8	6.1	9.0	7.2	11.9	10.6
Health and social work	25.9	24.1	25.8	28.0	26.7	19.9	16.1	6.3	8.4	10.3	8.6	12.6	11.1	14.5	13.8
Total	21.0	21.9	22.0	22.7	24.4	22.8	22.4	23.2	24.0	24.2	24.3	21.6	21.0	21.4	21.2

[a] Percentage of those who earn less than 2/3 of the median earning.
[b] 1995–2008: by TEÁOR'03, 2009–: by TEÁOR'08.
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent06_04

Figure 6.3: The dispersion of gross monthly earnings
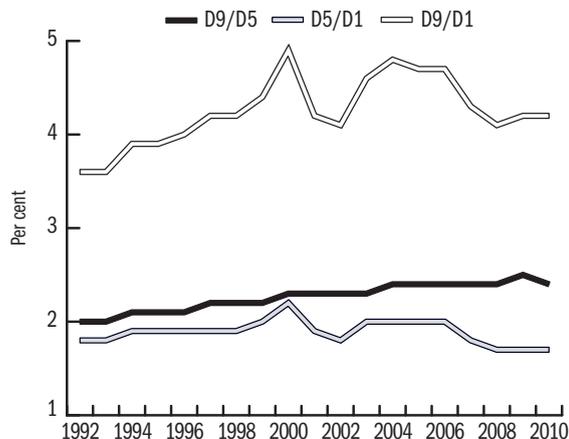
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena06_03

Figure 6.4: Age-income profiles by education level in 1998 and 2010, women and men
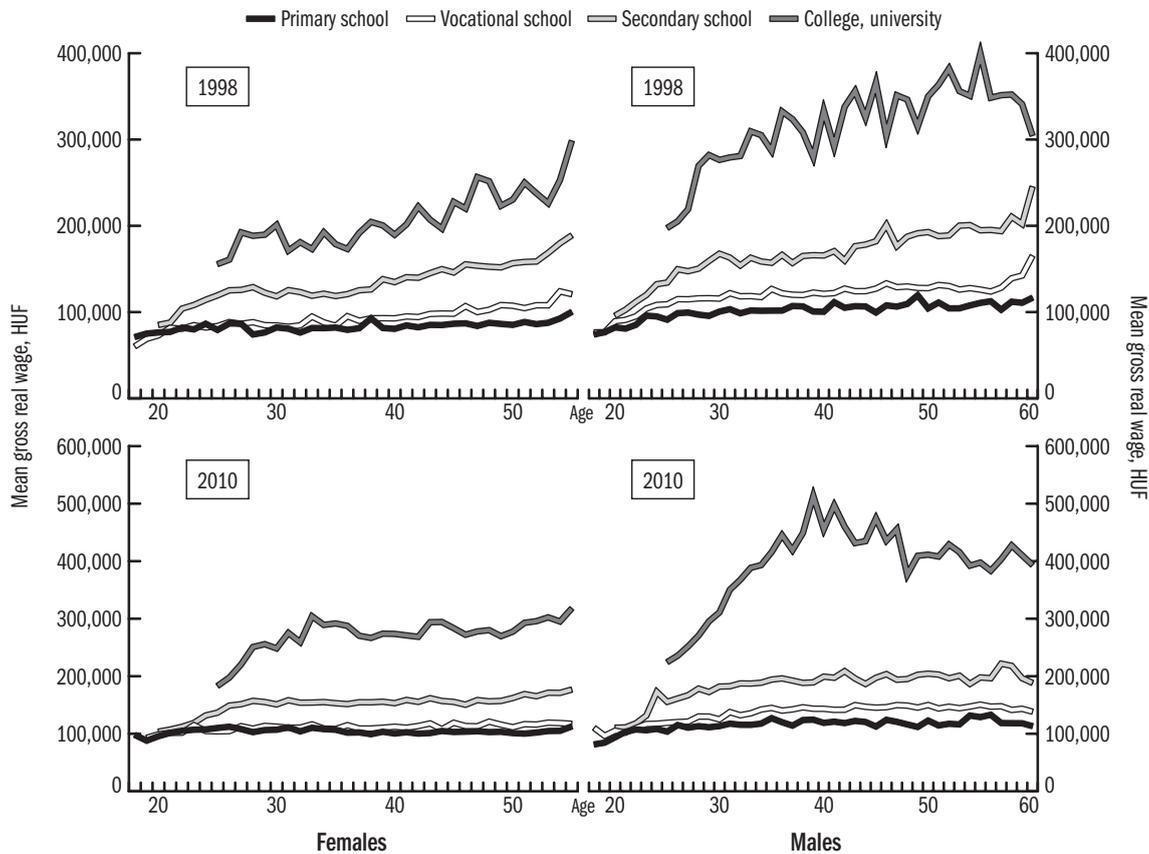
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena06_04

Figure 6.5: The dispersion of the logarithm of gross real earnings (2010 = 100%)
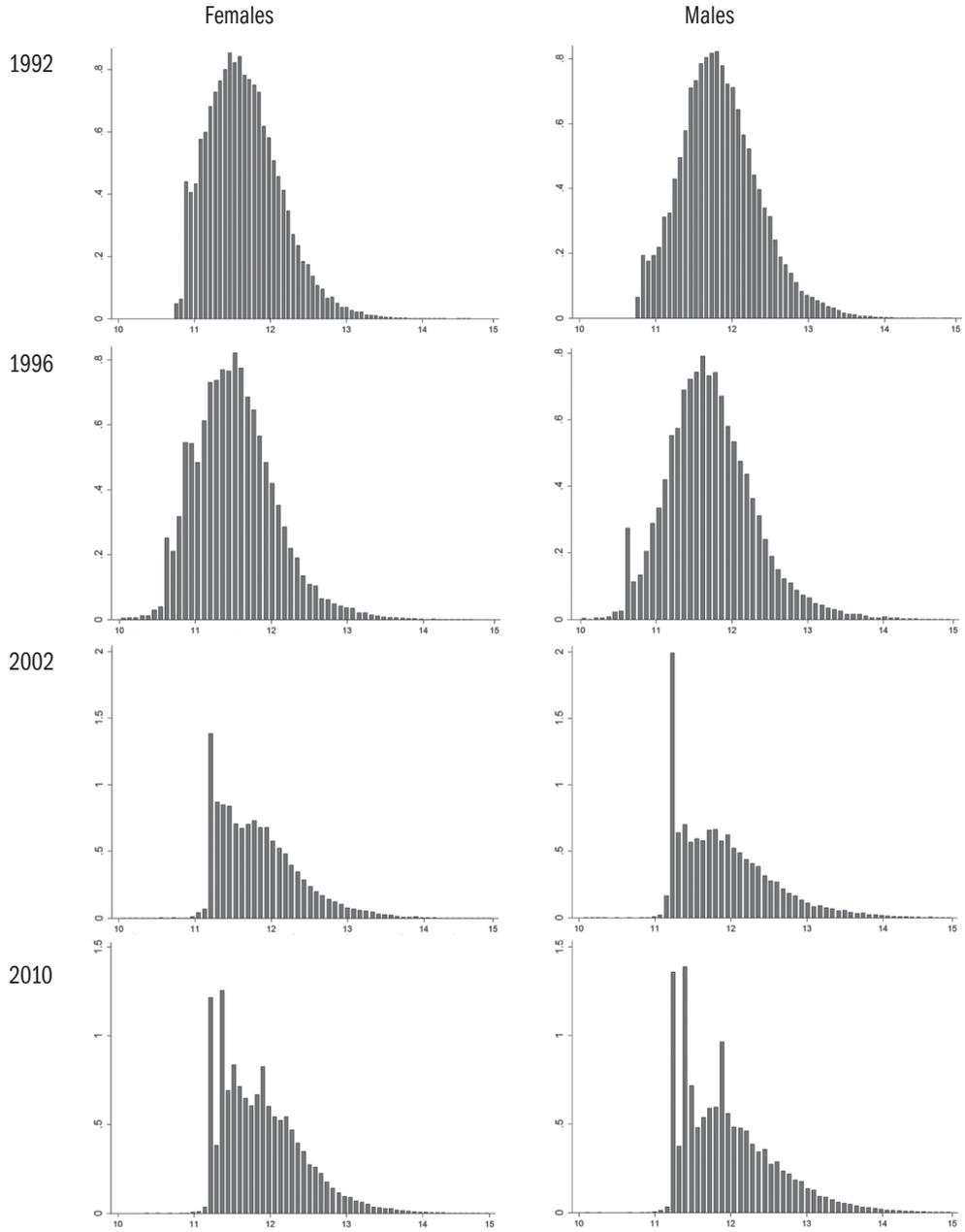
Source: *NMH BT.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena06_05

Table 7.1: School-leavers by level of education

Year	Primary school	Vocational school	Secondary school	College, university
1980	119,809	49,232	43,167	14,859
1989	170,891	53,724	52,573	15,699
1990	164,614	54,933	53,039	15,963
1991	158,907	59,302	54,248	16,458
1992	151,287	66,261	59,646	16,201
1993	144,200	66,342	68,607	16,223
1994	136,857	62,902	68,604	18,041
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	35,500[a]	72,200[a]	29,843[a]
2001	114,200[a]	33,500[a]	70,441	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

[a] Estimated data.

Note: Primary school: completed the 8th grade. Other levels: received certificate. Excludes special schools. College, university: from 2007 includes those completing basic higher education, combined, and masters programs.

Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent07_01

Figure 7.1: Full time studens as a percentage of the different age groups
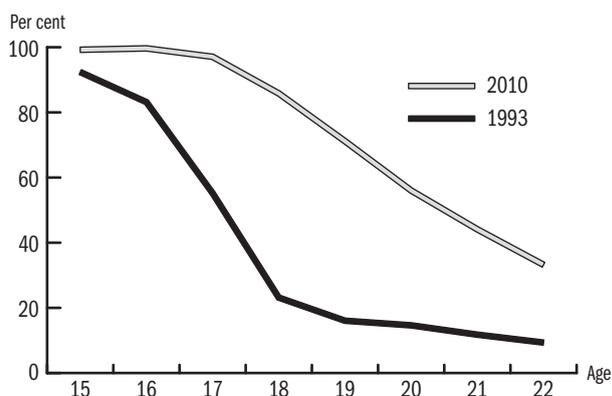
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena07_01

Table 7.2: Pupils/students entering the school system by level of education

Year	Primary school	Vocational school	Secondary school	College, university
1980	171,347	60,865	57,213	17,886
1990	125,665	87,932	83,939	22,662
1995	123,997	65,352	82,665	42,433
1996	124,554	58,822	84,773	44,698
1997	127,214	53,083	84,395	45,669
1998	125,875	39,965	86,868	48,886
1999	121,424	33,570	89,184	51,586
2000	117,000	33,900[a]	90,800[a]	54,100[a]
2001	112,144	34,210	92,393	56,709
2002	112,345	33,497	94,256	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

Note: Primary school: completed the 8th grade. Other levels: received certificate. Excludes special schools. College, university: from the 2005/2006 schoolyear, includes those completing basic higher education, combined, and masters programs.

[a] Estimated data.
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent07_02

Figure 7.2: Flows of the educational system by level
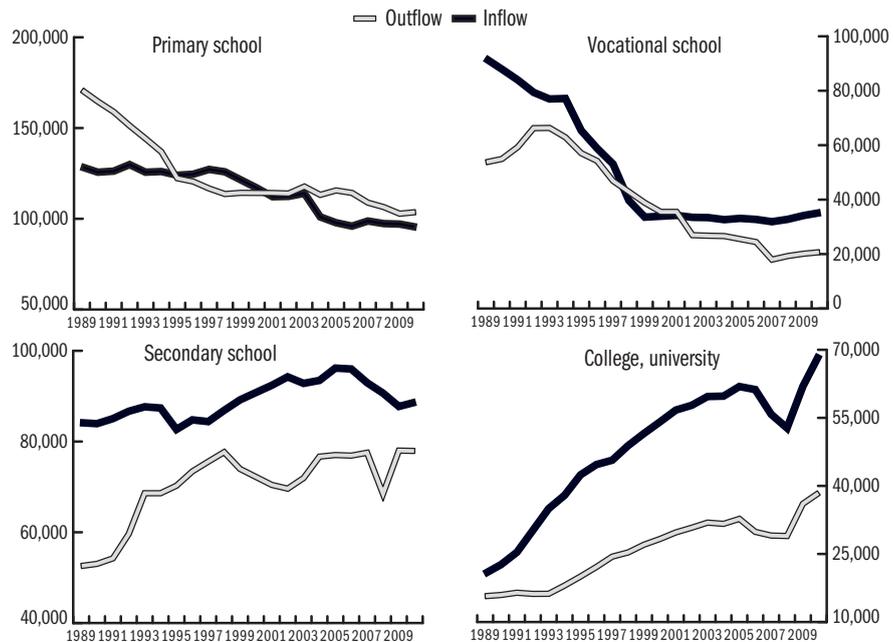
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena07_02

Table 7.3: The number of full time pupils/students by level of education

Year	Primary school	Vocational school	Secondary school	College, university
1990/91	1,130,656	222,204	291,872	76,601
1996/97	965,998	158,407	361,395	142,113
1997/98	963,997	143,911	368,645	152,889
1998/99	964,248	128,203	376,626	163,100
1999/00	960,601	117,038	386,579	171,612
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

