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## **Employment in Poland 2007: Security on flexible labour market**

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# Employment in Poland 2007

Security on a flexible labour market

Edited by Maciej Bukowski

Department of Economic Analyses and Forecasts  
Ministry of Labour and Social Policy

Warsaw 2008



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## Introduction

This Report is a third in the series *Employment in Poland*. Its subtitle, which reads *Security on a flexible labour market*, is a reflection of one of the key dilemmas in social and economic policy, namely the necessity to reconcile the development of effective economic structures that react in a flexible manner to changing external circumstances with the assurance of social security and stability to all citizens. In the subsequent parts of this Report we demonstrate that in many cases this conflict between flexibility and security is only ostensible and that it is therefore possible to organise the labour market institutions in such a way that thanks to greater flexibility negative disturbances, which are bound to hit this market, could be absorbed more easily and quickly and their consequences for the public would be less severe.

Similarly to its previous editions, this Report is above all a scientific paper which synthesises empirical as well as theoretical investigations in the field of economics with the recent research study results obtained in the course of its preparation. This Report is primarily a product of cooperation between the Department of Economic Analyses and Forecasts of the Polish Ministry of Labour and Social Policy and the Scientific Foundation Institute for Structural Research located in Warsaw. However, it is addressed not only to social scientists and academics who specialise in labour economics but also to practitioners who are responsible for designing and implementing economic policies at national, regional and local levels. The authors of this Report hope that the presented analytical approach as well as conclusions drawn on the basis thereof can come to play an important role in the discussion on the optimal design of the Polish economic policy.

This Report consists of four Parts. In Part I, we go deeper into the macroeconomic analysis initiated in the previous edition of *Employment in Poland* identifying key factors responsible for different evolutions of employment and unemployment in eight Central European countries that joined the European Union in May 2004. We point out that although in the past external shocks were of foremost importance to unemployment and employment fluctuations in the region, nowadays countries vulnerability to typical macroeconomic shocks affecting their major trade partners is considerably smaller. At the same time, we argue that, next to cyclical fluctuations, it was wage rises – unrelated to changes in productivity, that constituted an important internal disturbance which determined the developments on the labour markets in the region. We assert that greater real wage flexibility could allow some countries, including Poland, to lower actual unemployment levels and to better absorb external disturbances in their economies. Last but not least, we emphasise that restrictive monetary policies implemented in the past in reaction to supply shocks that affect above all the price structure and not price levels, largely intensified the negative consequences of the economic slowdown in Poland by increasing unemployment and decreasing employment.

Part II treats on the impact on market efficiency of those labour market institutions that are intended to enhance the adaptability of households and businesses to inevitable macroeconomic disturbances – as well as to different functions that work serves at different stages of human and company life. What is more, in our analysis, we focus on non-standard work arrangements and indicate that in those economies where protection measures applied to the traditional employment relationship are restrictive and where the use of alternative work arrangements is hindered, the period of absorption of aggregate disturbances is longer and the reallocation of production factors is less effective than in labour markets which with less restrictive employment protection legislation. We emphasise that in all Central European countries, including Poland, the popularity of flexible employment arrangements is much less than in Western Europe. It is also highly heterogeneous. As much as in the recent years Poland has seen a dynamic spread of temporary work contracts and integration of temporary work agencies in the functioning of the labour market, the potential of atypical employment arrangements in Poland is largely unfulfilled when it comes to economic activity of people who combine work and family life or who find it difficult to work full-time due to age or health reasons.

In Part III, we look at the issue of work remuneration from macro- and micro-perspective alike. We argue that the recent rapid wage growth can be interpreted as a belated reaction to the economic upsurge which started after 2003 and that its persistence may only become adverse to the labour market when the gap between wages and labour productivity, which came into being during the period of slowdown, is fully closed. The persistent growth of wage inequalities in Poland during the transition period was due to the fact that rapid technological progress favoured some professional and social groups more than others. What is essential here is the increasing return on formal education and rising premiums on work in managerial positions as well as increasingly diverse individual and market characteristics of Polish workers. In this context, it is the public sector that stands out because it offers relatively higher wages to low-qualified workers and it pays relatively less to people with higher qualifications. Wage arrangements in the public sector are less flexible than in the private sector and therefore they are less prone to cyclical fluctuations, which leads to swings in wage attractiveness of this sector. Towards the end of Part III we evidence that, in international comparison, the gender wage gap in Poland is relatively small. Notwithstanding the above, even if differences in individual and employer characteristics as well as working time are taken into consideration, women still earn about ten percent less than men. At the same time, we emphasise that, based on the existing databases, it is impossible to decide whether this fact reflects real barriers to the advancement of women or whether it is rather a consequence of different preferences of men and women which determine different paths of their professional careers.

Part IV focuses on one of the key instruments of the contemporary social and economic policy in developed economies, namely active labour market policies (ALMP). We describe the evolution of different types of ALMP over time in OECD and EU countries and discuss the results of international research on the effectiveness of this form of support to the unemployed and economically inactive. The main objective of this Part, however, is to assess the active labour market policies implemented in Poland. We carry out our assessment at the level of aggregates as well as based on the individual survey study of effectiveness of ALMP which we have conducted for the purposes of this Report. It is the first attempt at producing a rigorous and comprehensive evaluation of ALMP effectiveness in Poland in the recent years. Our analysis evidences that a part of resources allocated to active labour market policies does not translate into the greater chance for their beneficiaries to find a job. This concerns above all intervention and public works which turn out to be completely inefficient when it comes to opening up job opportunities to the unemployed. At the same time, however, we point out that even for those policies that are characterised by positive net efficiency, such as internships and traineeships, the deadweight loss is also high, i.e. support is extended to groups whose situation is relatively good, whereas more difficult cases are neglected. The problem of ALMP being misaddressed also affects the fact that actions undertaken by local labour offices in Poland in the area of agency and advisory support have no significant impact on the situation of unemployed people which clearly distinguishes Poland from other European countries.

The phenomena identified in particular Parts have been put together in the final Part of this Report which contains conclusions and recommendations for the labour market policy. Their objective is to provide directions for desired changes in all areas covered by the presented analyses. We put particular emphasis on the fact that interventions in one area must account for the consequences that they might cause in other areas and we indicate that labour market policies should become a part of a broader and coordinated economic policy that would enhance the security of the people as well as favour development.

# Part I. Labour market macrostructure, shocks and institutions

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## Introduction

In the last four years, the negative image of the Polish labour market, to which we had got used to in the last decade, has been largely altered. The effects of the disturbances, which hit the Polish economy in 1998-2003 and turned Poland, for a couple of years, into a country with the highest unemployment rate and one of the lowest employment rates out of all EU member states, have been nearly absorbed.

Hence, we begin this Part with a detailed account of the latest developments in the Polish labour market and we argue that the employment growth, which started in 2003 and has been gaining both momentum and scale ever since, has made the current situation in the Polish labour market look very good indeed in the perspective of the last fifteen years. At the same time, we bring to light those aspects of the labour market which do not follow the cyclical upturn. This concerns above all the labour supply of people in pre-retirement age. Then, we broaden the analysis by comparing the labour market in Poland with those in other EU countries, particularly in other Central-Eastern European EU new member states. We demonstrate to what extent the gap between the Polish labour market and the labour markets of EU15 and also of remaining new member states has been reduced. At the same time, we present how diverse were the developments of contractual structure of employment in Poland from these in other EU.

In second Chapter, using a structural econometric model, we analyse the reasons behind different history of unemployment and employment in Poland in comparison with other CEE countries. We scrutinize to what extent the observed differences are due to various evolutions of internal and external macroeconomic disturbances, different economic policies and different institutional setting of the labour markets in particular countries. Thanks to the adopted approach, we have been able to make a formal quantitative comparison of the actual developments of unemployment and employment trends over years with hypothetical alternative scenarios, which would have happened assuming different shocks and/or other policy conduct than in fact occurred. In this way, we can quantify the crucial macroeconomic disturbances and the factors which influence the labour market ability to absorb them, and which jointly explain the diversity of evolution of the NMS labour markets. That leads us to conclusions which we present in the summary.

## 1. Polish labour market compared with labour markets in other EU countries in 2003-2007

### 1.1. Recent labour market developments in Poland

The year 2007 saw an economic upturn in Poland, which translated into the reinforcement of positive trends in the labour market which have been developing since 2003. The increase in employment and decrease in unemployment gained pace in 2006 and both trends continued with added vigour throughout the next year. Consequently, in the first two quarters of 2007,<sup>1</sup> employment averaged 14996 thousand, 5 per cent more than in the same period of 2006 and 8.8 per cent more than in 2002, when the employment rate reached the lowest level in the last fifteen years. At the same time, the number of the unemployed was on a steady decrease. As a result of this, in the second quarter of 2007 there were almost a million less unemployed people than at the beginning of 2006 (adjusted for seasonal fluctuations) and almost 1.5 million less than in the first quarter of 2005.<sup>2</sup> This means that the number of the unemployed was lower by 50 per cent in 2007 than in 2003, which was a landmark year for the labour market, and moreover, this number reached the lowest level since the beginning of the transition. Obviously, the above translated into a decrease in the unemployment rate, which, in the second quarter of 2007, was slightly above 10 per cent in the working age population. Hence, the rapid increase in unemployment from 1998 on to exceed 20 per cent in 2002, was completely mitigated in the last four years.

**Table I.1.**  
**Participation, employment and unemployment in Poland in 1998-2007 in the age group 15-64**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 <sup>i</sup>
Participation	65.8	65.6	65.4	65.2	64.5	64.2	64.2	64.3	63.7	63.0
Employment	58.6	56.5	54.7	53.1	51.4	51.2	51.7	52.6	54.7	56.4
Unemployment	11.0	13.9	16.3	18.6	20.3	20.3	19.5	18.1	14.2	10.5

Remarks: i) – two first quarters

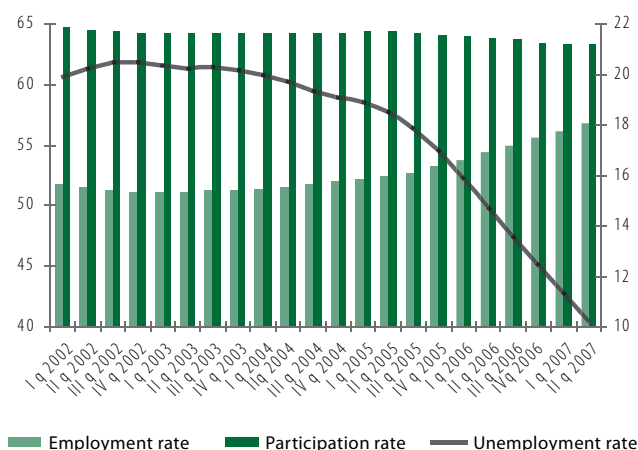
Source: Own elaboration based on BAEL data adjusted for seasonal fluctuations and methodological changes.

The evolution of unemployment in 2003-2007 should be perceived as the accommodation on the labour market of the negative disturbances of the end of the last decade and the beginning of the present one. The number of employed in 2007 reached levels comparable to those observed prior to these turbulences, whereas the employment rate for the age group 15-64 was 4 points higher than that in 2003, when it reached the lowest level in the last fifteen years. Notwithstanding the above, the said rate is still 2 percentage points below that of 1998, because the working age population is currently bigger by several percent than in the second half of the 1990s.

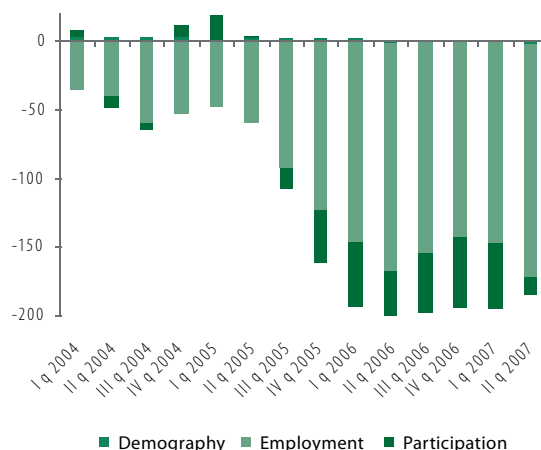
<sup>1</sup> At the time of preparation of this Report, LFS (BAEL) data were available for the first two quarters of 2007 only.

<sup>2</sup> Based on BAEL data adjusted for seasonal fluctuations and methodological changes. The same applies to the subsequent parts of this Report for analyses carried out for Poland only. For international comparisons Eurostat data has been used, unless otherwise noted.

**Chart I.1.**  
**Employment and participation rates (left axis) and unemployment rate (right axis) in Poland in 2002-2007 (until the second quarter)**



**Chart I.2.**  
**Decomposition of sources of unemployment changes – quarterly changes in the number of unemployed people aged 15-64, resulting from demographic factors and changes in participation and employment (in thousands of unemployed) in 2003-2007 (until the second quarter)**



Remarks: Decomposition is based on quarterly changes in the number of unemployed people aged 15-64 which result from demographic factors as well as changes in participation and employment rates (in thousands of unemployed) – factors that lower the unemployment rate are below the OX axis and those that increase it – above the OX axis.

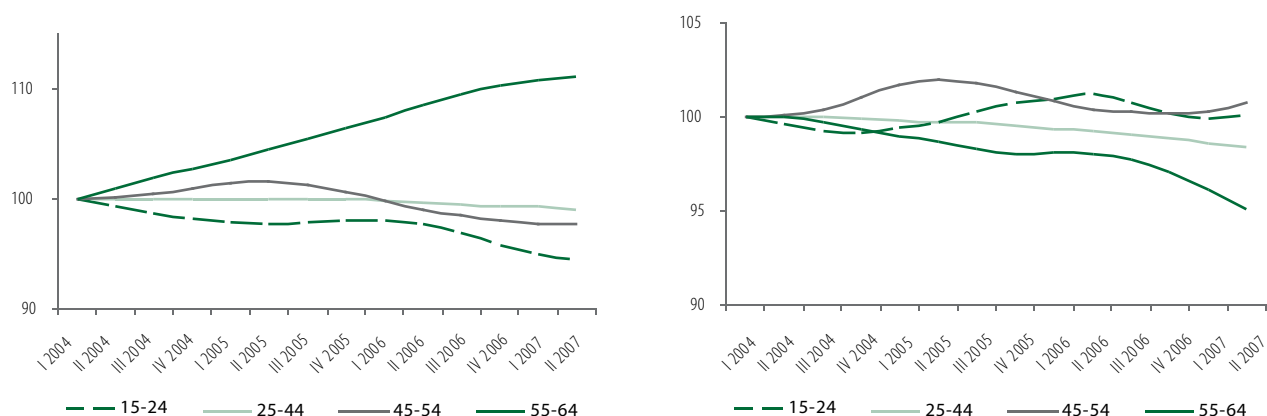
Source: Own calculations based on BAEL data adjusted for seasonal fluctuations and methodological changes.

However, processes affecting participation introduce some dark colours into the generally positive outlook of Polish labour market after 2002, epitomized by trends in employment and unemployment. As opposed to these two labour market aggregates, the reversal of downward trend in labour supply in 2005 turned out to be only transitory (see Chart I.1). The increase of working age population, resulting from demographic changes, was accompanied by a decrease in the number of the economically active people, and, as a consequence, the declining trend in participation – visible ever since the beginning of the transition, persisted. This means that irrespective of strengthening labour demand, employment and rising wages, the inclination of Poles to withdraw early from the labour market continues. As argued in the previous editions of this Report (Ministry of Economy and Labour 2005, Ministry of Labour and Social Policy 2006), this phenomenon can be largely attributed to institutional factors which have not been subject to significant changes after 2005.

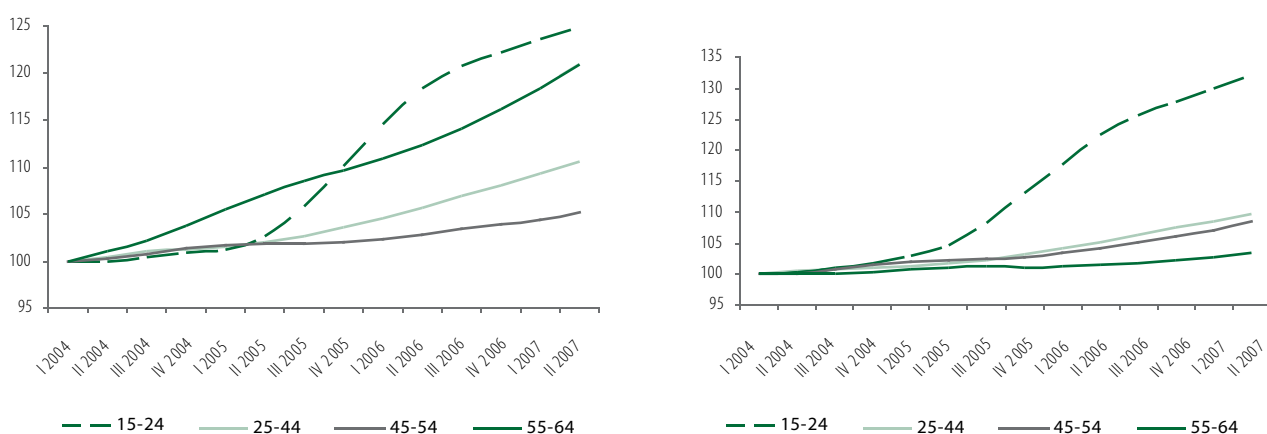
Because of the persistence of decrease in participation, in the last couple of quarters, declining labour supply has had a visible impact on the reduction of unemployment (see Chart I.2). Admittedly, the importance of the growing number of jobs was clearly greater as the increase in employment was almost entirely responsible for the drop in the number of unemployed people until mid-2005 and in the subsequent period – for approximately 80 percent thereof. However, the contribution of declining labour supply is also worth noting. As argued later in this chapter, the above processes constitute partly a continuation of certain features, which had been visible in the Polish labour market in the last fifteen years, whereas to some degree they also form a new phenomenon that concerns people in their prime-age.

**Chart I.3.**

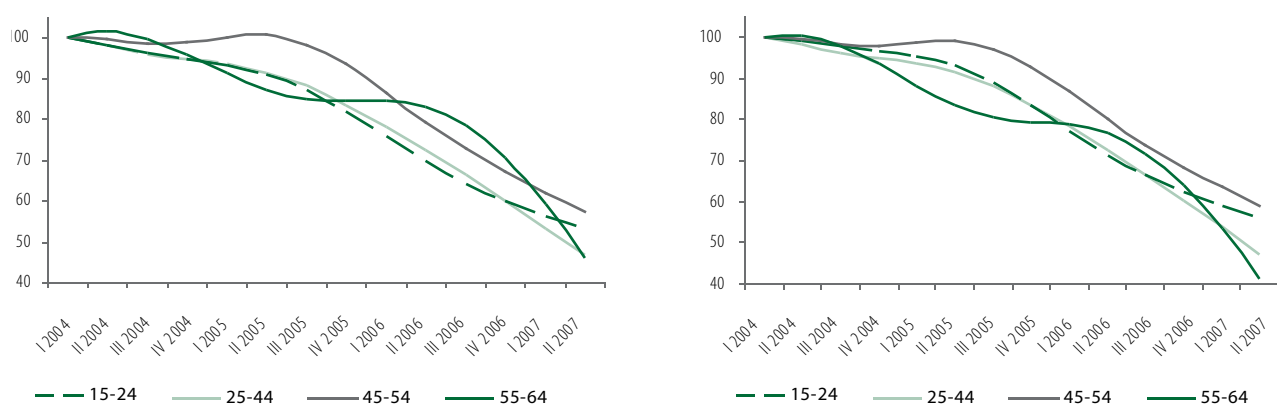
**Dynamics of the number of economically active people (left graph) and of the participation rate (right graph) by age in Poland in 2004–2007 (until the second quarter)**

**Chart I.4.**

**Dynamics of the number of employed people (left graph) and of the employment rate (right graph) by age in Poland in 2004–2007 (until the second quarter)**

**Chart I.5.**

**Dynamics of the number of unemployed people (left graph) and of the unemployment rate (right graph) by age in Poland in 2004–2007 (until the second quarter)**



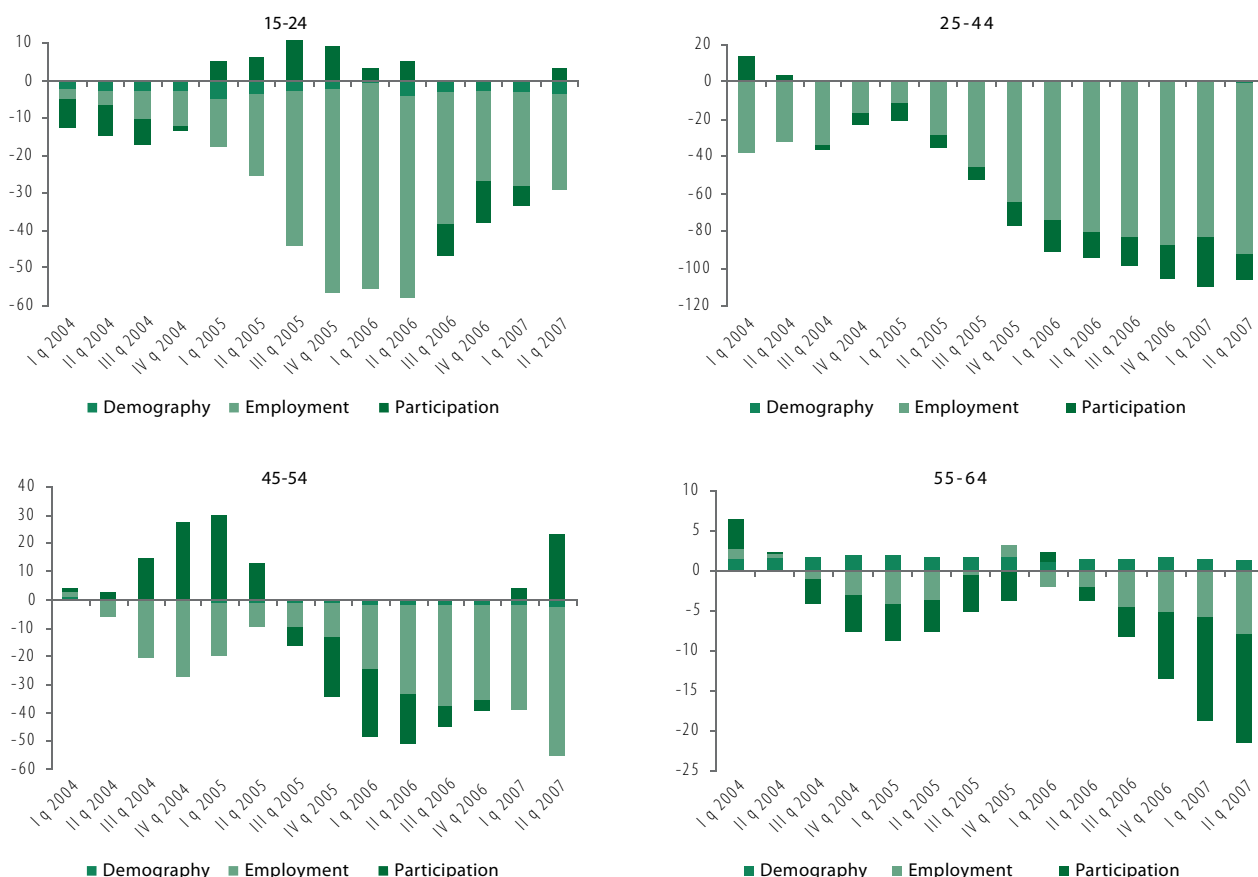
Source: Own calculations based on BAEL data adjusted for seasonal fluctuations and methodological changes.

In all age groups, a profound increase of employment was the key factor behind falling unemployment, although with some differences in intensity and scale of the process between age groups. As the cyclical economic upturn strengthened and labour demand grew, the employment rate for young people picked up strongly – the number of employed aged 15-24 was in mid-2007 25 percent higher than three years earlier and almost 10 percent higher than at the beginning of 2006 (see Chart I.4). At the same time, the cohorts of young people born in the mid-1980s, who are currently entering the labour market, are clearly less populous than these that come from the demographic boom of the beginning of this decade. Hence, such a significant rise in the number of young working people translated into an even more visible increase in the employment rate for this group – by one third between the beginning of 2004 and mid-2007. As for people aged 25-44, i.e. the prime-age population, who are typically characterised by highest participation and employment levels, the dynamics of employment growth was naturally less prominent. Nevertheless, it is worth noting that the employment rate for this age group picked up earlier than for other groups, i.e. in early 2003, and in mid-2007 as many as 78 percent of people aged 25-44 were working, which was the highest rate in the last fifteen years.

The most dynamic slump in unemployment took place for the age groups for which the employment rate had grown fastest, namely for the under-45-year-olds. Hence, for the youngest age group, the rate of unemployment declined from 42 percent at the beginning of 2004 to 24 percent in mid-2007, whereas for the prime-age group – from 18 percent to 8.5 percent. These developments were of similar, stable dynamics (see Chart I.5), although the decline of the number of young unemployed has been slowing down throughout the last year and so had the dynamics of employment growth in this age group. At the same time, it is worth noting that the above age group is the only one where the demographic factor has been contributing to the decrease of unemployment, as the less populous cohorts enter the labour market. On the other hand, from the beginning of 2005 on, in the age group 25-44 the impact of rising employment on the reduction of unemployment was escalating in every quarter, although, at the same time, decreasing participation has also constituted a visible and continuing contribution (see Chart I.6). We further discuss this novel phenomenon in the subsequent parts of this Chapter.