Note: Excludes special education schools. Beginning with the 2001/2002 schoolyear, students in grades 5–8 who attend a 6 or 8 year high school are included in the number of high school students. The reason for the missing data in 2000/01 is that the NEFMI was unable to carry out the analysis based in the source data due to technical difficulties. College, university: from the 2005/2006 schoolyear, includes those completing basic higher education, combined, and masters programs.
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent07_03

Table 7.4: The number of pupils/students not in full time by level of education

Year	Primary school	Vocational school	Secondary school	College, university
1990/91	11,536	–	68,162	25,786
1996/97	4,099	–	74,653	56,919
1997/98	3,165	–	78,292	80,768
1998/99	3,016	–	84,862	95,215
1999/00	3,146	–	88,462	107,385
2000/01	2,940	1,070	91,700	118,994
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

Note: College, university: from the 2005/2006 schoolyear, includes those completing basic higher education, combined, and masters programs.
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent07_04

Table 7.5: Number of high school applicants, full time

Year	Applied	Admitted	Admitted as a percentage of applied	Applied	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

Note: Including those applying to and accepted to basic higher education, combined, and masters programs. From 2008, includes the number of those accepted during late and cross-semester admissions.
Source: *NEFMI STAT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent07_05

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Table 8.1: The number of vacancies[a] reported to the local offices of the NFSZ

Year	Number of vacancies at closing day	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

[a] Monthly average stock figures.
[b] Since 1st of November, 2005: registered jobseekers instead of registered unemployed.
Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent08_01

Figure 8.1: The number of vacancies reported to the local offices of the NFSZ
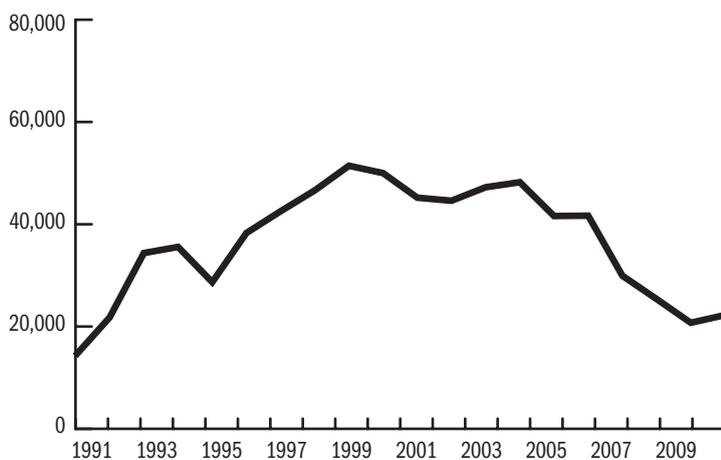
Source: *NMH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena08_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
1993	I.	34.7	23.6	2000	I.	24.4	41.0
	II.	28.5	22.3		II.	27.2	36.5
1994	I.	24.5	29.1	2001	I.	25.3	40.0
	II.	21.0	29.7		II.	28.6	32.6
1995	I.	30.1	32.9	2002	I.	25.6	39.2
	II.	30.9	27.5		II.	27.9	35.4
1996	I.	32.9	33.3	2003	I.	23.6	38.5
	II.	29.4	30.4		II.	32.1	34.3
1997	I.	29.6	39.4	2004		30.0	39.8
	II.	30.7	36.8	2005		25.3	35.0
1998	I.	23.4	42.7	2006		26.6	36.2
	II.	28.9	37.1	2007		20.4	27.0
1999	I.	25.8	39.2	2008		26.9	23.2
	II.	28.8	35.8	2009		18.4	26.8
				2010		15.4	26.0

[a] In the period of the next half year after the interview date, in the sample of NMH PROG, since 2004: 1 year later from the interview date.
Source: *NMH PROG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent08_02

Figure 8.2: Firms intending to increase/decrease their staff
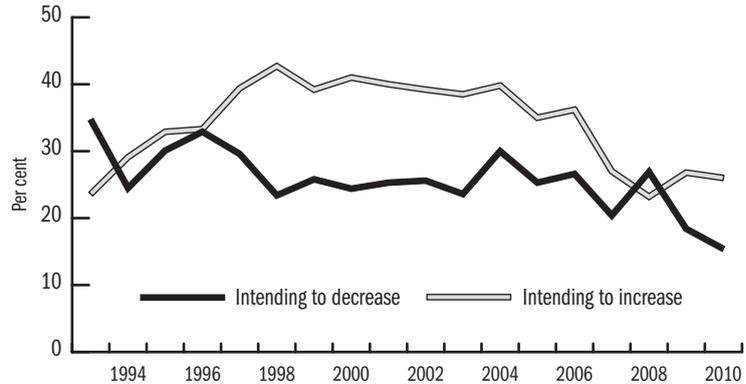
Source: *NMH PROG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena08_02

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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	62.7	61.4	62.8	53.6	50.4	51.1	54.3	57.3
2007	62.7	61.8	63.4	51.2	50.8	50.5	55.2	57.3
2008	62.7	60.3	62.1	51.0	49.5	49.9	54.5	56.7
2009	61.6	57.8	59.7	52.1	48.6	48.1	53.2	55.4
2010	60.3	57.3	59.0	53.1	48.7	49.3	54.4	55.4

[a] Age: 15–64.
Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_01

Figure 9.1: Regional inequalities: Labour force participation rates, gross monthly earnings and gross domestic product in NUTS-2 level regions
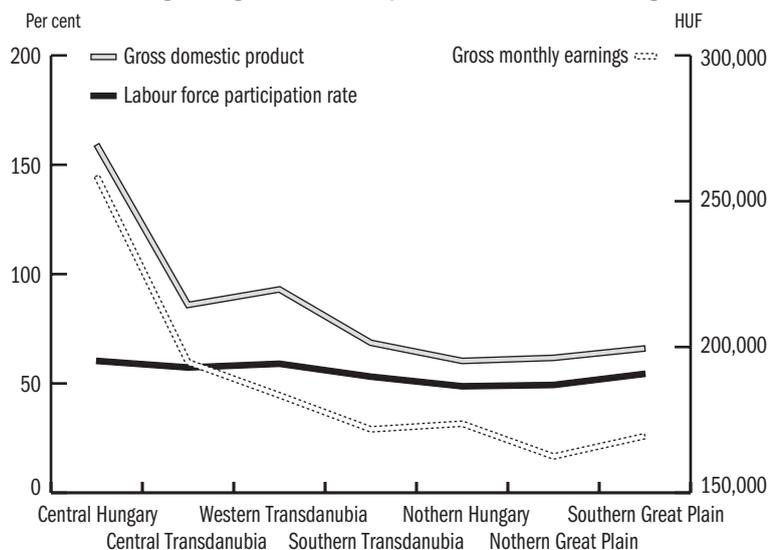
Source: Employment rate: *KSH MEF*; gross domestic product: *KSH*; earnings: *NMH BT*.
Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_01

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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
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	6.1	5.7	9.0	11.0	10.9	7.8	7.5
2007	4.7	5.0	5.0	10.0	12.3	10.8	7.9	7.4
2008	4.6	5.8	5.0	10.3	13.4	12.0	8.8	7.8
2009	6.6	9.3	8.6	11.0	15.2	14.2	10.9	10.0
2010	8.9	10.3	9.2	12.1	16.0	14.5	10.6	11.2

[a] Age: 15–74.
Note: Up to 2000 data are weighted on the basis of the 1990 Population Census.
Source: *KSH MEF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_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
1996	6.4	10.7	8.0	12.6	16.7	16.8	11.3	11.0
1997	5.6	9.9	7.3	13.1	16.8	16.4	11.0	10.5
1998	4.7	8.6	6.1	11.8	16.0	15.0	10.1	9.5
1999	4.5	8.7	5.9	12.1	17.1	16.1	10.4	9.7
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

[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: *NMH REG*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_03

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Figure 9.2: Regional inequalities: LFS-based unemployment rates in NUTS-2 level regions

2010

1993
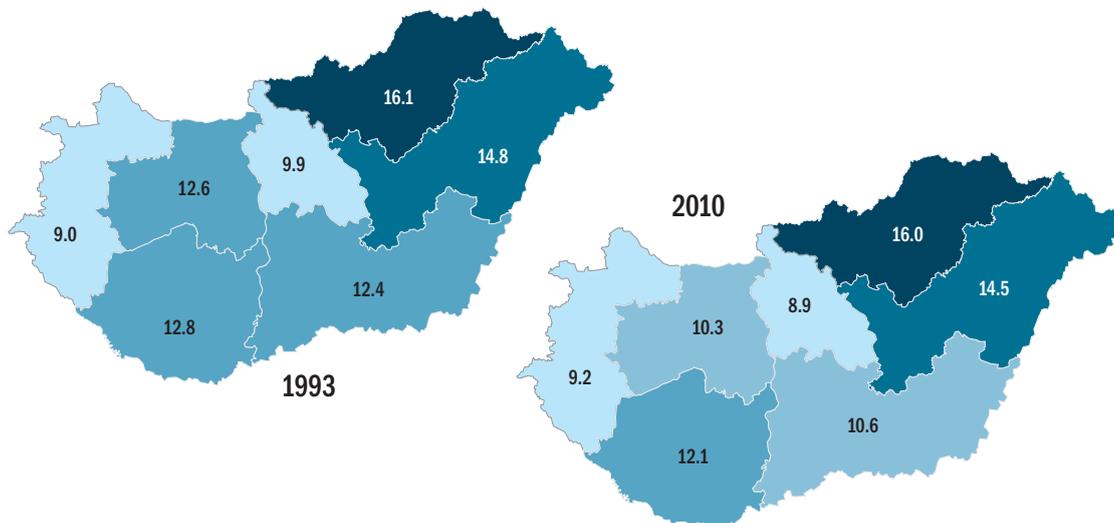
Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_02

Figure 9.3: Regional inequalities: The share of registered unemployed
relative to the economically active population, per cent, in NUTS-2 level regions

2010

1993
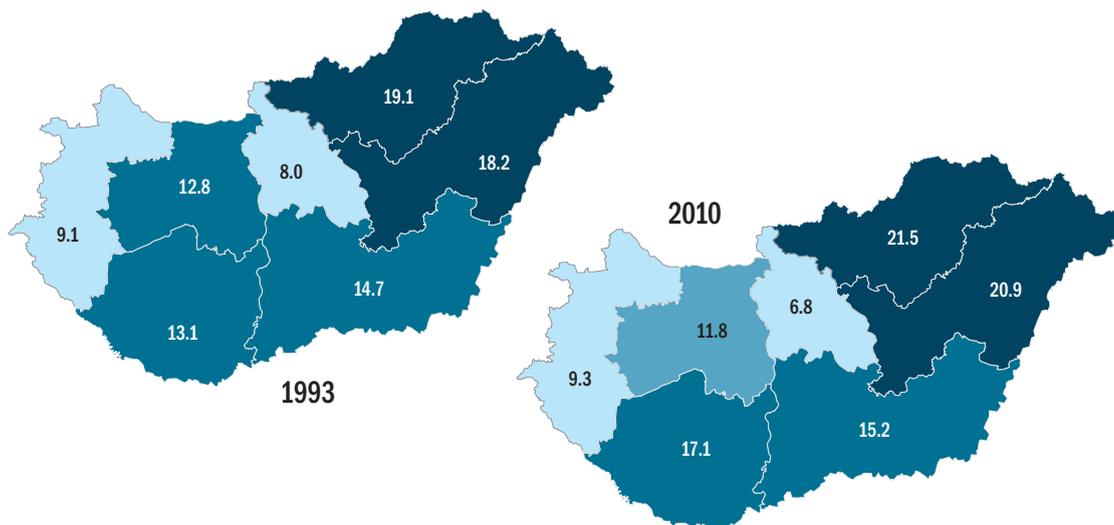
Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_03