**Chart I.6.**

**Decomposition of sources of unemployment changes – quarterly changes in the number of unemployed people by age, resulting from demographic factors and changes in participation and employment (in thousands of unemployed) in 2004-2007 (until the second quarter)**



Remarks: This decomposition is based on quarterly changes in the number of unemployed people aged 15-64, resulting from demographic factors as well as changes in participation and employment rates (in thousands of unemployed) in 2003-2007 (until the second quarter) – factors which decrease the unemployment rate are below the OX axis and those which increase it – above the OX axis.

Source: Own calculations based on BAEL data adjusted for seasonal fluctuations and methodological changes.

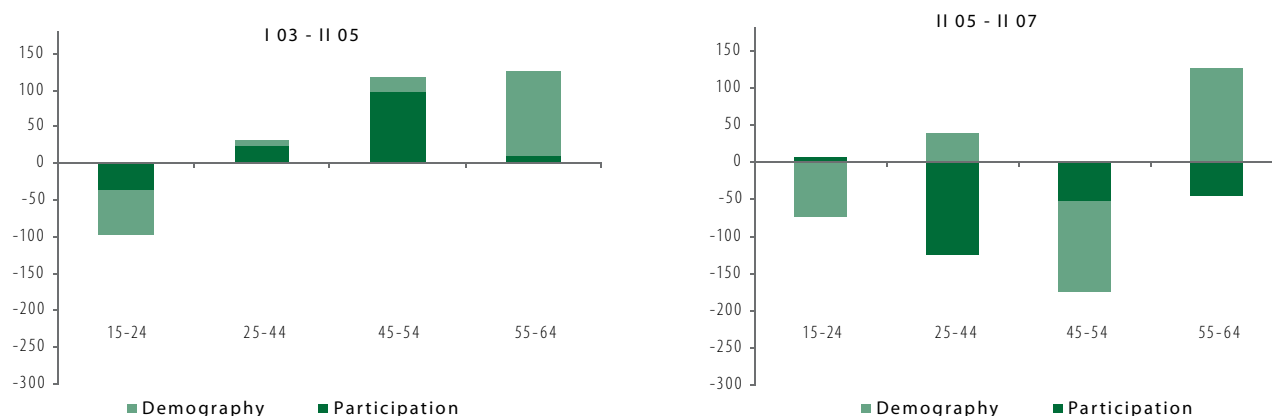


The improvement in the labour market situation of the over-45-year-olds, whose occupational mobility is on average lower than that of prime-aged workers, has not been as dynamic and the transmission of positive macroeconomic factors to employment growth has not been as fluent as in the age groups 15-24 and 25-44. As a result, at the beginning of 2007, the unemployment rate for people aged 45-54 was, for the first time in last fifteen years, higher than that for the age group 25-44. However, as from 2006, the dynamics of employment growth and its contribution to falling unemployment among people aged 45-54 have been very similar to the developments that concerned the age group 25-44. What is more, the 5 percent increase in employment since the first quarter 2004 made up for half of the employment slump in 1998-2003. Hence, it can be presumed that as the labour supply reserves of prime-age workers were running out gradually, employers started opting to take slightly older employees, which improved the situation of over 45-year old.

Compared to the favourable labour market developments described above, the evolution of participation of people in pre-retirement age clearly stands out. The increase in labour supply of older people in 2003-2004, which we attributed in the previous edition of this Report (Ministry of Labour and Social Policy, 2006) to the restricted access to pre-retirement benefits, turned out to be minor and short-lived. Then, the participation rate for this age group plunged to a very low level of 31 percent in mid-2007. As a result, disproportions between labour supply and employment among the over-55-year-olds in Poland and both the EU15 and other countries in our region, which are largely responsible for the Poland's employment gap, have not been mitigated even during the period of dynamic growth of labour demand and employment in Poland. Although the number of employed in pre-retirement aged has risen, this increase has been smaller than in all other age groups and it has mainly been due to increase of population aged 55-64 rather than higher employment rate (see Chart I.4). Hence, the window of opportunity for improving the labour supply of older people have largely been wasted in the last two/three years.

**Chart I.7.**

**Decomposition of sources of labour supply changes – changes in the number of economically active people by age resulting from demographic factors and changes in participation (in thousands of unemployed) in the following periods: I q. 2003 – II q. 2005 (left graph) and II q. 2005 – II q. 2007 (right graph)**



Remarks: This decomposition is based on quarterly changes in the number of unemployed people aged 15-64, resulting from demographic factors as well as changes in participation and employment rates (in thousands of unemployed) in 2003-2007 (until the second quarter) – factors which decrease the unemployment rate are below the OX axis and those which increase it – above the OX axis.

Source: Own calculations based on BAEL data adjusted for seasonal fluctuations and methodological changes.

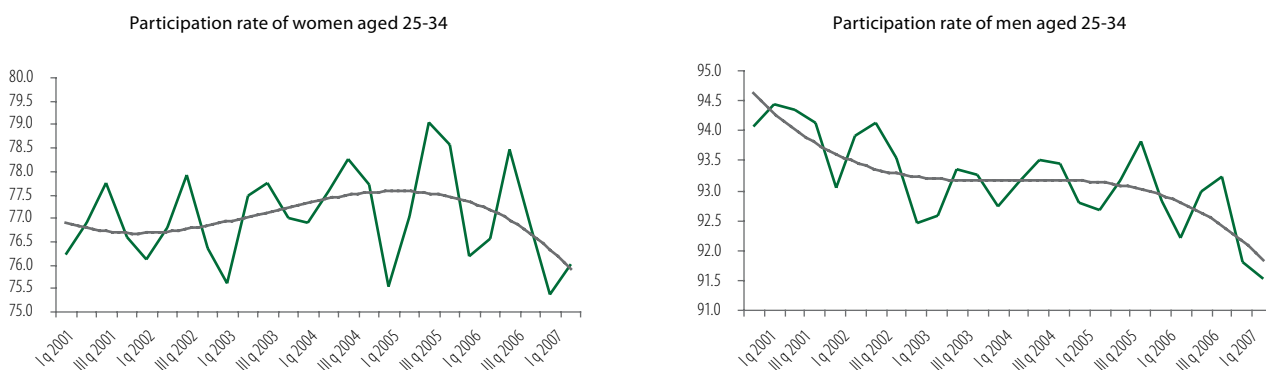
In contrast to the decreasing participation of individuals in pre-retirement age, decreasing, as from mid-2004, participation among the prime-age population is not a typical characteristic of the Polish labour market and constitutes a novelty. A drop in labour supply during a period of strongly rising wages (which we discuss in Part III, see Chart III.6) and falling unemployment is difficult to explain without a reference to institutional factors. Such situation should entail stable or possibly increasing labour supply due to the so-called substitution effect, which means that working becomes more attractive than leisure because of higher wages. The opposite effect, i.e. the income effect, which means that as wages rise households can limit labour supply and still be able to maintain a satisfactory level of consumption, is usually weaker. Hence, in general, total labour supply is relatively higher during those phases of business cycle when output growth and real wages are relatively higher (Blundell, MaCurdy, 1999, Bukowski et al., 2006).

It might also be possible that households increase total labour supply when the risk of job loss is perceived as greater, thus protecting themselves against income loss, whereas when the economic situation is favourable, they do the opposite, i.e. when the perception of job stability of one household member is positive, other household members may limit or even give up their labour supply. An alternative explanation for declining labour supply among prime-aged people could be associated with temporary economic migration – it may be expected that it is people who are economically active rather than idle in the domestic labour market that migrate. Moreover, in labour force surveys, especially in BAEL, people who are temporarily absent from households covered by a given survey tend to be classified as inactive because other household members do not declare them as migrants.

The first two of the above hypotheses, which refer to income effects as well as to the diversification of job loss risk, imply that the participation rate of women, who are characterised by higher elasticity of labour supply (Killingsworth, Heckman, 1999), should fall relatively stronger than that of men. Moreover, labour supply should also decline in the case of people whose households are able to generate a sufficient level of income even if only one household member is working.<sup>3</sup> The explanation that makes a reference to migration does not allow for such clear-cut implications (see Ministry of Economy and Labour, 2005).

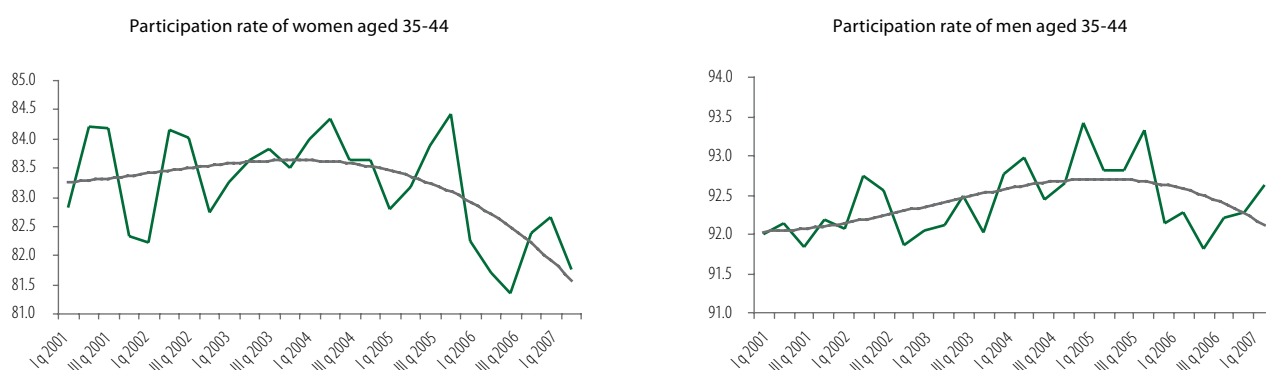
**Chart I.8.**

**Participation in the age group 25-34 by gender in 2001-2007 (until the second quarter)**



**Chart I.9.**

**Participation in the age group 35-44 by gender in 2001-2007 (until the second quarter)**



Source: Own calculations based on BAEL data adjusted for methodological changes.

Charts I.8-I.9 illustrate that, as from the beginning of 2005, participation rates of women and men have been declining to a more or less similar degree in both age groups 25-34 and 35-44. Hence, neither the income effect nor the "diversification" effect seem to have been the key to the decrease in participation among prime-age individuals, whereas emigration could explain some of it. In fact, according to Budnik (2007), based on labour market flows estimations for Poland, which also account for migration, following Poland's accession to the EU, the share of employed among emigrants increased (from 36 to 42 percent), whereas the shares of unemployed and inactive people decreased, from 33 to 30 percent and from 31 to 29 percent respectively. As estimated by Budnik (2007), emigration intensities for working, unemployed and inactive people amounted to 0.5, 0.1 and 0.1 percent respectively. Hence, the escalation of migration translated over-proportionally into the number of economically active people who migrate. Considering that in accordance with the National Census, more than 60 percent of emigrants in 2002 were aged 25-34, it can be stated that migration contributed significantly to lower participation in the domestic labour market. The fact that the participation rate for men aged 25-34 has been declining consistently since 2001 suggests that extended participation in education may also have been of importance.

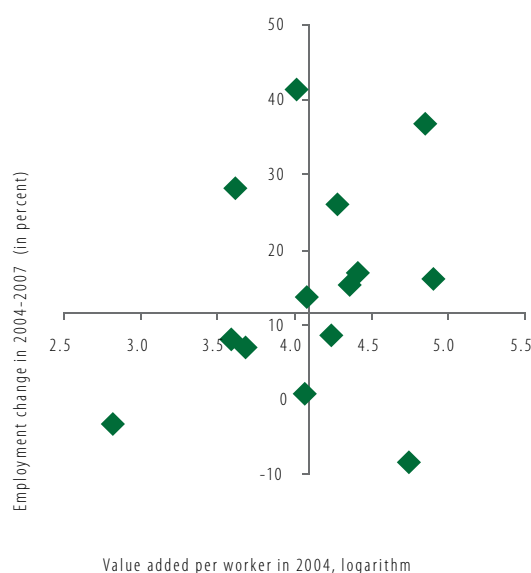
In the period from early 2004 to mid-2007, employment grew in all areas of the economy except for agriculture and electricity, gas and water supply. The employment rate in agriculture, which has been going down since 2001, continued to fall – almost 150,000 less people worked in agriculture in 2006 than in 2005, whereas in the first half of 2007 – employment in agriculture was roughly identical as in the same period of 2006. Based on the above, it is however impossible to assess whether the economic upturn and the increase in food exports have contained the reduction of employment in agriculture or whether this is only a result of a slightly different scale of seasonal variations. Nevertheless, as from the beginning of 2004, the employment in agriculture decreased by more than 3 percent, which meant that the share of this sector in total employment went down to 13 percent.

<sup>3</sup> Empirical tests would be necessary to assess the potency of these effects; however, BAEL data in practice make such tests infeasible.