Table 9.4: Annual average registered unemployment rate[a] by counties, per cent

County	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Budapest	0.1	5.7	5.7	4.8	4.0	3.7	3.0	2.6	2.2	2.4	2.8	2.9	2.6	3.0	3.1	4.6	5.9
Baranya	1.1	11.8	12.2	13.3	11.8	11.6	11.6	11.1	11.2	11.9	11.6	13.4	13.3	12.9	13.6	14.7	17.1
Bács-Kiskun	1.1	11.0	10.9	10.7	9.7	10.0	10.0	9.3	8.8	9.4	9.9	10.4	10.2	11.4	12.0	17.9	15.6
Békés	1.1	14.0	14.0	13.5	13.0	13.0	13.1	11.9	11.2	11.5	12.0	13.0	13.5	15.0	14.8	17.3	18.1
Borsod-Abaúj-Zemplén	2.3	16.7	18.0	19.0	17.9	19.5	20.3	19.0	19.1	19.6	18.3	18.9	18.0	19.9	20.1	23.1	23.7
Csongrád	1.0	9.9	9.3	9.2	8.1	8.5	8.6	8.3	8.1	8.5	9.7	10.7	8.8	9.2	9.3	11.6	12.4
Fejér	1.0	10.6	10.4	9.4	8.4	8.3	7.2	6.4	6.4	7.1	7.3	7.4	7.3	7.1	7.5	11.5	12.4
Győr-Moson-Sopron	0.5	6.8	7.4	6.4	5.1	4.8	4.6	4.1	4.0	4.1	4.6	5.4	4.6	4.1	4.1	6.9	6.8
Hajdú-Bihar	0.9	14.2	15.6	15.0	14.0	15.6	14.7	13.6	12.8	13.1	12.9	14.0	13.9	15.6	16.5	19.1	20.3
Heves	1.6	12.5	13.6	12.1	11.7	12.3	12.0	10.6	9.8	10.0	10.6	11.3	11.1	12.2	12.7	15.8	16.1
Jász-Nagykun-Szolnok	1.6	14.6	14.8	14.8	13.5	13.7	13.4	11.5	10.2	10.7	11.2	12.0	11.4	11.8	12.2	15.5	16.4
Komárom-Esztergom	1.0	11.3	12.0	11.4	9.8	10.1	8.3	7.0	6.7	6.0	5.8	6.8	5.8	5.4	5.5	10.2	10.4
Nógrád	2.4	16.3	17.0	16.3	15.6	16.2	14.9	14.3	13.8	14.6	14.6	16.1	16.1	17.7	17.8	21.2	22.0
Pest	0.5	7.6	7.8	7.3	6.3	6.0	5.2	4.4	3.7	3.7	3.8	4.2	3.9	4.3	4.4	6.7	7.7
Somogy	1.4	11.2	12.5	12.7	11.3	12.2	11.9	11.6	11.5	12.2	13.4	14.5	14.6	16.2	16.9	19.4	18.9
Szabolcs-Szatmár-Bereg	2.6	19.3	19.7	18.9	17.2	18.7	19.5	17.8	16.7	17.7	17.5	18.6	18.8	21.0	22.4	24.7	24.8
Tolna	1.6	12.2	13.4	13.5	12.3	12.9	11.8	11.0	10.0	10.7	11.6	11.8	10.5	11.5	12.1	15.2	14.7
Vas	0.4	7.2	7.2	6.7	5.6	5.6	5.2	4.9	4.5	5.0	6.0	6.8	6.1	6.2	6.1	9.8	9.6
Veszprém	0.9	10.0	9.9	9.2	7.9	8.2	7.2	6.9	6.6	7.0	7.3	8.0	7.7	8.0	8.2	12.6	12.3
Zala	0.8	9.2	9.8	9.2	8.1	7.7	7.2	6.5	6.4	7.0	7.4	9.3	9.0	9.3	9.4	13.0	12.9
Total	1.0	10.6	11.0	10.5	9.5	9.7	9.3	8.5	8.0	8.3	8.7	9.4	9.0	9.7	10.0	12.8	13.3

[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. The denominator of the ratio is the economically active population on January 1st of the previous year.
Source: *NMH REG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_04

Figure 9.4: Regional inequalities: Means of registered unemployment rates in the counties, 2010
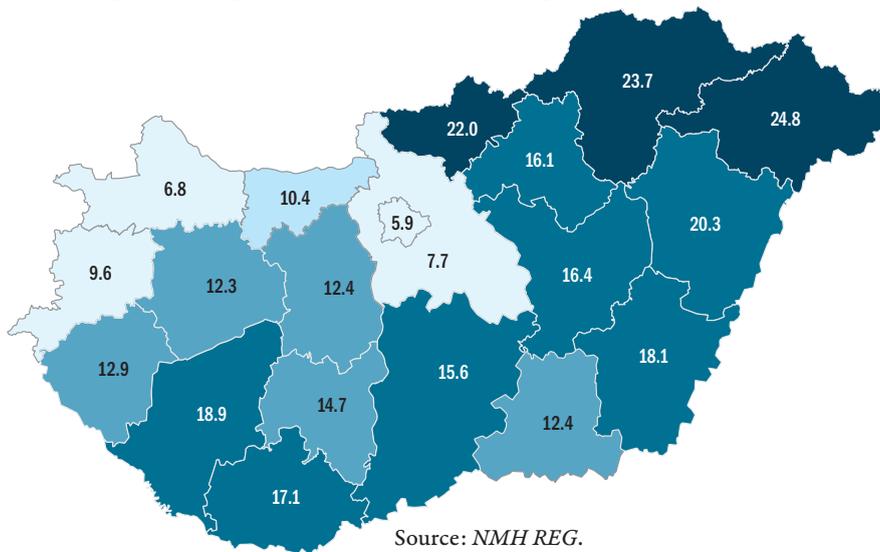
Source: *NMH REG.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_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
1997	70,967	56,753	52,934	51,279	51,797	50,021	50,245	58,022
1998	86,440	68,297	64,602	60,736	60,361	58,208	58,506	69,415
1999	101,427	77,656	74,808	70,195	70,961	68,738	68,339	81,067
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

[a] Gross monthly earnings (HUF/person), May.
Note: The data refer to full-time employees in the budgetary sector and firms employing
    at least 10 workers (1997–99), and at least 5 workers (2000–), respectively.
Source: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_05

Table 9.6: Regression-adjusted earnings differentials

Year	Central Hungary	Western Transdanubia	Southern Transdanubia	Northern Hungary	Northern Great Plain	Southern Great Plain
1996	0.0894	–0.0408	–0.0857	–0.1090	–0.1190	–0.1060
1997	0.0730	–0.0473	–0.1050	–0.1010	–0.1160	–0.1170
1998	0.0759	–0.0501	–0.1120	–0.1250	–0.1500	–0.1350
1999	0.1000	–0.0175	–0.1120	–0.1070	–0.1340	–0.1220
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	0.0691	–0.0191	–0.1430	–0.0856	–0.1300	–0.1130
2007	0.0659	–0.0826	–0.1380	–0.1260	–0.1570	–0.1440
2008	0.0467	–0.0926	–0.1820	–0.1380	–0.1930	–0.1640
2009	0.0732	–0.0468	–0.1300	–0.1220	–0.1470	–0.1450
2010	0.0599	–0.0773	–0.1480	–0.1220	–0.1700	–0.1600

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: *NMH BT*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_06

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								
1997	1,254	801	871	641	554	569	640	830
1998	1,474	969	1,083	754	662	660	742	983
1999	1,710	1,051	1,275	859	731	707	819	1,113
2000	2,014	1,255	1,468	957	827	815	918	1,290
2001	2,311	1,372	1,539	1,074	947	965	1,031	1,458
2002	2,701	1,462	1,703	1,204	1,050	1,062	1,136	1,648
2003	2,940	1,719	2,001	1,321	1,186	1,213	1,254	1,841
2004	3,237	1,953	2,143	1,468	1,366	1,351	1,439	2,021
2005	3,564	2,056	2,169	1,517	1,439	1,390	1,483	2,185
2006	3,921	2,127	2,359	1,591	1,505	1,487	1,563	2,359
2007	4,182	2,319	2,455	1,711	1,566	1,572	1,652	2,518
2008	4,424	2,398	2,594	1,825	1,643	1,657	1,783	2,665
2009	4,395	2,232	2,416	1,782	1,568	1,605	1,716	2,600
Per cent								
1997	149.1	96.0	105.2	77.6	67.3	69.1	77.9	100.0
1998	147.8	98.1	110.5	77.2	68.0	67.7	76.3	100.0
1999	151.1	93.7	114.9	77.7	66.3	64.1	74.5	100.0
2000	152.2	97.3	113.9	74.8	64.6	63.4	71.8	100.0
2001	158.5	94.1	105.6	73.7	64.9	66.2	70.7	100.0
2002	163.9	88.7	103.4	73.0	63.7	64.4	68.9	100.0
2003	161.1	92.4	107.6	71.6	64.0	65.3	68.0	100.0
2004	157.9	95.3	104.5	71.6	66.6	65.9	70.2	100.0
2005	163.2	94.0	99.2	69.4	65.9	63.6	67.8	100.0
2006	166.2	90.2	100.0	67.4	63.8	63.0	66.3	100.0
2007	166.1	92.1	97.5	67.9	63.5	62.4	65.6	100.0
2008	166.0	90.0	97.3	68.5	61.6	62.2	66.9	100.0
2009	159.1	85.9	93.0	68.6	60.3	61.7	66.0	100.0

Source: *KSH*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_07

Table 9.8: Commuting[a]

Year	Working in the 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
2008	2,645.2	70.9	1,085.1	29.1

[a] For methodological notes see Dr. Lakatos Miklós – Váradi Rita: A foglalkoztatottak napi ingázásának jelentősége a migrációs folyamatokban (The role of daily commuting in geographical mobility). Statisztikai Szemle. (87), 2009. 7–8., 763–794.

Source: 1980–2005 NSZ, microcensus, 2008 *MEF* ad-hoc modul.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent09_08

Figure 9.5: The share of registered unemployed relative to the population aged 15–64, 1. quarter 2007, per cent
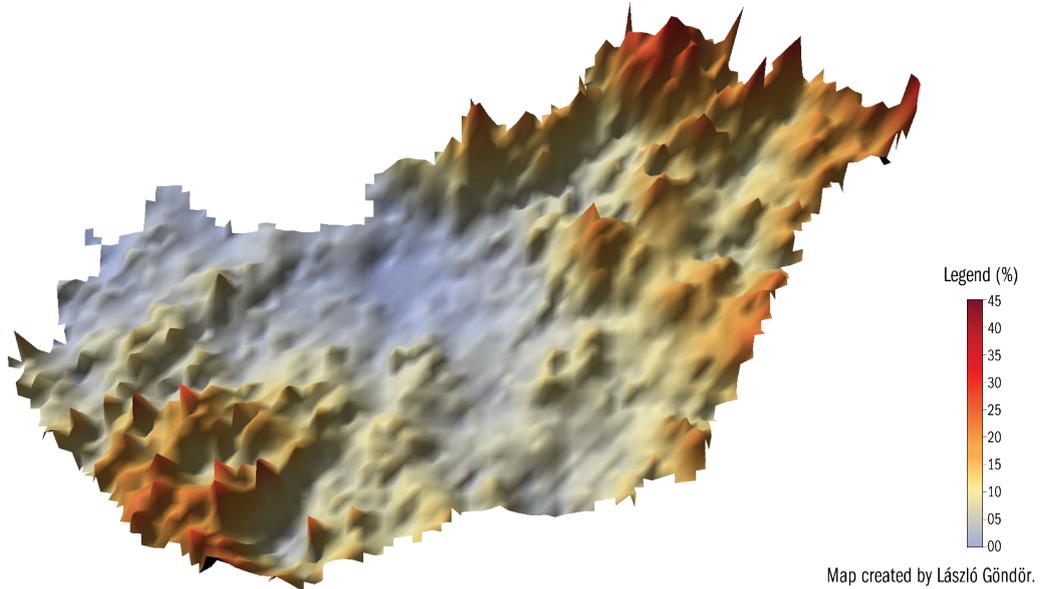
Legend (%)

45
40
35
30
25
20
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10
05
00

Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_05

Figure 9.6: The share of registered unemployed relative to the population aged 15–64, 1. quarter 2011, per cent
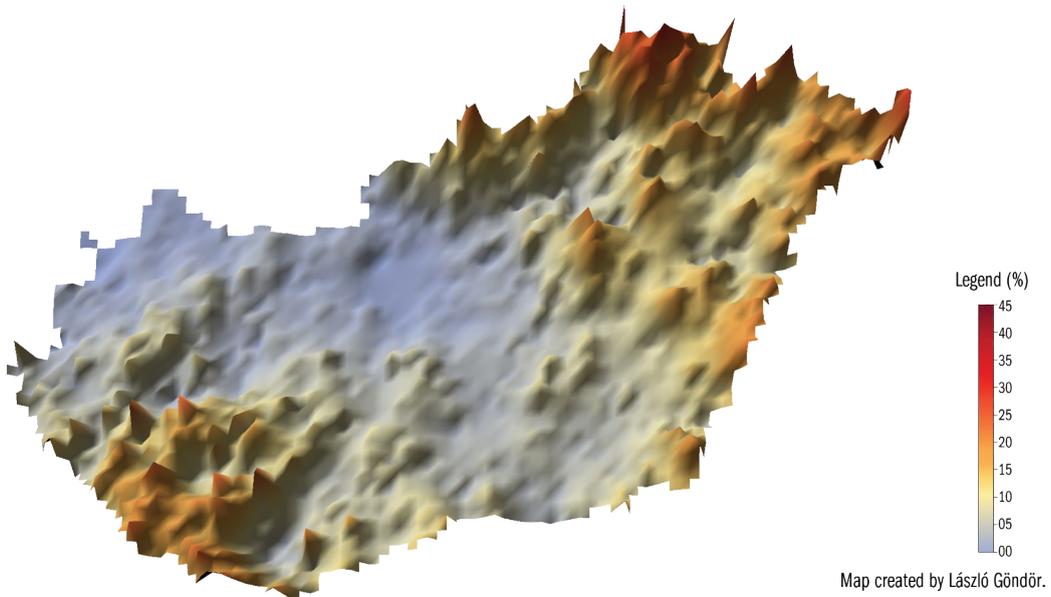
Legend (%)

45
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Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_06

Figure 9.7: The share of registered unemployed relative to the population aged 15–64, 2. quarter 2007, per cent
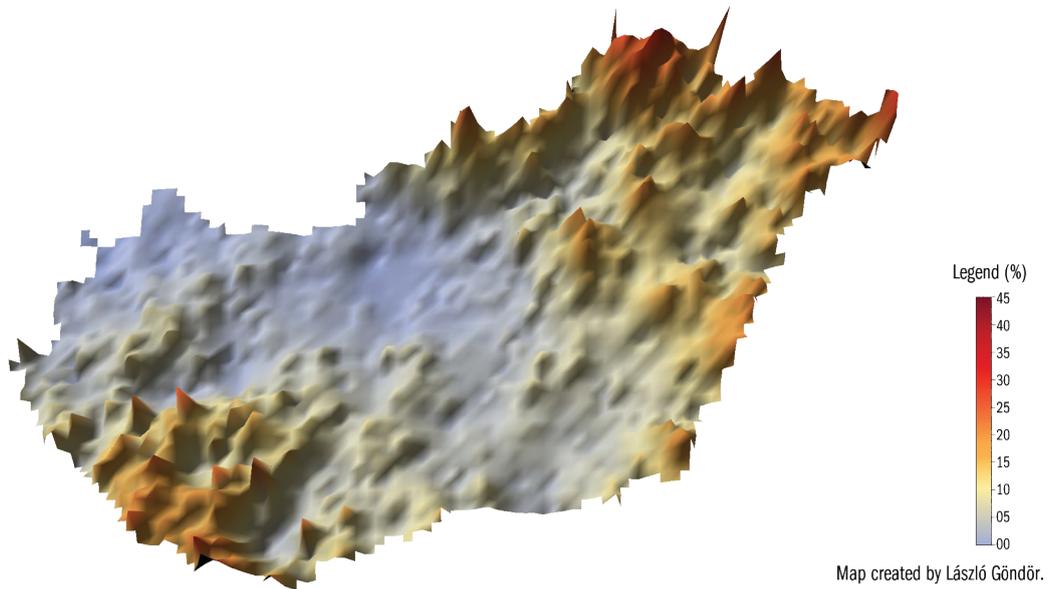
Legend (%)

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Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_07

Figure 9.8: The share of registered unemployed relative to the population aged 15–64, 2. quarter 2011, per cent
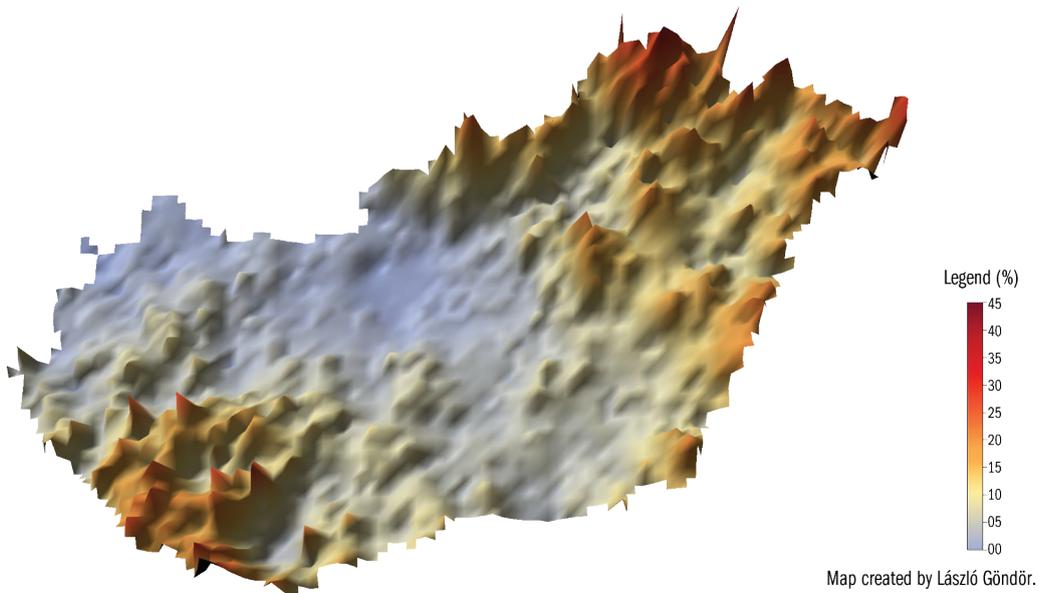
Legend (%)

45
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Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_08

Figure 9.9: The share of registered unemployed relative to the population aged 15–64, 3. quarter 2007, per cent
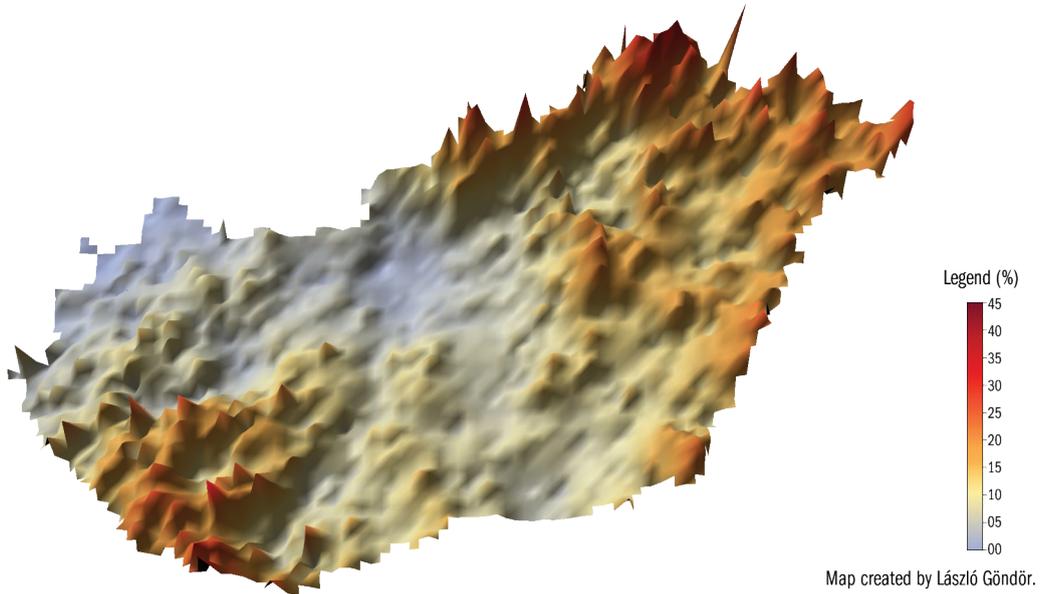
Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_09

Figure 9.10: The share of registered unemployed relative to the population aged 15–64, 3. quarter 2011, per cent
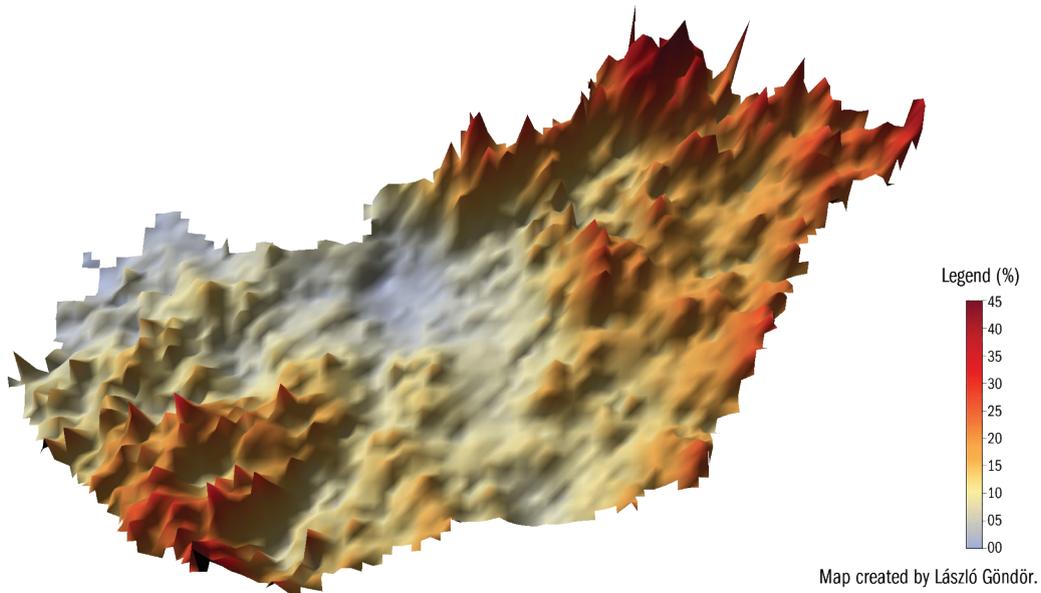
Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR*. Population: *KSH T-Star*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_10

Figure 9.11: The share of registered unemployed relative to the population aged 15–64, 4. quarter 2007, per cent
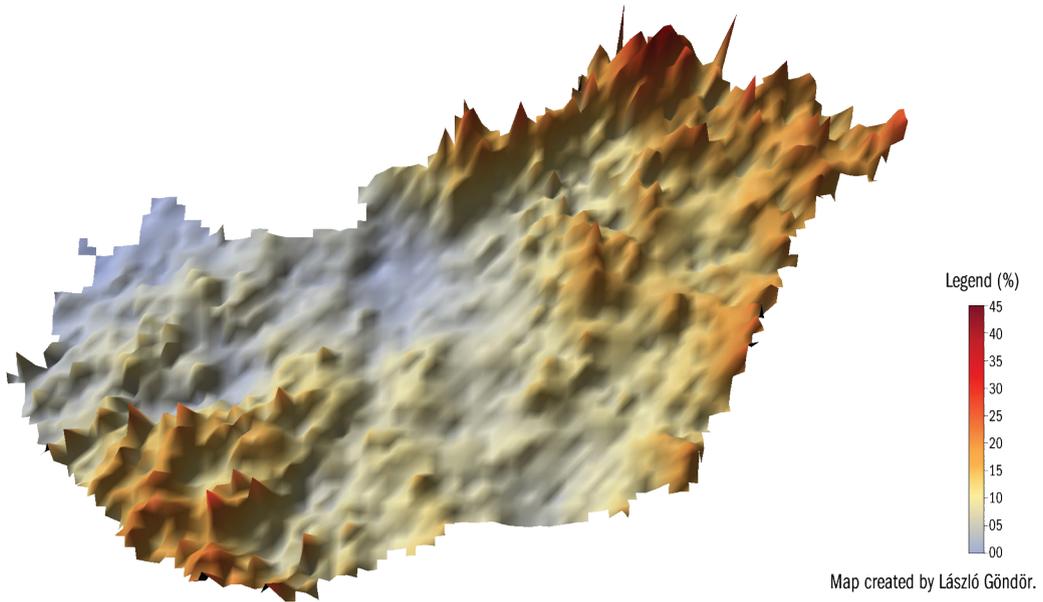
Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR.* Population: *KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_11

Figure 9.12: The share of registered unemployed relative to the population aged 15–64, 4. quarter 2011, per cent
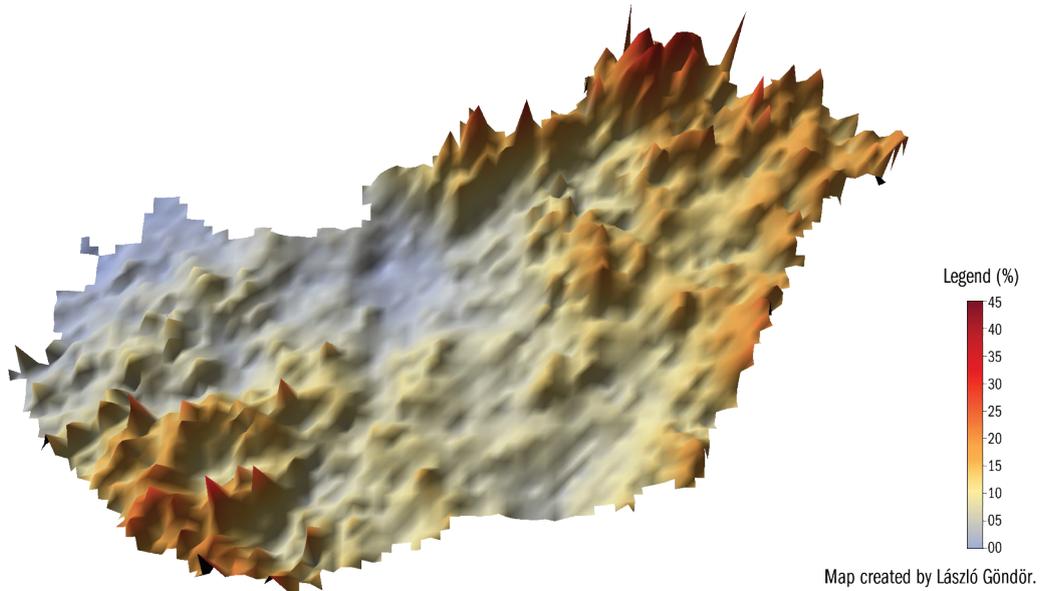
Map created by László Göndör.