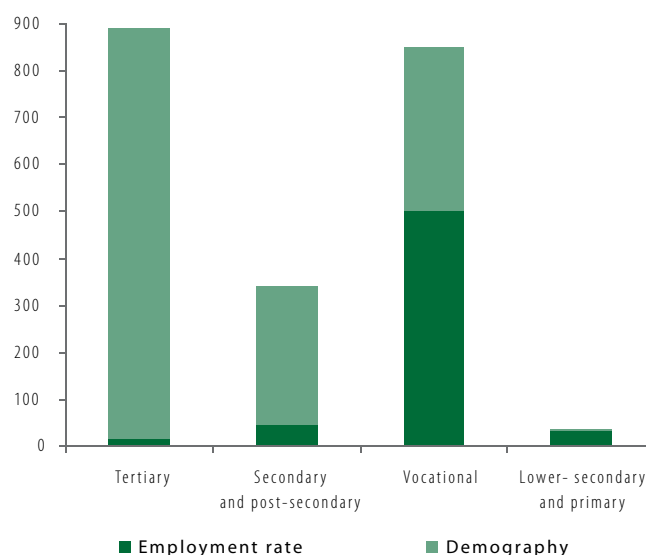
This process, although related to specific structure of Polish agriculture, has been a part of the recent reallocation of production factors in favour of more productive sectors. As demonstrated in Chart I.10, the relative increase in employment was higher in sections which, in 2004, were characterised by above-average added value per worker. This applies in particular to financial intermediation, real estate management and so-called other services, as well as to industry, though to a slightly lesser degree. On the other hand, branches with below-average productivity in 2004, such as education, health care, administration, which are generally dominated by the public sector, saw an increase in employment but this increase was clearly lower than in the economy as a whole.<sup>4</sup> The above rule did not apply, however, to construction, trade, hotel and restaurants, which are typically characterised by medium or below-average productivity but which also experienced a clear increase in employment. Indeed, in the last three years, construction recorded the relatively highest employment growth, by more than 40 percent. It was exactly in construction and trade, i.e. sectors where level of activity is closely linked to economic fluctuations, and in industry, where employment picked up as early as in 2003 in reaction to growing exports, (see previous edition, MPiPS, 2006), that the employment grew most – these three sectors accounted for approx. 65 percent of the total employment increase in the period from early 2004 to mid-2007.

**Chart I.10.**

**Percentage increase in employment by PCA section versus productivity of PCA sections in 2004-2007 (second quarters)**

**Chart I.11.**

**Decomposition of changes in employment by education into demographic factors and employment rate changes (in thousands of employed; first two quarters of 2004 vs. first two quarters of 2007)**



Remarks: the horizontal axis represents the added value logarithm by PCA section in 2004; the vertical axis represents percentage changes in employment by PCA section between II quarter of 2004 and II quarter of 2007. Axis intersections represent average values for the economy as a whole.

Source: Own calculations based on BAEL data.

Source: Own calculations based on BAEL and BDR data.

At the same time, there has been a continuing though gradual transformation of the labour supply structure in terms of education. Populous cohorts which had benefited from the education boom entered the labour market so the share of people with higher education in the working age population increased, whereas older cohorts comprised to great extent of workers with primary or vocational education started retiring, which jointly intensified the growth of average nominal quality of human capital in Poland. However, in terms of education, the improvement on labour market was two-dimensional – firstly, the number of people with higher education increased strongly, and secondly, the employment rate among people with vocational education has grown considerably. Therefore, the almost 900,000 increase in the number of employed with higher education between the first half of 2007 and the same period three years earlier, was in more than 4/5 attributable to the rise in the population with higher education level attained, whereas in the group with vocational education level attained an almost equally large employment growth was in 2/3 due to the rising employment rate.

The above phenomena can be directly linked with changes in employment structure within sectors – the systematically developing, high-productivity services and to some extent industry, absorbed the fast-growing labour supply of master's degree holders, whereas the dynamic increase in labour demand in such branches as construction and trade bolstered the probability of finding a job by people with certain – though low – qualifications, thus visibly increasing the share of employed among those with vocational education.

<sup>4</sup> This does not apply to electrical energy, gas and water supply, which provided above-average added value in 2004 but which also experienced declining employment – the fall was minor in absolute terms but it amounted to more than 8 percent in relative terms. Lack of free market in this sector and low elasticity of demand for its output with respect to business cycle make the employment changes in this branch only loosely connected with cyclical developments on the labour market.

## 1.2. Polish labour market of 2007 in international context

The improvement on labour market in Poland, which started in 2003, is only one of many examples or symptoms of the economic upturn in Europe. In 2003-2004, the number of employed grew in all European countries and so did the employment rate, though with some exceptions.<sup>5</sup> In the fifteen "old" EU countries this formed a continuation of an upward trend in employment. The average employment rate in the EU15 has been growing every consecutive year for the past decade, to reached in mid-2007 the level of 67 percent in the working age population. At the same time, labour supply has also been on the rise and in mid-2007 the participation rate in the EU15 reached 72 percent for the age group 15-64. The differences, especially concerning the labour supply, in how the situation evolved in Poland should be attributed to different character of structural and institutional changes implemented in a number of EU15 countries. However, the falling unemployment, which has been a common occurrence in all EU member states since 2004, seems to be of the same nature as in Poland, namely it has been due to the strengthening economic growth which led to increasing labour demand. From this perspective, the situation in the countries which joined the European Union together with Poland in 2004 (NMS9) was similar. As demonstrated in the previous edition of *Employment in Poland* (MPIPS, 2006), as from 2001, the situation in the Polish labour market has been worse than in other countries of the region – in Chapter 2 we assess the importance of particular macroeconomic factors for distinctive evolutions of labour markets in CEE countries. Consequently, these countries entered the phase of cyclical upturn in the world economy with higher participation and employment as well as with lower unemployment than Poland. Moreover, in 2003-2006, it was exactly these countries – the Baltic states and Bulgaria – that saw a higher relative drop in the number of unemployed than Poland and a comparable reduction of the unemployment rate (by approx. 5 percentage points). At the same time, these countries (apart from Lithuania), together with Slovenia, Spain and Ireland, recorded a greater increase in employment than Poland.

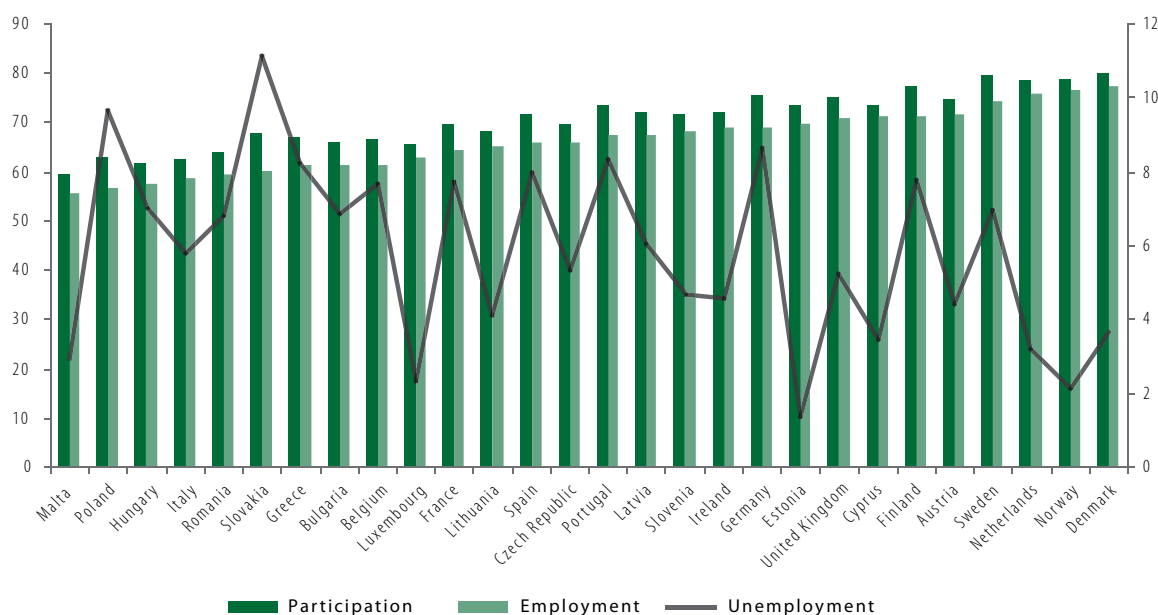
The scope of improvement, which has been taking place in the Polish labour market in the last couple of years, has been considerable and it allowed to achieve employment and unemployment rates that belong to the best ever since the beginning of the transition. However, compared with other European countries, they have elevated the outlook of Polish labour market only marginally. In mid-2007, Poland was no longer the country with the lowest employment rate in Europe but it was only ahead of Malta and Turkey and its employment rate was 10.1 and 6.3 percentage points below the average rates for the EU15 and the NMS9 respectively. The participation rate in the age group 15-64 in Poland was higher only than that in Malta, Turkey, Hungary and Italy, however, the gap between Poland and the EU15 and the NMS9 averages in this respect was 9 and 5 percentage points respectively. Because of a considerable drop in unemployment, which took place in Poland in the last couple of years, in mid-2007, for the first time since 2001, Poland did not rank as the country with the highest unemployment rate among the EU27. However, unemployment was still higher only in Slovakia, where concurrently the rates of employment and participation were better than those observed in Poland. Moreover, average unemployment rates in the NMS9 and the EU15 were practically identical, amounting to less than 7 percent, which is by more than 3 percentage points lower than in Poland. It was exactly the reduction of unemployment in the new member states that contributed most to the decrease in unemployment in the EU as a whole, especially among young people (Martins Ferreira, 2007).<sup>6</sup>

<sup>5</sup> The said exceptions include France, Portugal, the Netherlands, Sweden and Norway, which – especially the latter three, are nevertheless characterised by employment rates that exceed the average rate for the EU15.

<sup>6</sup> The contribution of new member states has also proved essential in limiting the long-term unemployment rate to 45.8 percent in the EU27 in 2007.

**Chart I.12.**

**Participation, employment and unemployment rates among people aged 15-64 in EU countries and Norway in the first half of 2007**



Source: Own calculations based on Eurostat data.

The last three years of increase in employment and decrease in unemployment have partly closed the gap between the Polish labour market and those in the EU15 and the NMS9 – in fact, in the period between mid-2004 and mid-2007, the employment rate in the working age population in Poland grew stronger by respectively 3 and 4 percentage points and the unemployment rate drop was greater by respectively 8.3 and 6.6 percentage points than the average decrease in the NMS9 and the EU15. At the same time, however, all “old” EU member states achieved an increase in participation, a trend that on the average has also been observed – though to a lesser degree, in NMS9, although some of the new member states have experienced falling labour supply. From this perspective, the decrease in participation in Poland highlights the impact of labour supply – low and with a tendency to decrease – on a relatively poor labour market performance, lower employment, output per capita and welfare in Poland, in comparison not only to the economies of EU15, but also of the countries which joined the EU together with Poland in 2004.

**Table I.2.**

**Labour market indicators in Poland, EU15 and NMS9 by age in the first half of 2007**

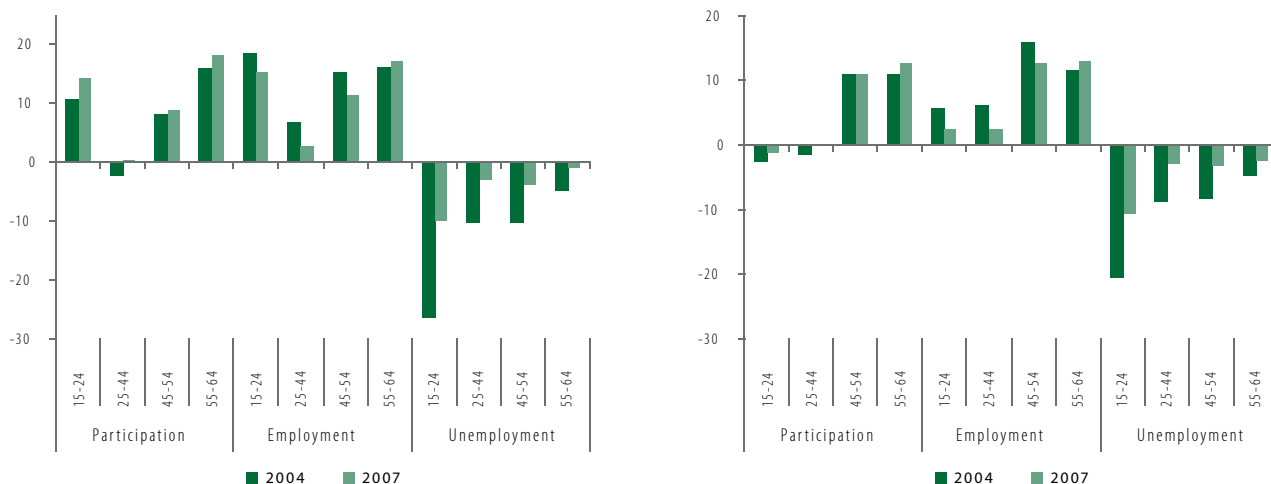
	Participation rate				Employment rate				Unemployment rate			
	15-24	25-44	45-54	55-64	15-24	25-44	45-54	55-64	15-24	25-44	45-54	55-64
UE15	47.0	85.7	82.6	48.9	39.8	79.6	78.1	45.8	15.3	7.1	5.4	6.3
NMS9	31.4	85.2	84.6	43.5	26.8	79.3	79.4	41.4	14.5	7.0	6.2	4.9
Poland	32.6	85.3	73.6	30.8	24.3	76.9	66.7	28.6	25.4	9.9	9.4	7.2

Source: Own calculations based on Eurostat data.