Source: Registered unemployed: *NFSZ IR.* Population: *KSH T-Star.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ena09_12

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Table 10.1: Strikes

Year	Number of strikes	Number of involved persons	Hours lost, in thousands
1994	4	31,529	229
1995[a]	7	172,048	1,708
1996	8	4,491	19
1997	5	853	15
1998	7	1,447	3
1999	5	16,685	242
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	8
2006	16	24,670	52
2007	13	64,612	189
2008	8	8,633	..
2009	9	3,134	8.6
2010	8	3,263	133.1

[a] Teachers strikes number partly estimated.
Source: *KSH* strike statistics.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_01

Table 10.2: National agreements on wage increase recommendations[a]

Year	ÉT Recommendations		Actual indexes	
	Minimum	Maximum	Budgetary sector	Competitve sector
1995	–	–	110.7	119.7
1996	113.0	124.0	114.6	123.2
1997	114.0	122.0	123.2	121.8
1998	113.5	116.0	118.0	118.5
1999	112.0	115.0	119.2	114.8
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	n.a.	117.5	108.9
2004	107.0	108.0	100.4	109.3
2005	106.0	n.a.	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	n.a.	100.5[b]	102.6[b]

[a] Average increases of gross wages: recommendations accepted by the National Interest Reconciliation Council (ÉT). Previous year = 100.
[b] Mean real wage index.
Source: *KSH, NEFMI.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_02

Table 10.3: Minimum wage, guaranteed wage minimum[a]

Date	Monthly amount, HUF	Average gross earnings = 100	Monthly amount of the guaranteed minimum wage[b]	Monthly amount of the guaranteed minimum wage[c]	Monthly amount of the guaranteed minimum wage[d]
1992. I. 1.	8,000	35.8	–	–	–
1993. II. 1.	9,000	33.1	–	–	–
1994. II. 1.	10,500	30.9	–	–	–
1995. III. 1.	12,200	31.4	–	–	–
1996. II. 1.	14,500	31.0	–	–	–
1997. I. 1.	17,000	29.7	–	–	–
1998. I. 1.	19,500	28.8	–	–	–
1999. I. 1.	22,500	29.1	–	–	–
2000. I. 1.	25,500	29.1	–	–	–
2001. I. 1.	40,000	38.6	–	–	–
2002. I. 1.	50,000	40.8	–	–	–
2003. I. 1.	50,000	36.4	–	–	–
2004. I. 1.	53,000	37.2	–	–	–
2005. I. 1.	57,000	33.6	–	–	–
2006. I. 1.	62,500	36.5	–	–	–
2006. VII. 1.	62,500	36.5	65,700	68,800	–
2007. I. 1.	65,500	35.4	72,100	75,400	–
2008. I. 1.	69,000	34.7	82,800	86,300	–
2009. I. 1.	71,500	35.8	–	–	87,000
2009. VII. 1.	71,500	..	–	–	87,500
2010. I. I.	73,500	36.3	–	–	89,500
2011. I. I.	78,000	..	–	–	94,000

[a] The guaranteed minimum wage pertains to employees who have completed at least a secondary education level and are employed in an occupation requiring skills.
[b] Guaranteed minimum wage of skilled workers less than 2 years of practical experience.
[c] Guaranteed minimum wage of skilled workers with at least 2 years of practical experience, or who are above the age of 50.
[d] Beginning in 2009. January 1, the specification regarding the 2 years of practical experience and those above the age of 50 was dropped from the legislation.
Note: As of September 2002, minimum wage earners do not pay personal income tax. (As a result of this measure, the net minimum wage increased by 15.9 per cent.)
Source: *KSH.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_03

Table 10.4: Single employer collective agreements in the business sector

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agree-ments	1,303	1,358	1,333	1,277	1,272	1,295	1,025	1,033	1,032	1,027	962	966
Number of persons covered	743,259	730,107	698,262	667,634	649,861	637,508	513,118	489,568	532,065	467,964	432,086	448,138

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_04

Table 10.5: Single institution collective agreements in the public sector

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agreements	2,084	2,079	2,077	2,019	2,026	2,020	1,750	1,435	1,711	1,710	1,737	1,751
Number of persons covered	274,329	272,051	268,139	251,849	251,352	250,492	228,080	203,497	224,246	222,547	225,434	224,651

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_05

Table 10.6: Multi-employer collective agreements in the business sector

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agreements	52	70	68	66	71	79	71	75	74	78	80	82
Number of persons covered	338,354	246,734	213,443	206,729	261,848	263,752	92,196	86,079	83,117	80,506	222,236	221,627

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_06

Table 10.7: Multi-institution collective agreements in the public sector

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agreements	11	12	10	9	9	10	5	4	2	1	1	1
Number of persons covered	2,177	2,357	2,081	2,045	2,042	2,072	403	360	238	..	..	..

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_07

Table 10.8: The number of firm wage agreements, the number of affected firms, and the number of employees covered

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agreements	827	572	471	531	545	515	298	302	214	202	785	905
Number of persons covered	587,476	334,056	259,033	279,753	316,585	347,223	169,639	151,022	171,259	100,206	377,677	414,522

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_08

Table 10.9: The number of multi-employer wage agreements, the number of affected firms, and the number of covered companies and employees

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of agreements	41	23	19	18	22	19	40	44	40	45	62	68
Number of companies	3,231	211	181	172	243	145	145	162	147	150	2,350	2,460
Number of persons covered	328,774	125,327	68,882	76,129	88,855	25,175	35,039	42,817	33,735	40,046	191,258	211,753

Source: *NGM,* Registry of collective agreements.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent10_09

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
2001	6,547	1,172,862	8,617	1,295,800	4,193	780,000	39,274	62,904	17,828	234,221
2002	6,588	1,069,911	10,034	1,277,900	4,338	758,000	44,901	70,167	19,842	222,104
2003	6,841	1,009,660	11,283	1,292,000	4,705	704,000	48,742	77,942	22,091	214,640
2004	6,941	969,512	11,971	1,290,200	5,236	670,000	54,322	83,678	24,174	210,509
2005	6,979	924,263	12,597	1,264,500	5,619	663,000	58,484	87,172	25,706	208,708
2006	9,392	122,883	21,637	1,269,000	–	–	62,684	91,678	27,102	212,741
2007	..	..	23,031	1,224,000	–	–	68,394	93,973	28,496	207,608
2008	..	..	24,521	1,246,600	–	–	73,902	94,515	30,880	208,652
2009	..	..	24,524	1,245,900	–	–	78,725	95,050	30,328	214,416
2010	..	..	24,442	1,224,000	–	–	81,356	94,682	..	..

[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 in the amount of 4,000 HUF per child.

[b] Annual mean. From 1999 to 2002. November 8, 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/2012ent11_01

Table 11.2: Unemployment benefits and average earnings

Year	Insured unemployment benefit and other non-means tested benefits[a]		Means tested unemployment assistance[b]		Net monthly earnings, HUF[c]		
	Average monthly amount, HUF	Average number of recipients	Average monthly amount, HUF	Average number of recipients	Male	Female	Together
2001	25,677	119,210	14,749	142,001	69,910	59,059	64,750
2002	30,113	114,934	14,869	132,895	82,745	72,036	77,770
2003	34,762	107,226	15,010	138,127	94,612	84,632	89,906
2004	37,107	109,654	15,864	144,853	98,101	87,710	93,233
2005	39,593	111,732	16,991	158,565	108,139	98,625	103,727
2006	43,344	109,095	23,771	160,426	..	..	110,951
2007	46,208	96,463	25,703	194,716	..	..	114,282
2008	49,454	97,047	27,347	213,436	..	..	122,267
2009	51,831	152,197	26,817	71,816	..	..	124,116
2010	50,073	125,651	..	..	..	..	132,628

[a] Average of headcount at the end of the month. Includes the pre-pension allowance (2000–2002).

[b] This scheme changed substantially in July 2006, therefore figures for 2006 are given for the period July-December 2006.

[c] Net earnings for the whole economy (including the public sector). The average net wage refers to the entire economy. Competitive sector prior to 1998: at least 19 employees, after 1998: at least 4 employees.

Source: NFSZ: *Labour Market Report, 2001*. KSH: *Welfare systems 2007, Welfare Statistics, Yearbook of Demographics. KSH Social Statistics Yearbooks.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_02

Table 11.3: Number of those receiving self-entitled pension, 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
2000	1,671,090	33,258	35,931	762,514	29,217	31,556
2001	1,667,945	37,172	41,002	772,286	32,381	35,705
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

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_03

Table 11.4: 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
2000	15,491	18,309	196,689	14,435	2,852	48,581	215,032	15,167
2001	15,640	20,809	198,820	15,610	3,304	53,379	217,764	16,556
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

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_04

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Table 11.5: 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
2003	27,058	23,884	2007	30,039	30,219
2004	27,923	25,388	2008	30,677	32,709
2005	28,738	27,257	2009	31,263	33,434
2006	29,443	28,720	2010	31,815	33,429

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_05

Table 11.6: The median age for retirement and the number of pensioners

Pension	2001		2002		2003		2004		2005	
	Age	Persons	Age	Persons	Age	Persons	Age	Persons	Age	Persons
Females										
Old age and similar	57.6	14,388	56.8	25,730	58.8	13,591	57.6	36,806	57.7	45,115
Disability and accident-related disability pension	47.8	24,836	48.1	23,649	48.5	21,507	48.7	19,901	49.1	19,250
Total	51.4	39,224	52.6	49,379	52.5	35,098	54.5	56,707	55.1	64,365
Males										
Old age and similar	60.1	28,932	60.1	30,217	59.7	32,611	60.1	36,111	59.9	30,560
Disability and accident-related disability pension	49.6	30,820	49.7	29,013	50.0	27,115	50.1	24,915	50.5	24,565
Total	54.7	59,752	55.0	59,230	55.3	59,726	56.0	61,026	55.7	55,125
Together										
Old age and similar	59.3	43,320	58.6	55,947	59.5	46,202	58.9	72,917	58.6	75,675
Disability and accident-related disability pension	48.8	55,656	49.0	52,662	49.3	48,622	49.5	44,816	49.9	43,815
Total	53.4	98,976	53.9	108,609	54.3	94,824	55.3	117,733	55.4	119,490
	2006		2007		2008		2009		2010	
Females										
Old age and similar	57.5	46,093	57.8	62,015	57.3	39,290	59.9	15,243	60.6	13,195
Disability and accident-related disability pension	49.3	18,488	49.8	15,837	50.5	8,565	51.1	9,065	50.9	9,935
Rehabilitation annuity	–	–	–	–	44.1	1,604	44.9	6,574	47.6	6,752
Total	55.2	64,581	56.2	77,852	55.7	49,459	54.1	30,882	54.4	29,882
Males										
Old age and similar	59.9	33,134	59.7	50,878	59.8	25,749	59.7	37,116	60.1	36,517
Disability and accident-related disability pension	50.6	23,045	51.1	19,032	51.9	11,069	52.3	11,992	52.1	12,542
Rehabilitation annuity	–	–	–	–	44.5	1,556	44.8	6,278	47.4	6,080
Total	56.1	56,179	57.4	69,910	56.9	38,374	56.4	55,386	56.9	55,139
Together										
Old age and similar	58.5	79,227	58.7	112,893	58.3	65,039	59.7	52,359	60.3	49,712
Disability and accident-related disability pension	50.0	41,533	50.5	34,869	51.3	19,634	51.8	21,057	51.5	22,477
Rehabilitation annuity	–	–	–	–	44.3	3,160	44.9	12,852	47.5	12,832
Total	55.6	120,760	56.8	147,762	56.2	87,833	55.6	86,268	56.0	85,021

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.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_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 pension Total	Old-age and old-age type pensions[a]			From the total: at the age limit			From the total: under the age limit		
		Male	Female	Together	Male	Female	Together	Male	Female	Together
1996	59,967	31,770	59,939	91,709	9,893	20,073	29,966	18,681	31,857	50,538
1997	48,262	37,886	32,614	70,500	10,630	1,138	11,768	24,308	28,154	52,462
1998	42,975	12,908	17,841	30,749	385	882	1,267	11,461	15,244	26,705
1999	46,701	15,181	24,418	39,599	2,601	5,808	8,409	11,494	16,922	28,416
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	22,477	36,517	14,195	50,712	6,117	7,066	13,183	29,668	5,643	35,311

[a] Old-age type pensions include: old-age pensions given with a retirement age threshhold allowance (early retirement), artists' pensions, pre-pension up until 1997, miners' pensions.

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.

Source: *ONYF*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_07

Table 11.8: Retirement age threshold, men

Calendar year

Birth year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1932	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
1933	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
1934	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
1935	57	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
1936	56	57	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
1937	55	56	57	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
1938	54	55	56	57	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
1939	53	54	55	56	57	58	59	60[e]	61[a]	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
1940	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
1941	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
1942	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
1943	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
1944	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1945	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
1946	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
1947	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
1948	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76
1949	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75
1950	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74
1951	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60[i]	61	62[a]	63	64	65	66	67	68	69	70	71	72	73
1952 I.	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62,5[a]	63	64	65	66	67	68	69	70	71	72
1952 II.	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	62,5[a]	64	65	66	67	68	69	70	71	72
1953	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63[a]	64	65	66	67	68	69	70	71
1954 I.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63,5[a]	64	65	66	67	68	69	70
1954 II.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	63,5[a]	65	66	67	68	69	70
1955	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64[a]	65	66	67	68	69
1956 I.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64,5[a]	65	66	67	68
1956 II.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	64,5[a]	66	67	68
1957	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65[a]	66	67
1958	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65[a]	66
1959	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65[a]

Allowance given to those with significantly more years of service than the minimum required in the legislature, at least 42 years.

Birth year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1952 I.	62,5[a]	63	64	65	66	67	68	69	70	71	72
1952 II.	62	62,5[a]	64	65	66	67	68	69	70	71	72
1953	61	62	63[a]	64	65	66	67	68	69	70	71
1954 I.	60,5	61	62	63,5[a]	64	65	66	67	68	69	70
1954 II.	60,5	61	62	63	63,5[a]	64	65	66	67	68	70

a (20) b [34](29) c [35](30) d [36](31) e [37](32) f [38](32) g [40](37) h (37) i (38)[33] j (42)

a (20) b [34](29) c [35](30) d [36](31) e [37](32) f [38](32) g [40](37) h (37) i (38)[33] j (42)

Next to the current age, in the case of pension given with an age allowance, we display the minimum years of service without the allowance in [] parantheses, and the minimum years of service with the allowance in () parantheses, and in the case of full old-age pension the prescribed minimum years of service in () parantheses.

Note: Only those who have fulfilled the retirement age threshold applicable to them in the legislature, as well as the required years of service qualify for pension provision. In the table, we display these two requirements of full old-age pensions and early retirement in the case of a "model agent" who is employed in a job that does not qualify for an age allowance. The cells display the current age of a person born in the given calendar year.

The dark grey background represents the age threshold for qualification into early retirement, and the light grey background represents the age threshold for qualification into full old-age pension.

Source: Social Security legislature II. of 1975; Social Security legislature LXXXI. On pension provision of 1997; legislature XL. of 2009.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_08

Table 11.9: Retirement age threshold, women

Birth year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1937	55[a]	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
1938	54	55[a]	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
1939	53	54	55[a]	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
1940	52	53	54	55[b]	56[a]	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
1941	51	52	53	54	55[b]	56	57[a]	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
1942	50	51	52	53	54	55[b]	56	57	58[a]	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
1943	49	50	51	52	53	54	55[c]	56	57	58	59[a]	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
1944	48	49	50	51	52	53	54	55[d]	56	57	58	59	60[a]	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1945	47	48	49	50	51	52	53	54	55[e]	56	57	58	59	60	61[a]	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
1946	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
1947	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
1948	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75	76
1949	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57[f]	58	59	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74	75
1950	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57[f]	58	59[g]	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73	74
1951	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57[f]	58	59[g]	60	61	62[a]	63	64	65	66	67	68	69	70	71	72	73
1952 I.	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59[g]	60	61	62,5[a]	63	64	65	66	67	68	69	70	71	72
1952 II.	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59[g]	60	61	62,5[a]	63	64	65	66	67	68	69	70	71	72
1953	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59[g]	60	61	62	63[a]	64	65	66	67	68	69	70	71
1954 I.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60,5[h]	61	62	63,5[a]	64	65	66	67	68	69	70
1954 II.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60,5[h]	61	62	63,5[a]	64	65	66	67	68	69	70
1955	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64[a]	65	66	67	68	69
1956 I.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61[h]	62	63	64,5[a]	65	66	67	68
1956 II.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61,5[h]	62	63	64,5[a]	65	66	67	68
1957	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65[a]	66	67
1958 I.	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62,5[h]	63	64	65[a]	66
1958 II.	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62,5[h]	63	64	65[a]	66
1959	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65[a]

a (20) b [34](29) c [35](30) d [36](31) e [37](32) f [38](32) g [40](37) h (37) i (38)[33] j (42)

Next to the current age, in the case of pension given with an age allowance, we display the minimum years of service without the allowance in [] parantheses, and the minimum years of service with the allowance in () parantheses, and in the case of full old-age pension the prescribed minimum years of service in () parantheses.

Note: Only those who have fulfilled the retirement age threshold applicable to them in the legislature, as well as the required years of service qualify for pension provision. In the table, we display these two requirements of full old-age pensions and early retirement in the case of a "model agent" who is employed in a job that does not qualify for an age allowance. The cells display the current age of a person born in the given calendar year.

The dark grey background represents the age threshold for qualification into early retirement, and the light grey background represents the age threshold for qualification into full old-age pension.

Source: Social Security legislature II. of 1975; Social Security legislature LXXXI. On pension provision of 1997; legislature XL. of 2009.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent11_09

LABOUR MARKET POLICIES

Labour market policies can be grouped into two categories. The role of passive measures is the replacement of foregone income due to loss of employment, while that of active programmes is to decrease the duration of unemployment, to better the chances of exit to employment, and in a small part to maintain employment. The current chapter provides information on active programs, discussed in the chapter titled 'Changes in the institutional environment of the labour market between September 2010 and September 2011'. In the case of those who lost their jobs, registration with an employment centre is a precondition for becoming part of the institutional system of labour market policy and the programmes just mentioned. In the case of the employed, the employer can initiate involvement in active programmes (such as labour market training, job retaining support and commuting support) through grant application or requests. The law makes it possible for an unemployed/employed person to be involved with more than one active programme at the same time (for example, training and cost of communting support). In these cases, the given person is counted multiple times. Therefore, the number of program participants may exceed the number of registered unemployed.

In order to evaluate the tables it is important to note that the tables shown here are derived from the public employment service's monitoring system, which provides raw data, and thus is not suitable for the estimation of the effects of the programmes in the way discussed in the first chapter of the In Focus section, because it does not use a basis for comparison, and does control for selection into the programmes. In line with this, both the exit shares and the per capita support amounts of those remaining in employment should be evaluated very cautiously, and under no circumstances as the cost of successful employment via the programme. Such calculations require highly evolved statistical and econometric methods, we can read about these in the chapters of the In Focus section. Further, certain terms need to be clarified.

Taking part in active labour market programmes: all those people, who recieve some type of support aimed at aiding employment as outlined in Employment law (FIt.). In case of registered unemployed, participants are not considered to be in registered unemployed status for the duration of the support.

Number of active labour market programme participants effected: the number of persons who receive supoort on at least one day (are in the register) in the given time period; method of calculation: the sum of the number of those supported (included in the register) at the beginning of the given period and those who enter supported status (the register) during the time period. This measure deviates from the frequently used „average number," which is used, for example, to measure the number of employed or unemployed, as well as from the number of registered unemployed, which is generally a number measured on a given day. Compared to these, it is an important difference that the number of those effected cannot decrease within a given year, but it will not increase if a person who was earlier in the year included as effected returns to a given programme. The interpretation of the effected and average measures, as well as those calculated from current stock data should be undertaken with caution.

Exiters from active programmes: those persons whose support via a given programme ends during the time period. In the case that the supported person receives several different forms of support concurrently, we consider him or her to be exiting the programme in which support has ended (in the other, continued supports they will be counted among those effected). The measures of exiters will always refer to the given programme (programme participant) that they exited from.

Monthly support per capita for those exiting active programmes: the full support amount paid to those exiting the given active programme (for example, for training of the given person, or for keeping exiters in the given active programme, their employment, etc.) divided my the number of exiters. The measure therefore reflects how much, on average, the active programme costs per exiting person.

Average length of time of support for those exiting active programmes: in the given year, the average length of time (in months) spent receiving support for those who exit the given programme.

Job placement rate: the share of those who are employed on the 180th day after the end of the support, or the end

of the mandatory continued employment period. In case of job placement, only the fact of employment is considered, irregardless of whether the person works at the same company, or a different one, and of whether they are employed at a workplace receiving (wage) support. *Full amount of support paid to those exiting completed active programmes per person continued to be employed:* the full amount of support paid to those exiting a given active programme (for training of the given person, for keeping exiters in the programme, for their employment) divided by the number of those who are employed 6 months after exiting (and the end of the mandatory continued employment period). The measure thus shows how much it cost to place one person in employment via the given active programme, in a way that this situation remains after the end of the support.

Description of the programmes

Recommended training: training that the employment centre recommends to the jobseeker for improving chances of successful placement. The training may be organized by the employment centre, or the regional training centres.

Accepted training: training that the jobseeker seeks out for improving chances of placement, and asks for the support from the employment centre, which accepts it and supports the training costs. The condition of support is the accreditation of the training and the institution providing the training.

Training support of the employed:
– qualified employers: employers that submit a request for support of training that will enable continued em-

ployment of current employees;
– amount: maximum 100% of costs related to the training, and wage supplements;
– time length: the length of the theoretical and applied training, preparation for the exam, and the day of the exam.

Support for aiding jobseekers in becoming entrepeneurs:
– qualified persons: those who have been registered jobseekers for at least 3 months or receive rehabilitation support, and ensure their own employment through sole proprietorship or as a participant in a joint venture;
– amount: provision of capital up to 3 million Forints, or support in the amount of the minimum wage for up to 6 months, or the costs of expert consultation – separately or in combination;
– time length: given in the call for the grant.

Wage support aimed at aiding the expansion of employment:
– qualified employers: those employers that undertake employment of disadvantaged or disabled persons;
– amount: in the case of disadvantaged jobseekers it is up to 50% of the wage and employer contributions, in the case of disabled persons up to 60%;
– time length: for disadvantaged up to 1, for disabled, up to 2 years.

Wage cost support:
– support that can only be given within the framework of a labour market programme;
– makes possible the payment of up to 100% of the wage and employer contributions, for a maximum of 3 years. In the new programme, not only the wage and contribution costs of the target group, but also those arising in relation to employment of programme management.

Table 12.1: Share of participants in active programmes in 2010 relative
to the number of registered unemployed by county, per cent

| County | Not employed | | | | Those receiving entrepeneurial support | Employed with wage support | Those receiving wage cost support | Monthly average number of registered unemployed |
	recommend-ed training	accepted training	unknown	total				
Budapest	5.6	1.4	0.1	7.1	1.4	0.6	2.4	46,663
Baranya	10.7	3.1	0.6	14.3	1.6	1.9	4.7	27,893
Bács-Kiskun	6.8	1.3	1.0	9.0	0.7	2.0	2.8	35,125
Békés	5.9	0.9	1.1	7.9	0.6	1.1	2.7	27,470
Borsod-Abaúj-Zemplén	3.1	0.5	0.5	4.0	0.3	1.1	1.4	68,038
Csongrád	8.6	0.7	0.4	9.8	0.9	1.9	4.5	22,301
Fejér	4.8	2.9	0.7	8.4	1.3	1.5	2.8	24,074
Győr-Moson-Sopron	13.2	1.9	1.4	16.6	1.6	1.7	6.2	13,786
Hajdú-Bihar	5.3	0.4	0.6	6.2	1.3	2.0	4.0	45,135
Heves	7.4	1.1	0.8	9.3	1.9	2.7	6.5	21,360
Jász-Nagykun-Szolnok	5.5	0.5	0.2	6.1	1.0	1.8	3.8	28,291
Komárom-Esztergom	28.1	1.3	10.0	39.4	4.3	27.4	25.4	15,260
Nógrád	7.7	0.5	1.6	9.8	1.3	6.6	6.3	19,368
Pest	3.5	0.1	0.7	4.2	0.3	2.9	3.2	41,120
Somogy	14.9	0.0	1.7	16.6	2.6	5.8	4.5	25,840
Szabolcs-Szatmár-Bereg	3.8	0.0	0.4	4.2	0.5	1.4	1.6	56,850
Tolna	35.3	0.0	2.8	38.2	4.2	15.8	14.9	15,135
Vas	15.9	11.7	7.5	35.0	2.5	8.9	17.4	11,465
Veszprém	13.3	1.7	1.9	16.9	1.2	8.3	9.9	19,976
Zala	12.0	1.1	0.8	13.9	1.8	5.8	7.8	17,513
Total	8.1	1.1	1.1	10.4	1.2	3.5	4.8	582,664

Note: The 1991. IV. Law on the aiding of employment and the provisions for the unemployed changed the concept of registered unemployed to „registered jobseekers". Deviating from the official terminology, we use the term registered unemployed in the tables.

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.