Table I.4 and Chart I.13 indicate that these differences are persistently above all due to lower labour supply of over-50-year-olds as well as of under-25-year-olds, though to a lesser degree. As much as relatively low participation and employment among young people are a common characteristic of all countries in the region, from which Poland stands out with the lowest rates, Poland’s poor labour market indicators for over-45-year-olds are the main reason why the Polish labour market lags behind both the EU15 and the NMS9.

**Chart I.13.**

**Differences in participation, employment and unemployment in Poland compared with the EU15 (left graph) and the NMS9 (right graph) in percentage points for particular rates in 2004-2007 (first two quarters)**

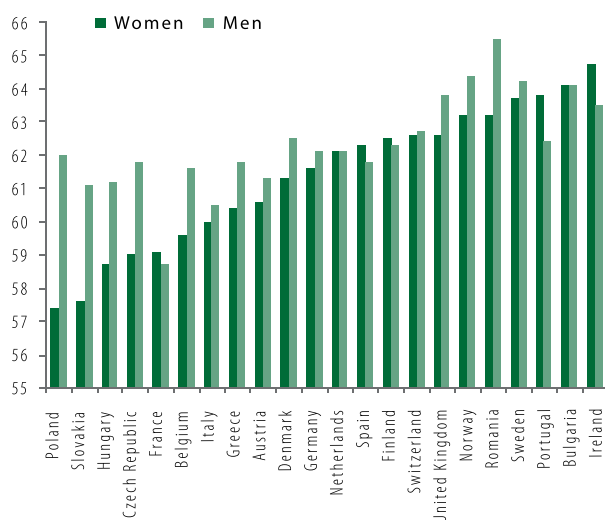


Source: Own calculations based on Eurostat data.

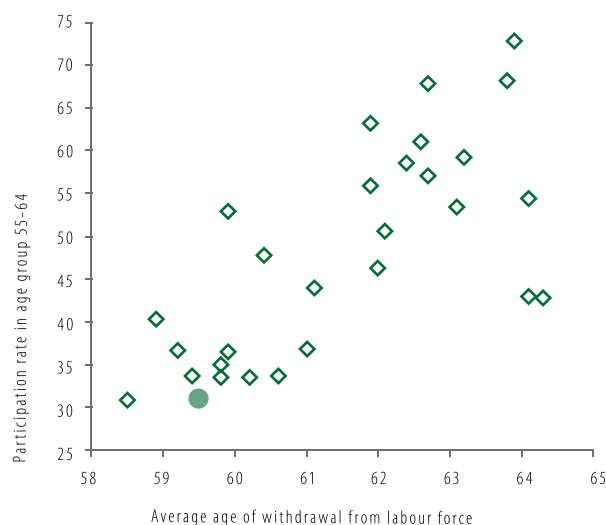
Although in the last two years the gap in terms of employment and unemployment rates among people aged 45-54 has been partly closed, at the same time, the differences in terms of participation have become more acute, because Poland is characterised by an exceptionally early age of withdrawal from the labour force. A considerable drop in labour supply can be observed as early as at the age of 50, whereas in most developed countries people tend to withdraw only after the age of 55 or 60 and in some countries even later. Moreover, this phenomenon concerns men and women alike. In the first half of 2007, participation rates for men aged 45-49 and 50-54 in Poland were only higher than those in Hungary. As for women, their participation in the labour force before the age of 50 is relatively high and more wide-spread than in a number of other EU countries, mainly South European. Nonetheless, a relative fall in the participation of women after the age of 50 in Poland is incomparably greater than that in the EU15. It is also much stronger than in the NMS9. The participation rate for women aged 50-54 in Poland (in mid-2007) was lower by almost 17 percentage points than the corresponding rate for women aged five years less. Among all the EU countries, a similarly sharp fall in labour supply among women reaching the age of 50 can be observed only in Romania and Slovenia. As a result, the participation rate for women aged 50-54 in Poland is only higher than that in such countries as Malta, Greece, Italy, Spain and Romania, which are countries with a completely different household model as well as social and family policies than Poland. Moreover, because of such a significant increase in withdrawals of women from the labour force after the age of 55, it is only in Poland and Malta that less than one in five women aged 55-64 are economically active.

**Chart I.14.**

**Average age of withdrawal from the labour force for women and men in Europe in 2006**

**Chart I.15.**

**Average age of withdrawal from the labour force versus participation among people aged 55-64 in Europe in 2006**



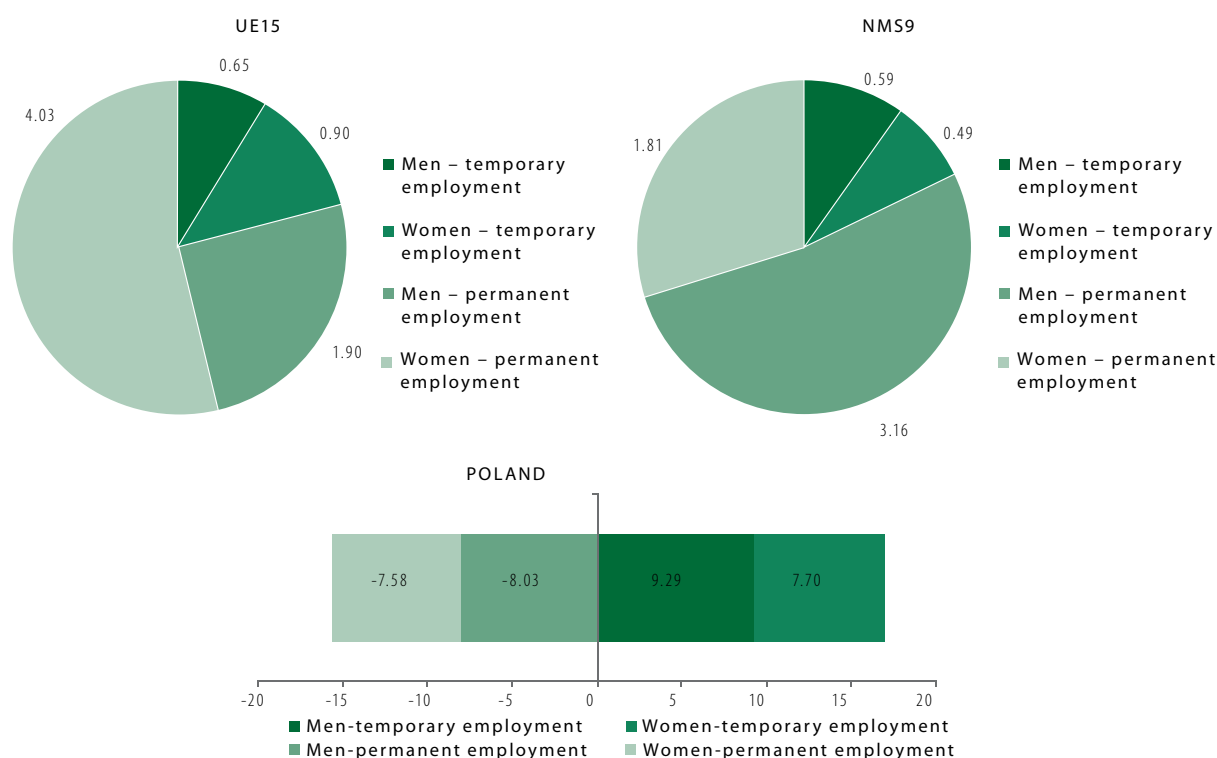
Remarks: The left graph shows all countries for which necessary Eurostat data – disaggregated by gender – is available. Poland is marked on the right graph.

Source: Own calculations based on Eurostat data.

Hence, Poland is a country where relatively many women participate in the labour market at their prime-age but on the other hand, where women withdraw from the labour market earliest (among all European countries) and they clearly do so long before the statutory retirement age, which translates into very low labour supply and employment among people at pre-retirement age. As demonstrated in Chart I.15, longer average period of participation in labour market is commonly accompanied by higher labour supply among older people and thus by a greater effective labour force. In view of increasing participation of older people in all EU27 apart from Poland,<sup>7</sup> falling participation more and more evidently proves that it is the factor, that distinguishes the Polish labour market from most developed countries. The above phenomenon can be directly related to a range of social policy decisions taken in the period 2005-2007 which extended the period of acquiring entitlements to early retirement in accordance with the rules adopted under the so-called old retirement system.

Moreover, the years 2000-2006 brought some changes in the labour market structure in terms of employment forms. The said changes also made Poland stand out from the other European countries. The net employment growth by 7.5 percent in the EU15 and by 6.1 percent in the NMS9 was to large extent attributable to increasing open-ended contracts, which made a contribution of 80 percent. The difference was that in the NMS9 more new jobs have been filled by men (working under fixed-term and open-ended agreements alike) than by women, and the opposite was the case in the EU15. As for Poland, a much smaller relative increase in employment in the period 2000-2006,<sup>8</sup> was accompanied by a net fall in the number of employed under open-ended contracts and an increase in the number of employed under fixed-term agreements. However, in the period 2004-2006, the proportion of contributions made by permanent and fixed-term employment to net employment growth was identical to the above-mentioned proportions in the EU15 and the NMS9.<sup>9</sup> Hence, during the period of rising employment, the Polish labour market behaved similar in terms of the dynamics of creating "permanent" and "temporary" jobs to other European labour markets. Notwithstanding the above, the dynamics with which fixed-term agreements became widespread during the earlier period of poor labour market performance constitutes one of Poland's characteristics. Therefore, in the next Chapter, we analyse the macroeconomic processes which were responsible for the observed evolution of labour markets in our region and in the next Part we provide a detailed account of how fixed-term agreements are used in Poland.

**Chart I.16.**  
**Contribution of open-ended employment and temporary employment by gender to the net employment growth (population 15-64) in the EU15, NMS9 and Poland in 2000-2006 (in percent of total change)**



Remarks: The graphs reflect net contributions of open-ended employment by gender as well as temporary employment by gender to total net employment growth in the EU15, NMS9 and Poland in 2000-2006 (in percentages). NMS9 – countries which joined the European Union in 2004, excluding Poland.

Source: Own calculations based on Eurostat data.

<sup>7</sup> In the period 2000-2006, the participation rate for people aged 55-64 went down only in Poland and Romania, whereas in 2003-2006, only in Poland, Lithuania and Malta.

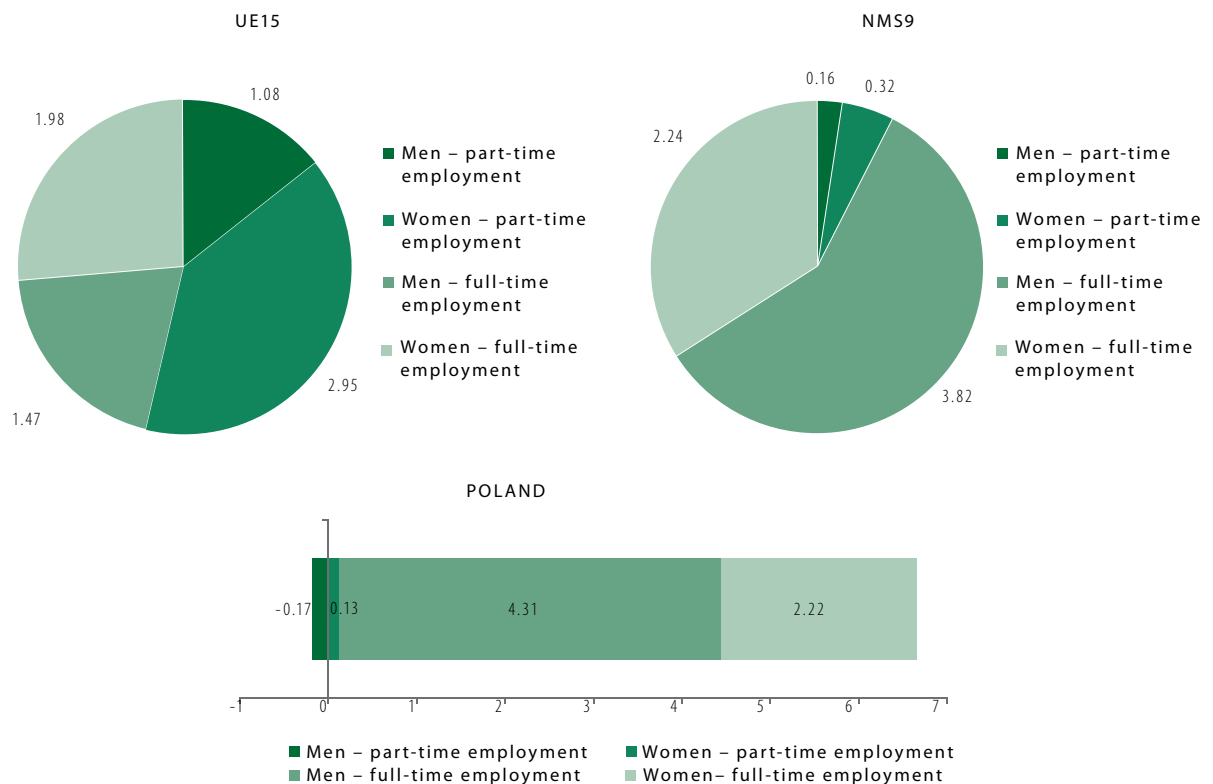
<sup>8</sup> Due to the contracting employment in 1998-2003, its later (and dynamic from 2005 on) upsurge translated to total net employment growth of only 1.4 percent in 2000-2006 (MPIPS, 2006).

<sup>9</sup> The 6.5 percent total employment growth in Poland in 2004-2006 was attributable in substantial degree to the increase in the number of men (3 percent contribution) and women (2.2 percent contribution) working under open-ended agreements, whereas fixed-term employment among men contributed 1.2 percent, and among women -0.1 percent (own calculations).

At the same time, in Poland, similarly to other NMS, part-time work has played a much smaller role than in the EU15. In the EU15, increasing part-time employment of women has made the largest contribution to the total net employment increase in 2000-2006 (see Chart I.17). Taking into consideration the number of men engaging in this form of employment, more than a half of the net number of jobs created in the EU15 in the above period could be attributed to part-time employment. By contrast, in the NMS, part-time jobs made a contribution of only 10 percent to the total net employment growth, and in Poland, the number of people working under such employment form went down marginally.<sup>10</sup>

**Chart I.17.**

**Contribution of full-time and part-time employment by gender to the net employment growth (population 15-64) in the EU15, NMS9 and Poland in 2000-2006 (in percent of total change)**



Remarks: NMS9 – countries which joined the European Union in 2004, excluding Poland.

Source: Own calculations based on Eurostat data.

<sup>10</sup> For Poland, this comparison must take account of the specific agricultural structure and of the high, though declining, share of agriculture in employment, as it is characterised by high use of part-time labour.



## 2. Macroeconomic and institutional causes of unemployment and employment fluctuations in Central Europe

### 2.1. Introduction

One of the most important processes that affecting Central-Eastern European labour markets throughout the period from 1990, when the transition began, to 1 May 2004, a symbolic date marking its end, was a gradual incorporation of post-socialist, initially almost autarchic economies, into the global trade exchange system. The advantages of this process cannot be overestimated as they include, among others, greater diversity and higher quality of consumer goods, easier spread of innovations and consequently increased dynamics of economic growth (see Barro, Sala-i-Martin, 2003). However, at the same time, we should not forget about the unquestionable cost of integration with the world economy, in form of vulnerability to macroeconomic shocks that hit trade partners. As much as autarchic economies are by definition isolated from disturbances in global markets, countries which actively participate in international trade are particularly vulnerable to the consequences of potential slumps and in times of weakening global economic conditions they bear some cost, constituting a temporary “price” for the benefits that these countries reap in the medium and long term from the exchange of goods and transfer of technology.

In the previous editions of *Employment in Poland* (Ministry of Economy and Labour, 2005, Ministry of Labour and Social Policy, 2006) we pointed to the fact that in the NMS8 the above-mentioned cost became particularly apparent after the so-called Russian crisis in 1998. We argued that the coincidence in time of deterioration of the labour market situation in most countries in the region, and a slump in economic growth in Russia causing shrinking of the volume of trade with the latter, could not be accidental. In this edition of the Report, we deepen our analysis using an econometric structural vector error correction model, estimated on a panel of NMS8, or the “SVECM panel” (See Box I.1). This model allows not only the quantified assessment of the impact of external shocks, including the Russian crisis (variables representing the magnitude of impact of the economic situation in Russia and the UE15 on the examined CEE economies are used), on the evolution of unemployment and employment in the region, but also evaluation how this impact was modified by internal disturbances. We focus on shocks causing deviations from the rising trend of labour productivity, on changes in wage levels that occurred independently from these factors (i.e. innovations to the process of real wage formation) and on autonomic (i.e. independent of all other controlled factors) shifts in labour supply and demand. In addition, we consider two dimensions of the so-called *policy mix*, namely real interest rates and primary deficit, which are the measures of the restrictiveness of monetary and fiscal policies respectively.

We present the results derived from the model by comparing the actual evolution of the aggregates under consideration with alternative hypothetical scenarios, in which particular shocks that have been identified are removed. We can thus assess the importance of given type of disturbances for the actual labour market evolution in NMS8 countries between 1996 and 2006.

### Box I.1. Identification of impact of macroeconomic shocks on employment and unemployment using a structural vector error correction model (SVECM)

The model employed here is based on the methodology of structural vector error correction models, SVCEM. Such models are used when analysing dynamic relations between economic variables and they allow for a mutual interactions of all modelled variables. In other words, every variable is determined by all other variables from the same period and all variables – realizations from the previous periods – which is a VAR methodology. Since the variables that we are concerned with, namely labour productivity and real wages, are non-stationary, i.e. they exhibit trends over time, within the model the so-called cointegration relation is estimated. It can be interpreted as a long term „equilibrium“ between variables (see Lütkepohl, 2007). In this particular case it means that in the long term real wages are determined by labour productivity and, what is more, higher employment leads to higher wages. The remaining variables turned out to be irrelevant in this relations, which is line with economic intuition and with the results of other studies of this kind (see Jacobson, Vredin, Warne, 1997; Lütkepohl, Krätzig, 2004).

In order to identify the shocks in the model and interpret the results, in models of such type restriction limiting the impact of particular variables on other variables in the long term and/or at a given time are used. These restrictions stem from economic theory (Blanchard, Quah, 1989; Lütkepohl, Krätzig, 2004) and the ones used here are presented in Table I.3 – „0“ means that a given type of shock does not have any impact on a given variable in the long term, whereas „x“ means that it does not exert any impact at the time when it occurs but with some delay.

Last but not least, due to the fact that the time series available for the NMS are short (the model has been estimated on quarterly data for the period 1996–2006), standard SVECM estimation for individual countries is not viable from the methodological point of view. Hence, the model has been estimated using the panel method with common cointegration relation for all countries and country-specific adjustments to all shocks in the short term. The model also makes account of two exogenous variables, which quantify the impact of external demand fluctuations on the NMS8 economies. For a more detailed description of the methodology of estimation and results see Bukowski, Koloch, Lewandowski (2008).

**Table I.3.**  
**Restrictions identifying the SVECM of the labour markets in the NMS8**

Source of shock:						
Impact on:	Real wages	Labour productivity	Labour demand	Labour supply	Real interest rates	Primary balance
Real wages	0	x	0		0	0
Labour productivity		0	0		x	
Employment rate		0	0		0	x
Unemployment rate				0		0
Real interest rates				0		
Primary balance	0	0	0	0	0	

Remarks: Columns indicate the type of shock and lines – variables influenced by the shock. „0“ means that a given type of shock does not have any impact on a given variable in the long term, whereas „x“ means no impact at the time when a given shock occurs.

## 2.2. Effects of external shocks on the NMS8 labour markets in 1996-2006

We have included two exogenous variables in the model which account in a synthetic way for the impact of economic fluctuations in countries which are the main trade partners of the NMS8, i.e. in Russia plus the Commonwealth of Independent States (CIS) and in the "EU fifteen" (EU15).<sup>11</sup> This impact has been quantified using percentage deviations of output per capita from the long term trend determined using the Hodrick-Prescott filter, where the said deviations have been weighted by the share of exports to a given composite trade partner in GDP of every NMS.

As demonstrated in Charts I.18-I.19, external shocks thus defined, including above all the Russian crisis, have had an important influence on the evolution of unemployment<sup>12</sup> and, to a lesser extent, of employment in CEE countries after 1996. It can be claimed that if there had not been a severe slump in Russia in mid-1998 and consequently if the volume of trade between the NMS and Russia, CIS countries and between themselves had not fallen (see Chart I.20 and Ministry of Labour and Social Policy, 2006), unemployment would have been much lower and employment higher in almost all countries under study, with exception of Slovenia and Hungary. The distinctiveness of these two countries should not come as a surprise because their economic ties with Russia and its neighbouring countries were significantly weaker and their integration with the EU (in the second half of the 1990s) was much greater than that of other NMS. In other words, our model shows that had the Russian crisis not occurred, the increase in unemployment and the decrease in employment after 1999 would have been considerably smaller in some countries (Poland, Slovakia) than they actually were. In fact, in the Baltic states, a gradual fall in unemployment could have been expected as well as (excluding Lithuania) a rise in employment, in accordance with the trends observed in these countries.

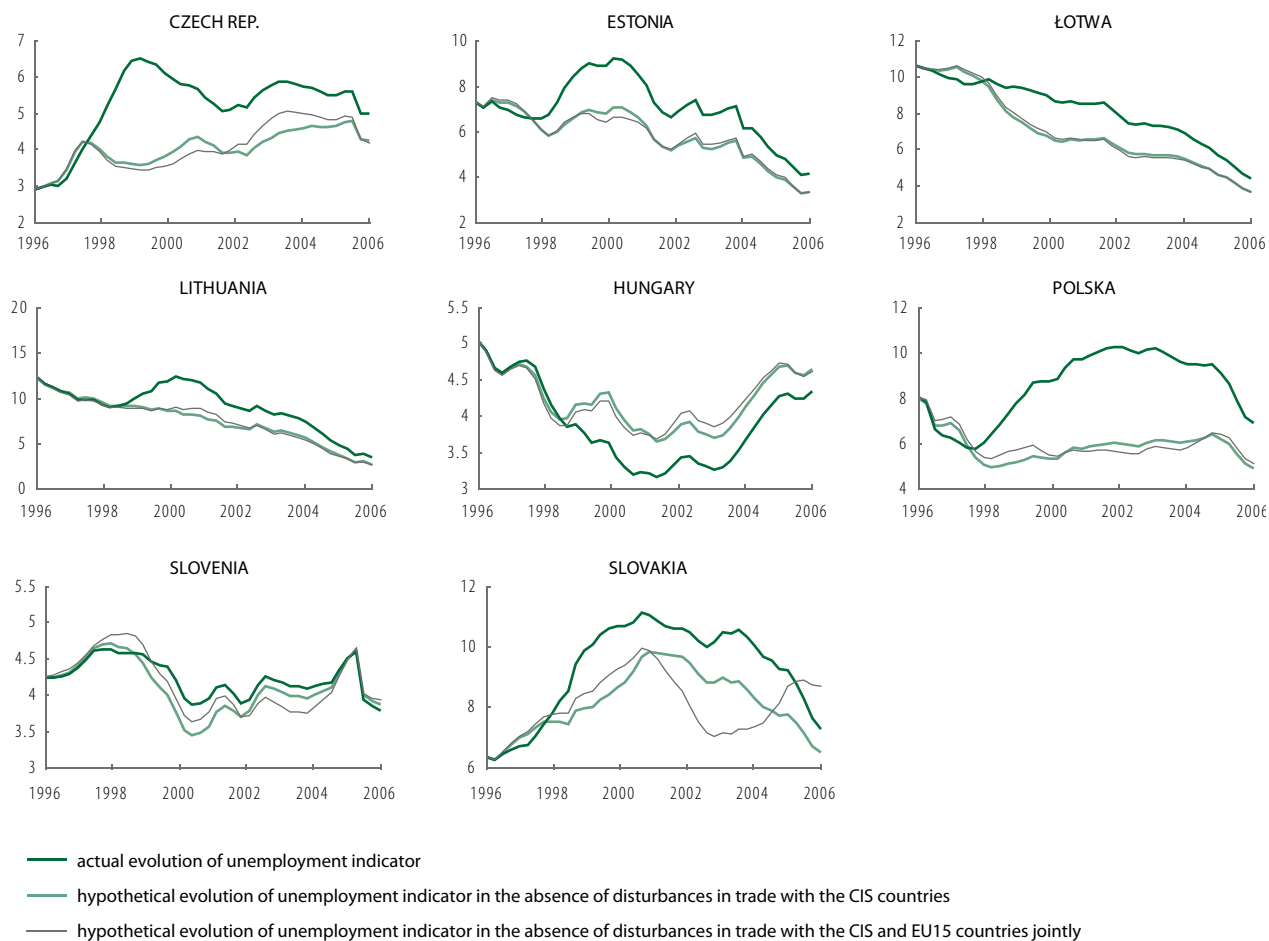
Only in the case of Slovenia, which had virtually no trade links with Russia, the Russian crisis was neutral for the economy. As for the Czech Republic, it seems that the unemployment rise after 1998, which the model mostly attributes to the slump in Russia, is due rather to limitations imposed by data availability – the time series used begin at the time when the Czech Republic was experiencing a domestic financial crisis of 1997, which was entirely independent from the situation in Russia and which had started earlier than the Russian crisis. Therefore, we are dealing here with a coincidence in time of different economic processes, which cannot be identified by the model. Therefore all hypothetical evolutions of the Czech labour market presented in this Chapter, which are conditional on elimination of external disturbances, should be analysed with the above caveat in mind.