Source: *NFSZ IR*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_01

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Table 12.2: Share of participants in active programmes in 2010 relative to the number of registered unemployed by gender, age, education level, entry status, and status prior to the support, per cent

	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support	Monthly average number of registered unemployed
	recommended training	accepted training	unknown	total				
By gender								
Males	7.6	1.0	1.2	9.8	1.1	3.3	4.0	305,012
Females	8.6	1.2	1.1	10.9	1.3	3.8	5.7	277,652
By age group								
–20	17.8	2.1	1.8	21.7	0.2	4.5	2.3	12,167
20–24	15.9	2.0	2.0	19.8	1.1	5.5	5.4	75,623
25–29	9.7	1.4	2.1	13.2	1.5	2.9	5.1	70,781
30–34	7.9	1.2	2.0	11.1	1.8	2.9	4.6	78,586
35–39	7.5	1.1	0.9	9.4	1.7	2.9	4.5	76,921
40–44	7.1	1.0	0.6	8.7	1.3	2.5	4.8	72,256
45–49	6.2	0.8	0.6	7.5	1.1	2.1	5.3	66,245
50–54	5.0	0.6	0.4	6.0	0.8	5.0	5.5	72,835
55+	2.4	0.3	0.2	3.0	0.6	4.4	3.5	57,250
By level of education								
8 grades of primary school or less	5.0	0.7	1.5	7.1	0.3	2.8	2.5	228,973
Vocational school	6.7	0.8	0.6	8.1	1.2	3.5	4.8	182,982
Vocational secondary school	13.7	1.9	1.3	16.9	2.3	4.6	7.3	87,332
Grammar school	15.2	1.7	1.3	18.2	2.3	4.6	7.1	52,930
College, university	11.1	2.5	1.3	15.0	3.7	4.3	11.0	30,401
Unknown	..	..	..	..	..	..	..	46
By entry status								
School-leavers	18.7	2.4	1.8	22.9	1.1	7.7	5.5	52,637
Non school-leavers	7.1	1.0	1.1	9.1	1.2	3.1	4.7	530,027
By status prior to the support								
Jobseeking support	14.1	1.8	1.6	17.5	2.6	4.9	6.9	186,334
On call support	2.3	0.3	1.3	3.9	0.3	1.2	1.0	165,890
Regular social assistance	12.7	2.0	2.3	17.0	2.2	17.4	15.9	1,894
Not supported	7.4	1.1	0.6	9.2	0.8	4.0	5.8	228,546
Total	8.1	1.1	1.1	10.4	1.2	3.5	4.8	582,664

Note: The 1991. IV. Law on the aiding of employment and the provisions for the unemployed changed the concept of registered unemployed to „registered jobseekers". Deviating from the official terminology, we use the term registered unemployed in the tables.

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.

Source: NFSZ IR.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_02

Table 12.3: Monthly average number of registered unemployed in 2010 by length of continuous time spent seeking work prior to receiving the support

Continuous length of time spent seeking work	Monthly average number of persons	Continuous length of time spent seeking work	Monthly average number of persons
6 months	290,049	More than 12 months	164,955
6–12 months	127,659	Total	582,664

Note: The 1991. IV. Law on the aiding of employment and the provisions for the unemployed changed the concept of registered unemployed to „registered jobseekers". Deviating from the official terminology, we use the term registered unemployed in the tables.

Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_03

Table 12.4: Monthly support of those exiting active programmes in 2010 per capita by county, thousand HUF

County	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
Budapest	143	92	36	130	148	56	99
Baranya	116	101	114	112	65	54	109
Bács-Kiskun	140	97	22	120	71	51	89
Békés	135	98	45	118	70	54	87
Borsod-Abaúj-Zemplén	133	86	3	111	76	46	86
Csongrád	92	53	2	84	71	46	104
Fejér	95	92	5	86	77	49	109
Győr-Moson-Sopron	113	127	4	103	87	50	107
Hajdú-Bihar	112	74	10	101	1,062	49	98
Heves	114	80	4	103	110	48	94
Jász-Nagykun-Szolnok	118	72	11	114	77	44	93
Komárom-Esztergom	116	64	44	97	94	47	107
Nógrád	118	64	6	96	81	46	95
Pest	119	143	31	107	86	44	91
Somogy	107	..	1	96	129	40	102
Szabolcs-Szatmár-Bereg	143	..	..	126	197	45	97
Tolna	103	..	1	93	87	43	104
Vas	85	91	4	78	71	46	108
Veszprém	89	41	3	75	91	44	96
Zala	95	59	10	88	71	45	101
Total	114	88	20	101	177	46	100

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.

Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_04

Table 12.5: Monthly support of those exiting active programmes in 2010 per capita by gender, age, education level, entry status, and status prior to the support, thousand HUF

	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
By gender							
Males	117	92	18	103	180	47	100
Females	111	84	22	99	174	45	100
By age group							
–20	241	183	23	218	579	83	195
20–24	111	87	23	100	149	45	104
25–29	112	89	19	95	174	47	109
30–34	117	86	14	95	202	45	102
35–39	112	95	22	103	139	44	101
40–44	111	84	32	103	144	44	99
45–49	114	93	31	106	237	44	94
50–54	107	85	18	100	214	49	93
55+	370	91	27	347	283	145	281
By level of education							
8 grades of primary school or less	208	158	15	118	257	82	169
Vocational school	225	173	61	211	359	89	181
Vocational secondary school	216	167	73	200	324	98	209
Grammar school	114	80	46	106	178	47	105
College, university	238	176	98	217	430	117	247
Unknown	99	80	2	86	213	46	99
By entry status							
School-leavers	111	84	23	101	207	45	105
Non school-leavers	118	90	19	103	175	46	100
By status prior to the support							
Jobseeking support	121	93	26	110	161	48	103
On call support	114	89	4	71	284	41	96
Regular social assistance	98	72	15	83	69	43	110
Not supported	102	81	49	97	197	46	98
Total	114	88	20	101	177	46	100

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/en-gine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.
Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_05

Table 12.6: Average length of support of those exiting the active programmes in 2010 by county, months

County	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
Budapest	4.8	5.6	7.7	5.0	5.1	6.5	5.9
Baranya	4.4	5.1	2.9	4.5	5.2	6.6	6.3
Bács-Kiskun	4.2	5.0	4.4	4.4	4.7	6.1	8.0
Békés	4.1	5.1	4.7	4.3	5.0	6.4	7.9
Borsod-Abaúj-Zemplén	3.1	4.7	3.7	3.4	4.3	6.2	7.9
Csongrád	3.6	5.8	3.5	3.8	4.6	6.6	7.1
Fejér	4.2	3.7	5.7	4.2	4.0	5.5	7.2
Győr-Moson-Sopron	4.5	3.9	3.8	4.4	4.3	6.8	7.2
Hajdú-Bihar	5.5	3.8	6.2	5.5	5.3	6.4	8.3
Heves	6.2	3.9	5.7	5.9	5.9	5.5	8.3
Jász-Nagykun-Szolnok	5.9	3.8	7.0	5.8	6.0	6.0	8.5
Komárom-Esztergom	5.1	3.1	3.6	4.7	5.7	7.3	6.0
Nógrád	4.9	5.5	5.1	5.0	5.6	6.9	5.7
Pest	5.5	2.5	4.6	5.3	5.7	6.8	6.0
Somogy	6.0	..	4.7	5.9	5.7	6.5	8.3
Szabolcs-Szatmár-Bereg	5.0	..	3.9	4.9	5.0	5.5	7.8
Tolna	5.6	..	4.6	5.5	5.9	6.7	8.1
Vas	4.0	5.1	7.0	4.8	5.3	6.6	6.5
Veszprém	5.0	4.8	4.1	4.9	5.5	5.9	6.9
Zala	4.7	5.5	5.7	4.8	5.0	6.0	6.4
Total	4.9	4.8	4.5	4.8	5.3	6.5	7.1

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.

Source: *NFSZ IR*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_06

Table 12.7: Average length of support of those exiting the active programmes in 2010 by gender, age, education level, entry status, and status prior to the support, months

	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
By gender							
Males	4.8	4.5	4.5	4.7	5.2	6.5	6.7
Females	5.0	5.0	4.6	5.0	5.3	6.6	7.3
By age group							
–20	5.9	6.1	5.4	5.9	5.6	5.9	6.7
20–24	5.4	5.1	4.5	5.3	5.4	6.6	7.0
25–29	5.2	4.9	4.5	5.0	5.2	6.6	7.3
30–34	5.0	4.6	4.4	4.9	5.3	6.7	7.2
35–39	4.9	4.6	4.5	4.8	5.2	6.5	7.2
40–44	4.7	4.7	5.0	4.7	5.2	6.5	7.0
45–49	4.0	4.4	4.7	4.1	5.2	6.5	7.0
50–54	3.7	4.3	5.0	3.9	5.2	6.5	6.8
55+	2.4	6.3	4.0	2.6	5.4	6.8	7.3
By level of education							
8 grades of primary school or less	4.0	5.4	4.6	4.3	5.3	6.1	6.5
Vocational school	4.5	4.7	5.1	4.6	5.3	6.5	6.8
Vocational secondary school	5.3	5.0	4.4	5.2	5.2	6.8	7.1
Grammar school	5.6	5.1	4.4	5.5	5.3	6.8	7.3
College, university	4.9	5.6	4.1	5.0	5.3	7.2	7.7
Unknown	5.1	4.7	6.1	5.2	5.1	6.5	7.3
By entry status							
School-leavers	5.6	5.3	4.2	5.4	5.5	6.7	7.0
Non school-leavers	3.3	4.5	4.9	3.5	5.2	6.5	6.9
By status prior to the support							
Jobseeking support	4.9	4.5	4.6	4.8	5.2	6.3	6.9
On call support	4.4	4.3	4.5	4.4	5.5	6.7	6.4
Regular social assistance	5.2	8.0	6.0	5.6	5.8	7.7	8.6
Not supported	5.0	5.3	4.5	5.0	5.4	6.6	7.2
Total	4.9	4.8	4.5	4.8	5.3	6.5	7.1

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/en-gine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.

Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_07

Table 12.8: Job placement shares of those exiting completed active programmes in 2010 by county, per cent

County	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
Budapest	35.4	42.1	78.9	54.2	65.1	100.0	86.9
Baranya	40.3	48.5	86.2	59.6	70.3	100.0	89.8
Bács-Kiskun	54.4	40.6	80.1	65.7	81.7	87.9	99.8
Békés	57.6	54.0	80.8	68.6	77.5	93.5	94.0
Borsod-Abaúj-Zemplén	54.1	45.0	83.0	69.9	83.9	93.9	97.6
Csongrád	46.0	50.7	80.7	60.4	78.5	93.5	88.4
Fejér	63.3	53.4	94.2	73.3	87.5	100.0	91.2
Győr-Moson-Sopron	47.1	49.7	80.8	61.7	83.6	89.9	78.3
Hajdú-Bihar	44.7	51.8	78.0	63.8	75.4	100.0	87.3
Heves	52.6	51.3	82.3	70.3	76.6	91.6	95.5
Jász-Nagykun-Szolnok	43.1	75.0	87.0	67.0	82.6	94.4	96.8
Komárom-Esztergom	59.4	60.4	78.0	72.6	85.5	88.8	86.9
Nógrád	54.4	43.0	88.9	76.3	87.0	97.6	90.7
Pest	60.3	100.0	76.1	71.8	85.2	81.5	80.1
Somogy	45.7	..	76.8	62.4	69.3	91.1	85.9
Szabolcs-Szatmár-Bereg	48.8	..	74.9	64.1	66.8	92.1	87.0
Tolna	46.5	..	72.1	61.3	74.2	87.0	81.7
Vas	47.3	53.1	80.3	67.3	81.2	91.8	88.2
Veszprém	54.6	42.5	75.5	67.9	75.4	86.0	85.3
Zala	48.6	56.4	79.9	68.2	74.6	92.3	94.5
Total	49.5	50.1	79.2	66.3	76.4	90.9	88.3

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.
Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_08

Table 12.9: Job placement shares of those exiting completed active programmes in 2010
by gender, age, education level, and entry status, per cent

	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
By gender							
Males	51.1	51.8	81.2	67.7	77.2	90.5	89.8
Females	48.0	48.3	78.2	65.3	75.7	91.5	87.3
By age group							
–20	43.6	46.0	63.1	50.9	76.9	90.9	67.7
20–24	54.2	52.3	82.3	66.3	77.5	98.2	89.4
25–29	55.3	55.5	84.0	69.5	80.6	92.5	93.2
30–34	51.8	51.3	83.9	68.8	77.9	93.1	92.2
35–39	49.4	45.4	80.9	66.9	78.1	93.8	89.3
40–44	47.1	46.8	80.0	65.9	75.3	87.3	88.8
45–49	44.4	47.6	76.1	63.9	72.7	85.6	87.2
50–54	39.7	49.0	77.7	66.2	67.7	88.8	82.9
55+	37.1	44.6	73.4	66.5	76.4	83.9	84.6
By level of education							
8 grades of primary school or less	43.3	43.2	70.3	59.3	65.8	87.8	81.5
Vocational school	50.7	53.3	81.2	69.0	77.0	90.0	88.4
Vocational secondary school	54.4	54.6	84.5	69.8	77.9	95.0	91.8
Grammar school	48.2	46.0	80.7	64.4	75.9	91.7	87.1
College, university	52.5	51.8	85.5	72.3	79.2	96.4	93.2
By entry status							
School-leavers	50.6	48.3	86.7	62.9	77.1	100.0	86.5
Non school-leavers	49.5	50.2	79.0	66.4	76.4	90.6	88.4
Total	49.5	50.1	79.2	66.3	76.4	90.9	88.3

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/en-gine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.
Source: *NFSZ IR.*

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_09

Table 12.10: Full amount of support paid to those exiting completed active programmes in 2010 per person continued to be employed by county, thousand HUF