It is worth emphasising that although the Russian crisis of 1998 caused a slump in exports from CEE countries to Russia and the CIS countries – which had some serious economic consequences due to relatively considerable export volumes going ther from the Baltic states, Slovakia and Poland (see Chart I.20) – the later revival of economic growth in Russia was far less important for the output dynamics and for the labour market situation in these countries because of the general and lasting decrease in importance of Russia as their trade partner from 2000 on. In view of the above, also the vulnerability to prospective disturbances in the Russian economy and slumps in its consumer imports (for example, following a slow-down in the growth dynamics of Russian oil and gas exports) should not be as prominent in the future as it was in 1998. In fact, according to our model, changes in the dynamics of trade with the CIS countries or output fluctuations in Russia have not contributed significantly to evolution of unemployment and employment in NMS8 after 2000.

<sup>11</sup> In 1996-2006, these economies were the main trade partners of CEE countries under study. In 1996, their combined share in the total volume of exports from the NMS8 exceeded 70 percent in all NMS, apart from the Czech Republic and Slovakia, which were highly engaged in bilateral trade with each other. However, the extent of trade integration of the Czech Republic and Slovakia with the EU15 grew with time. In case of the other NMS8, especially the Baltic states, it could be observed how the trade links within the group of new member states grew in importance, especially so after the accession (see Chart I.20).

<sup>12</sup> It should be noted that on the Charts in this Chapter the unemployment indicator (share of unemployed people in the population aged 15-64) is presented, not the unemployment rate, which is usually used to measure the unemployment. The above is due to the necessity of incorporating in the model such variables that would be comparable, especially mutually coherent measures of employment and unemployment.

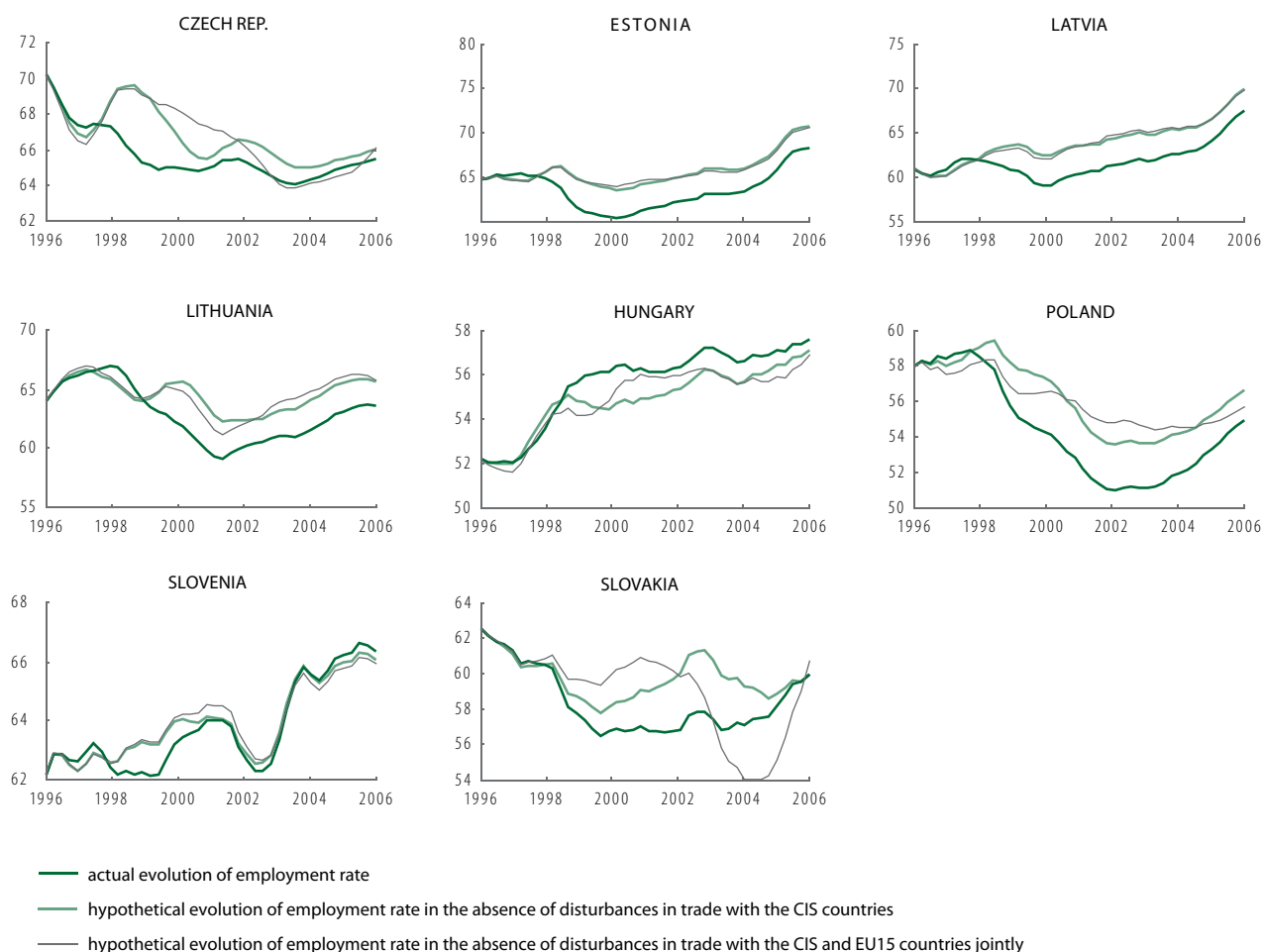
**Chart I.18.**  
**Impact of external demand fluctuations on unemployment in the NMS8 in 1996-2006**



Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

At the same time, the data indicate that trade flows between the NMS8 and the Western European countries, especially the “old” EU member states, have been dominated by a medium-term upward trend and they have been vulnerable to cyclical fluctuations only to a relatively small extent. Consequently, our structural model has only discerned a rather limited significance of economic fluctuations in the EU15 on employment and unemployment in the NMS8. This means that, in line with estimated results, booms and slumps in the EU15 have had only a small impact on employment and unemployment fluctuations in the NMS8 because the trend in the dynamics of exports to the EU15 has largely outweighed these oscillations. Exporting companies have not been reducing employment during downturns in the world economy because they were affected by them only to a limited extent – demand for their goods contracted nearly insignificantly because of the tightening integration between the EU15 and the NMS, which has been reflected in the increasing share of NMS economies in the Western European countries imports and in the generally increasing share of exports in the output of all countries in the region (apart from Latvia) (see Chart I.20), has been balancing out the slowdowns and weaker demand in the EU15. In the previous edition of *Employment in Poland*, we analysed the mechanism behind these process in greater detail and we point to rapid growth in labour productivity, improving the competitiveness of NMS economies, as well as to shifts in their export structure in favour of higher processed goods, as factors facilitating the increase in the volume of exports to the EU15 and to non-European OECD economies, even during periods of slowdown in the world economy.

**Chart I.19.**  
**Impact of external demand fluctuations on employment in the NMS8 in 1996-2006**



Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008)

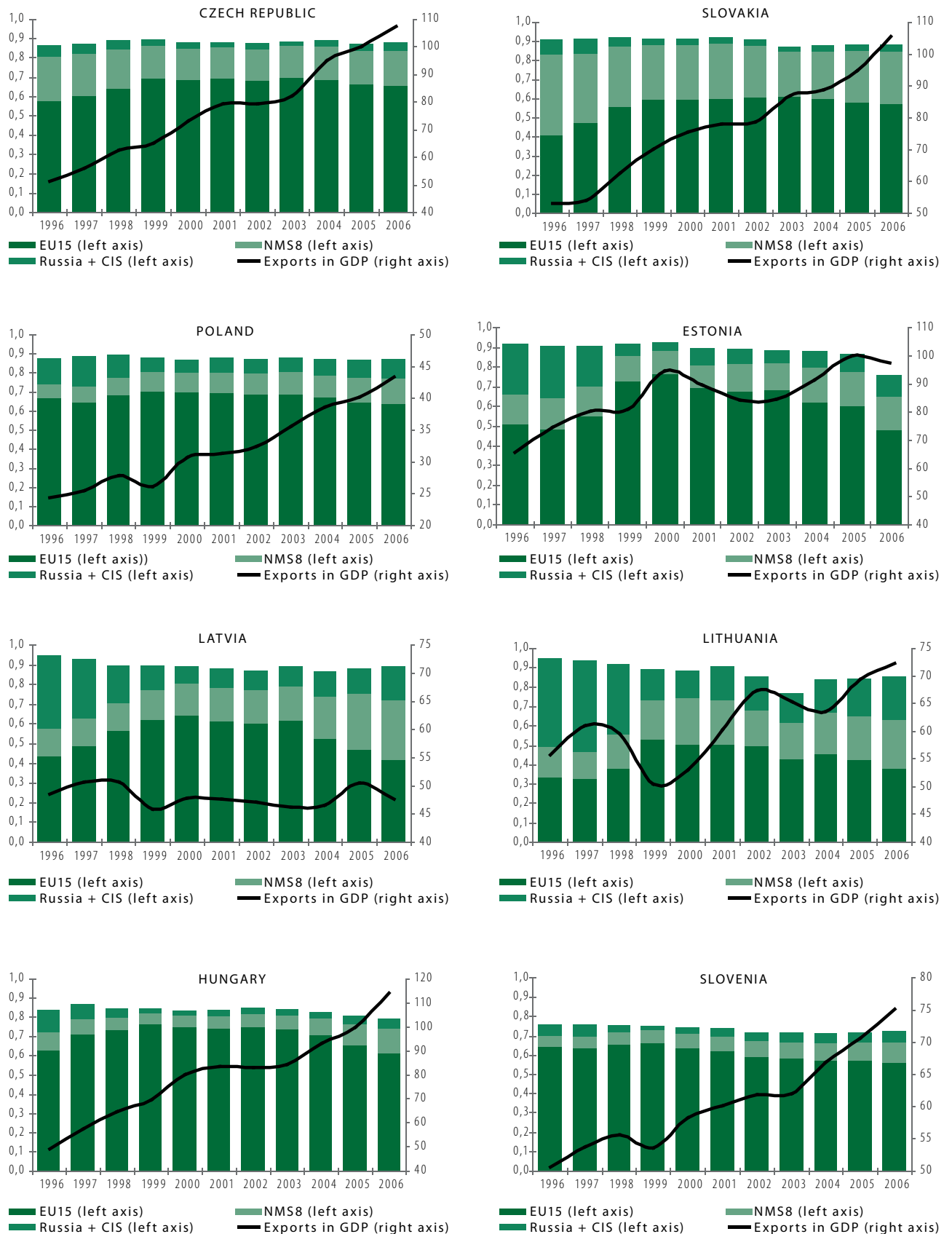
As a result, the estimated impact of demand fluctuations in the EU15 on labour markets in the NMS8 turned out to be rather small.<sup>13</sup> In the case of Poland, the model shows a moderate positive influence of this factor on employment prior to 2001 and after 2004, with a temporary negative effect of the slow-down in world economy in 2002-2003. However, compared with the results of the Russian crisis, as well as of some domestic shocks discussed in the subsequent part of this Chapter, and of medium-term trends determined by the structural and institutional labour market features, the importance of economic fluctuations in the EU15 for the evolution of labour markets in the region in 1996-2006 turns out to be rather moderate.

Lastly, the fact that the model implies Hungary's rather exotic behaviour, consisting in falling unemployment and increasing employment, in the aftermath of the Russian crisis also deserves a comment. The above is a consequence of adopted estimation method which explicitly assumes that the countries in the panel are homogeneous. At the time of the Russian crisis, the Hungarian economy experienced a period of significant decline of unemployment triggered on the one hand by the withdrawals from labour force, and on the other hand by a good economic situation resulting from a domestic demand shock. The panel estimation with the assumption of a homogeneous cointegration relationship in all countries, i.e. with an identical links between wages, productivity, unemployment and employment in the long term, technically correlates that decrease in unemployment in Hungary with the co-occurring Russian crisis and attributes to it also the proportionate increase in employment. It seems that in this particular case we are dealing with an identification error.

<sup>13</sup> A significant positive impact of the economic situation in the EU15 on employment in Slovakia in 2003-2005 constitutes one exceptions from the above, though it could have been expected in view of the dynamic integration of this country within the global trade system. However, the scale of this impact seems to be overestimated by the model.

Chart I.20.