County	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
Budapest	1,696	1,194	..	1,555	556	508	851
Baranya	1,442	727	..	1,403	556	432	1,244
Bács-Kiskun	790	796	..	793	489	419	958
Békés	793	392	198	752	557	370	1,005
Borsod-Abaúj-Zemplén	1,076	349	439	971	635	490	967
Csongrád	931	484	..	892	492	376	864
Fejér	1,359	1,189	1,224	1,325	415	425	948
Győr-Moson-Sopron	748	651	..	740	421	393	1,003
Hajdú-Bihar	1,669	..	..	1,669	774	402	1,268
Heves	1,116	746	787	1,087	561	432	763
Jász-Nagykun-Szolnok	1,198	..	..	1,198	795	327	1,036
Komárom-Esztergom	1,111	752	2,889	1,076	450	481	955
Nógrád	1,269	447	1,230	1,231	649	457	765
Pest	1,467	1,223	816	1,391	490	417	901
Somogy	1,424	550	..	1,330	558	371	1,092
Szabolcs-Szatmár-Bereg	1,462	..	736	1,461	615	410	1,247
Tolna	1,715	541	..	1,644	576	340	1,074
Vas	658	633	..	650	397	348	1,013
Veszprém	985	819	..	956	417	374	1,015
Zala	1,077	664	..	1,028	384	447	1,128
Total	1,208	823	682	1,147	554	420	1,005

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/en-gine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.
Source: *NFSZ IR*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_10

Table 12.11: Full amount of support paid to those exiting completed active programmes in 2010 per person continued to be employed by gender, age, education level, and entry status, thousand HUF

	Not employed				Those receiving entrepeneurial support	Employed with wage support	Those receiving wage cost support
	recommended training	accepted training	unknown	total			
By gender							
Males	1,186	798	726	1,126	558	424	949
Females	1,231	851	646	1,169	550	416	1,048
By age group							
–20	1,671	1,179	838	1,605	521	406	1,169
20–24	1,254	842	638	1,191	533	419	1,013
25–29	1,159	734	524	1,078	516	437	1,134
30–34	1,188	776	602	1,117	564	409	1,004
35–39	1,189	903	844	1,147	524	404	1,012
40–44	1,205	841	677	1,147	547	411	986
45–49	1,095	800	884	1,053	604	416	933
50–54	1,112	796	1,995	1,076	647	418	953
55+	1,356	945	1,214	1,298	581	447	984
By level of education							
8 grades of primary school or less	1,268	1,042	1,013	1,235	624	384	830
Vocational school	1,065	676	1,153	1,015	535	417	842
Vocational secondary school	1,207	772	514	1,132	552	433	1,070
Grammar school	1,427	881	566	1,338	565	436	1,118
College, university	1,132	838	524	1,056	550	523	1,365
By entry status							
School-leavers	1,474	964	306	1,364	540	427	1,021
Non school-leavers	1,195	813	698	1,135	554	420	1,005
Total	1,208	823	682	1,147	554	420	1,005

A more detailed description of the programmes can be found in the following analysis: http://www.munka.hu/engine.aspx?page=afsz_stat_fobb_aktiv_eszkozok.
Source: *NFSZ IR*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent12_11

Table 13.1: Employment and unemployment rate of population
aged 15–64 by gender in the EU, 2010

Country	Employment rate			Unemployment rate		
	males	females	together	males	females	together
Austria	77.1	66.4	71.7	4.6	4.3	4.5
Belgium	67.4	56.5	62.0	8.2	8.6	8.4
Denmark	75.8	71.1	73.4	8.4	6.6	7.6
United Kingdom	74.5	64.6	69.5	8.8	7.0	7.9
Finland	69.4	66.9	68.1	9.3	7.7	8.5
France	68.3	59.9	64.0	9.0	9.7	9.3
Greece	70.9	48.1	59.6	10.1	16.4	12.7
Netherlands	80.0	69.3	74.7	4.5	4.5	4.5
Ireland	63.9	56.0	60.0	17.1	9.6	13.7
Luxembourg	73.1	57.2	65.2	3.8	5.1	4.4
Germany	76.0	66.1	71.1	7.6	6.6	7.2
Italy	67.7	46.1	56.9	7.7	9.7	8.5
Portugal	70.1	61.1	65.6	10.4	12.5	11.4
Spain	64.7	52.3	58.6	19.8	20.6	20.2
Sweden	75.1	70.3	72.7	8.7	8.4	8.6
EU-15	71.4	59.5	65.4	9.6	9.6	9.6
Hungary	60.4	50.6	55.4	11.6	10.8	11.2
Bulgaria	63.0	56.4	59.7	11.0	9.5	10.3
Cyprus	76.6	63.0	69.7	6.2	6.5	6.4
Czech Republic	73.5	56.3	65.0	6.5	8.5	7.4
Estonia	61.5	60.6	61.0	19.9	14.7	17.3
Poland	65.6	53.0	59.3	9.4	10.1	9.7
Latvia	59.2	59.4	59.3	21.9	16.0	19.0
Lithuania	56.8	58.7	57.8	21.5	14.6	18.0
Malta	72.3	39.2	56.0	6.9	7.1	7.0
Romania	65.7	52.0	58.8	8.2	6.9	7.6
Slovakia	65.2	52.3	58.8	14.3	14.6	14.4
Slovenia	69.6	62.6	66.2	7.6	7.2	7.4
EU-25	70.4	58.6	64.5	9.8	9.8	9.8
EU-27	70.1	58.2	64.2	9.7	9.7	9.7

Source: *CIRCA*.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent13_01

Table 13.2: Employment composition of the countries in the EU[a], 2010

Country	Self employed	Part time	Fix term contr.	Service	Industry	Agriculture
Austria	11.3	24.3	9.3	70.1	25.2	4.7
Belgium	13.0	23.7	8.1	75.2	23.5	1.3
Denmark	8.1	25.8	8.6	77.8	19.7	2.3
United Kingdom	13.0	25.7	6.0	79.0	19.2	1.1
Finland	12.2	13.9	15.4	72.0	23.3	4.1
France	10.7	17.5	15.1	74.5	22.2	2.9
Greece	29.6	6.2	12.4	68.2	19.9	11.9
Netherlands	13.8	48.3	18.3	71.8	16.1	2.6
Ireland	15.3	21.9	9.3	75.9	19.7	4.0
Luxembourg	7.2	17.5	7.1	81.2	12.0	1.0
Germany	10.5	25.5	14.7	69.9	28.5	1.5
Italy	22.7	14.8	12.8	67.5	28.9	3.6
Portugal	17.5	8.4	23.0	63.8	29.2	7.0
Spain	15.7	13.1	25.0	72.6	23.2	4.2
Sweden	9.8	25.3	15.4	77.8	20.1	1.9
EU-15	14.1	21.4	14.1	72.5	24.0	2.8
Hungary	11.7	5.5	9.6	64.8	30.8	4.4
Bulgaria	11.5	2.2	4.4	59.9	33.4	6.7
Cyprus	15.5	8.1	13.6	76.1	21.1	2.8
Czech Republic	16.8	5.1	8.2	58.7	38.3	3.1
Estonia	7.9	9.8	3.7	64.7	30.7	4.1
Poland	18.5	7.6	27.2	57.1	30.5	12.4
Latvia	9.9	9.3	6.8	66.9	24.3	8.5
Lithuania	9.1	7.7	2.4	66.1	24.6	8.9
Malta	13.7	11.6	5.6	72.7	24.8	1.2
Romania	19.5	9.7	1.1	43.1	30.0	26.9
Slovakia	15.8	3.8	5.6	59.5	37.2	3.2
Slovenia	11.6	10.3	17.1	59.5	33.1	7.0
EU-25	14.5	18.5	13.9	69.3	25.5	4.7
EU-27	14.4	19.2	14.5	70.6	25.2	3.7

[a] All employed = 100.
Source: *Eurostat* (Newcronos) Labour Force Survey.

Online data source in xls format: http://www.bpdata.eu/mpt/2012ent13_02

DESCRIPTION OF THE MAIN DATA SOURCES

The data have two main sources in terms of who gathered them: the regular institutional and population surveys of the Hungarian Central Statistical Office, and the register and surveys of the National Labour Office.

MAIN DATA SOURCES OF THE CSO

CSO Labour Force Survey – KSH MEF

The Hungarian Central Statistical Office has been conducting a new statistical survey since January 1992 to obtain ongoing information on the labour force status of the Hungarian population. The Labour Force Survey 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 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 Labour Force Survey, the surveyed population is divided into two main groups according to the economic activity performed by them during the reference week (up to 2003, this was always on the week containing the 19th 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 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 the 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.

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. They are not subject to all three criteria.

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 searched, they could not have started work. Passive unemployed are included here, who desire 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 Labour Force Survey 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 Labour Force Survey 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 Labour Force Survey 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 sampling weights for 1992–2000 data are based on the 1990 census.

CSO 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 grants), 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, the employee's social security contributions, etc., 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 net values are calculated at the institutional and monthly level.

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 CSO 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, version since January 1, 1994) in major groups 1–4., manual workers are persons with occupations classified in major groups 5–9.

CSO Labour Force Accounting Census
– KSH MEM

Before the publication of the Labour Force Survey, the annual Labour Force Account gave account of the total labour force in the time period between the two censuses.

The Labour Force Account, 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

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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 National Labour Office.

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 Central Statistical Office.

MAIN NMH DATA SOURCES

Unemployment (Jobseekers') Register Database – NMH 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 contains all jobseekers, but out of them, at a given point of time, only those are regarded as registered unemployed/jobseekers, who:

– had themselves registered with a local office of the National Employment Service 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 a point of time (on the final day of any month), the person is not a pensioner or a full-time student, 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, or has a short-term, temporary job 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 outflow within a period.

Based on the records of the labour requests needs reported to the National Employment Service, 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 monthly.

The very detailed monthly statistics – in a breakdown of 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 National Employment Service's main functions (such as placement services, payment of benefits, active programme support, etc.).

The National Labour Office (and its predecessors, i. e. OMK – National Labour Centre, OMMK and OMKMK) has published the key figures of these statistics on a monthly basis since 1989. The more detailed reports which also contain data by local office service delivery area are published by the County/Metropolitan (Budapest) Labour Centres.

The denominators of the unemployment rates calculated for the registered unemployed/jobseekers are the economically active population data published by the Central Statistical Office's Labour Market Account (KSH MEM).

The figures of the registered unemployed/jobseekers and the registered unemployment/jobseekers rate are obviously different from the figures based on the Central Statistical Office's labour force survey. 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 – NMH PROG

At the initiative and under the co-ordination of the National Labour Office (and its legal predecessors), the National Employment Service conducted the so called

short term labour market forecast since 1991, twice a year, in March and September, by interviewing over 7500 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 and regions to the whole country, providing useful information at all levels for the planning activities of the National Employment Service.

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 surveys 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, with one additional benefit being that with the help of the surveyors of the Institute, the sample size has increased to nearly 8000.

Wage Survey Database – NMH BT

The National Labour Office (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 Resources (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), $1/12^{th}$ of the total amount of such benefits received during the previous year is used.

In the competitive sector, the data collection initially only covered 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 practically 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 data base for the years of 1983, 1986 and 1989 too.

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).

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– 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 Central Statistical Office, which enables the Office to also provide data for certain international organisations, (e. g. ILO and OECD). The National Labour Office 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 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 database of SES 2006 was also sent to the Eurostat in anonymized form in accordance with EU regulations.

Unemployment (Jobseekers') Benefit Register – NMH REG

The recipients' fully comprehensive registry is made up, on the one hand, of the financial records containing the disbursed jobseekers' supports (jobseekers' benefit, jobseekers assistance, and entrepreneurial benefit) and, on the other hand, of the so-called master records containing the particulars of benefit recipients. This register allows for the accurate tracking of the recipients' benefit related events, the exact date of their inclusion in, and removal from, the system, as well as why they have been removed from it (e. g. got a job, eligibility period expired, were excluded, joined an active labour market programme, etc.)

This huge database allows for reporting for any point of time the detailed data of persons who received benefits on a given day, in a breakdown of country, region, county and local office service delivery area. In order to align these data with the closing day statistics of the registered unemployed, these monthly statistics are also completed by the 20th of each month. (Stock in the closing day.)

In addition, the monthly statistics also contain information on the number of those who were affected during the month, e.g. the number of those who have received benefits on any day of the month between the previous month's and the given month's closing day. Of course, data indicating inflows and outflows are also reported here.

It is an important and rather useful aspect from a research perspective that, in addition to the standard closing day statistics, groups defined by any criteria can be tracked in the benefit register, e. g. inflow samples can be taken of newly registered persons for different periods, and through tracking them in the registry system the benefit allocation patterns of different cohorts can be compared.

The detailed data of unemployment benefit recipients have been available from the benefit register since January 1989. The first two years had a different benefit allocation system, and the current system, which has been modified several times since then, was implemented by the Employment Act of 1991 (Act IV).

For the period of between 1991 and 1996, the register also contains the stock and flow data of the recipients of school-leavers' unemployment benefit. Between 1997–2005 the system has also contained the recipients of pre-retirement unemployment benefit. In addition to headcount data, the benefit register can also monitor the average duration of the period of benefit allocation and the average monthly amount of the benefits allocated.

The key data regarding benefits were published by the National Labour Office in the monthly periodical Labour Market Situation. In addition, time series data and the main results of the wage tariff surveys can be reached on the website of the Hungarian National Employment Service (http://www.munka.hu/statisztika).

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