Share of exports in GDP (right axis) and export flows with to EU15, Russia and CIS and other NMS8 in total exports (left axis) of NMS8 countries in 1996-2006



Source: Own calculations based on Eurostat data

## 2.3. Labour supply and demand shocks in the NMS8

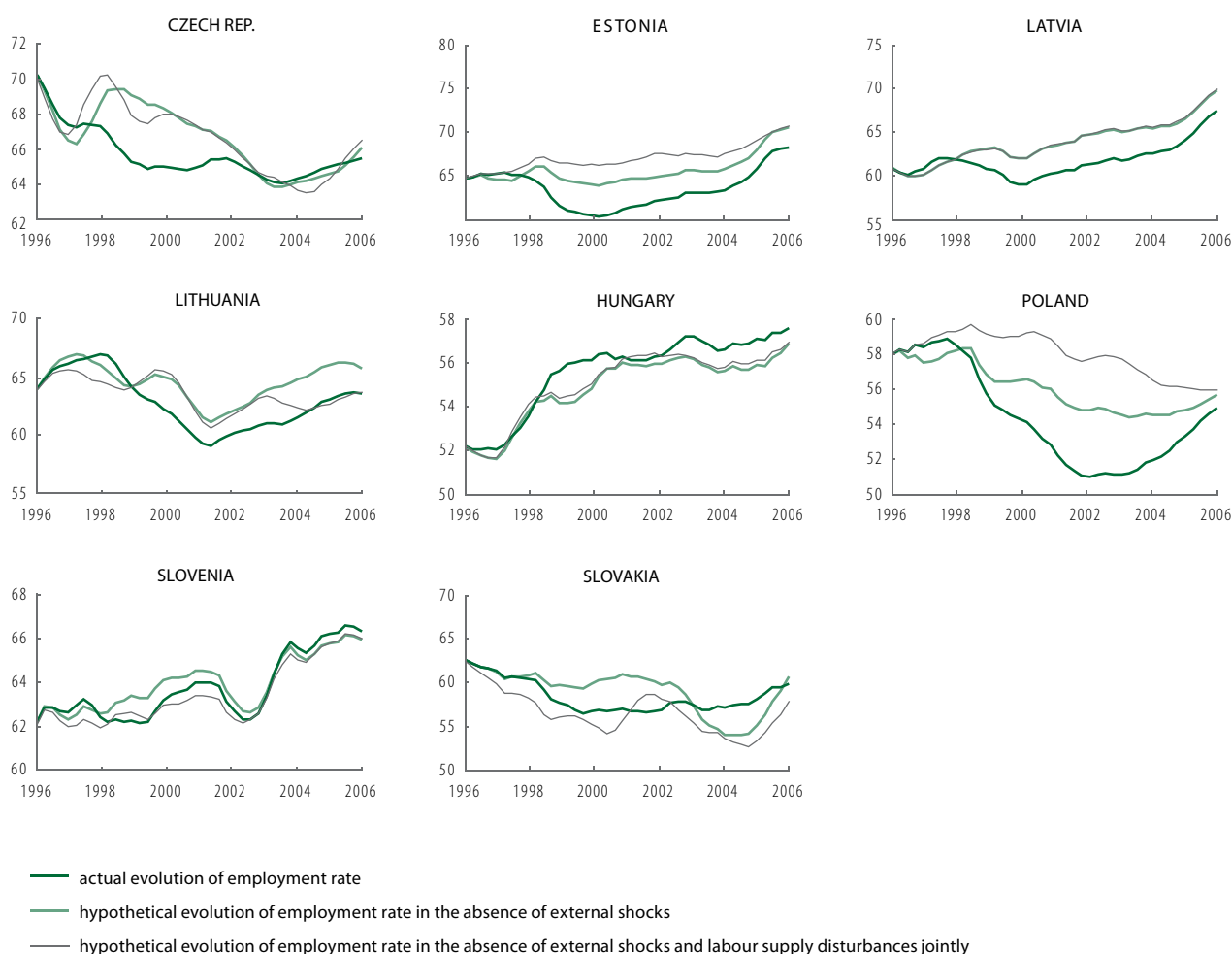
Besides the external disturbances, labour supply shocks and innovations in the wage formation have exerted a crucial influence on evolution of employment and unemployment the CEE countries after 1996. Moreover, in some countries the shifts in labour supply were of greater importance (especially in Estonia, Poland and Slovakia), whereas in other the effects of wage shocks were more prominent. The next sub-chapter is devoted to the latter group of countries, while in this one we focus on labour supply and labour demand shocks, since, in accordance with our estimations, out of all domestic shocks, the shifts in labour supply played the most important role in the evolution of employment and unemployment in Poland.

Supply and demand shocks should be understood as independent (i.e. not resulting from other domestic or external disturbances considered in the model) changes in labour supply and demand. Notwithstanding the above, in Charts I.21-I.22 below, we only present the impact of supply shocks because the model has not identified any significant demand shocks in any of the countries studied. In other words, according to the model, all labour demand fluctuations either were caused by the fluctuations of domestic demand (i.e. they were mainly a reaction to the Russian crisis) or they resulted from deviations from the increasing labour productivity trend or from the occurrence of innovations in the wage formation process. In line with our estimations, in case of NMS in period 1996-2006 we cannot really speak of idiosyncratic, independent of the evolving macroeconomic environment, changes in the propensity of firms to employ workers.

The situation is different in the case of labour supply, the exogenous shifts of which occurred in a number of countries, although generally these shifts have not had a great effect on unemployment and they were almost completely absorbed by the level of employment, labour productivity and wages.

**Chart I.21.**

**Impact of external shocks and labour supply disturbances on employment in the NMS8 (1996-2006)**



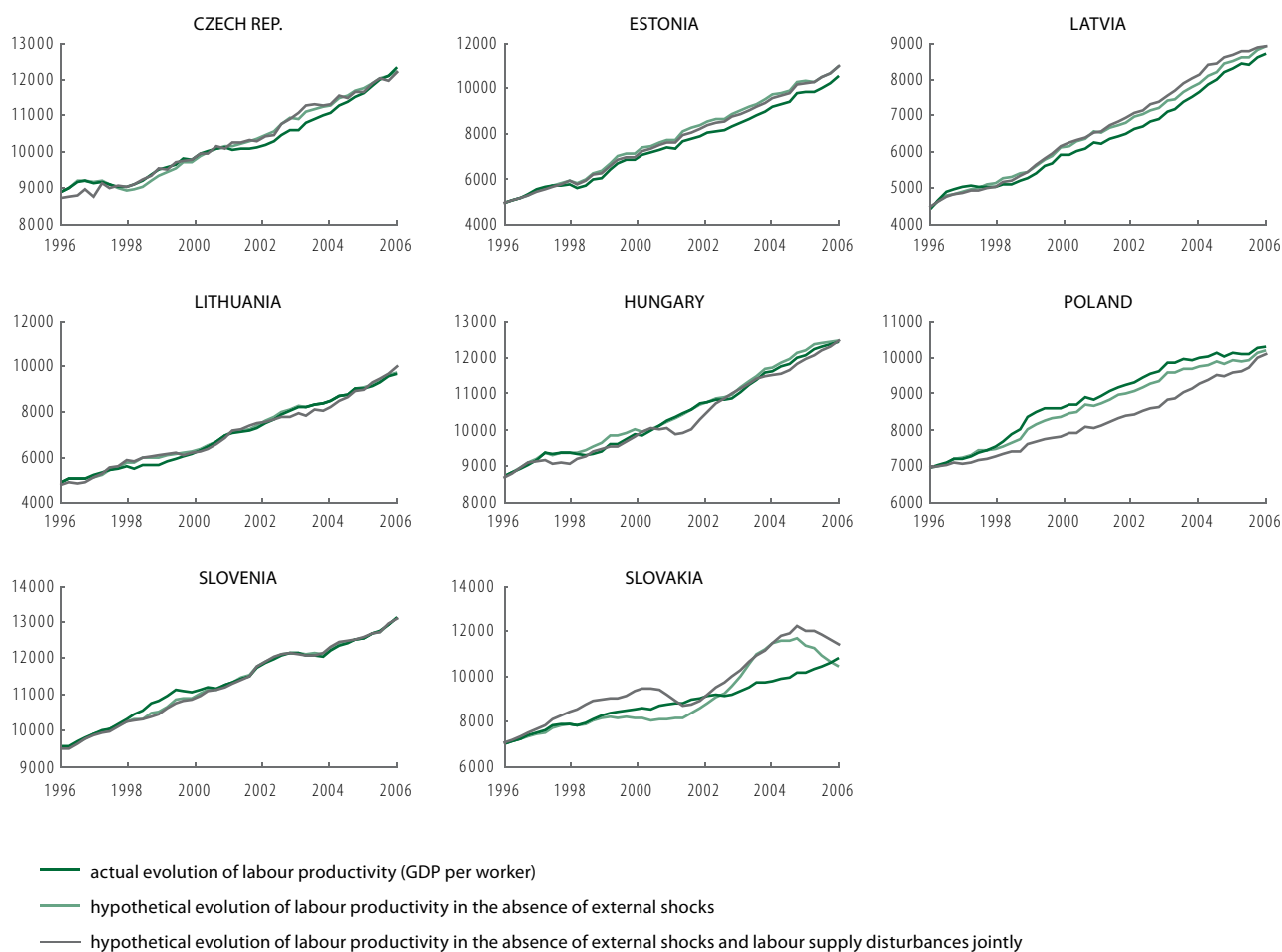
Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

In particular, it can be said that in case of Poland and Estonia, periods of substantial withdrawals from the labour force resulted in the eventual level of employment being lower than it could have been expected based on medium-term trends and other shocks studied. At the same time, the model indicates that in Estonia the fall in labour supply was an immediate reaction to the Russian shock, which can be attributed to the increase in the scale and availability of social transfers during the period of deterioration of the labour market situation, whereas in Poland this negative supply shock had appeared slightly earlier. The above is in line with the argument suggesting that the model of passive labour market policy, which was adopted in Poland in the second half on the 1990s, strongly encouraged withdrawals from the labour force (see Bukowski et al., 2006). Moreover, this decrease in labour supply in Estonia implied a loss in terms of the employment rate of significantly less severe consequences for output per capita and welfare than in Poland, where the employment rate has been lower in the last couple of years by more than 10 percentage points.

It should be emphasised that, as identified by the model, the lack of impact of exogenous shifts in labour supply on unemployment indicates that in some countries, including Poland, the increase in participation would entail certain cost, namely a decrease of productivity (though not in its rate of growth) and, to some extent, of real wages. This effect, however, would be marginal, as illustrated in Chart I.22. Moreover, it would occur because positive supply shocks generally lead to increased participation in the labour market of low- or at the most average-productivity workers, compared of course with those active prior to the impulse.<sup>14</sup> Due to the resulting pressure on reducing real wages, they temporarily become lower, which boosts employment and firms' incentives to increase investment. In the medium- and long term, the trend in real wages follows that in productivity and the effect of such supply shock in terms of employment, output per capita and welfare is positive. It is worth stressing that the results for the NMS indicate that employment generally absorbs developments in labour supply, which in turn suggests that policies encouraging withdrawal from the labour force, which had been introduced in some of the NMS and which had been intended to "protect" employees experiencing difficulties in adapting to evolving market conditions, only entailed lower employment without actually decreasing unemployment to a considerable degree.

**Chart I.22.**

**Impact of external shocks and labour supply disturbances on labour productivity in the NMS8 in 1996-2006**



Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

<sup>14</sup> The model indicates that such positive shocks have occurred in Slovakia and Slovenia. In fact, it also suggests that these shocks lowered the productivity trend. At the same time, however, the model suggests the occurrence of wage shocks in the above countries which had opposite effects on employment than labour supply shocks (see Chart I.24). This can be seen as resulting from the assumption of a homogeneous cointegration relation in the panel. Hence, we do not consider in greater detail such potential supply impulses.



## 2.4. Impact of innovations to the wage formation process in the NMS8 labour markets

By disturbances in the wage determination process we understand such changes in real wages which cannot be attributed to the evolution of productivity or labour demand and supply. Labour markets are imperfectly competitive and the mechanism of wage formation determines the equilibrium on this market as well as its ability to absorb other shocks under discussion (see Cahuc, Zylberberg, 2004). This is so because wages are determined as a result of negotiations between employers and employees and irrespective of the form that these negotiations take, wages are characterised by rigidities which can be divided into nominal and real (see Blanchard, 2005). Therefore, wage shocks can result from real rigidities when real wages do not react to changes in productivity, employment and unemployment in the way suggested by the “equilibrium” relations between these variables. These shocks can also result from exogenous modifications to the wage formation mechanism (for instance, increase/decrease in employees’ bargaining strength) or to wage claims (for instance, as a result of increasing/decreasing income available from other sources than work, such as unemployment benefits). Therefore, this type of shocks are of key importance for the labour market – it is exactly to innovations in the wage determination process that Jacobson, Vredin, Warne (1997)<sup>15</sup> attribute the role of determinants of employment and unemployment levels in the long term.

The SVECM model indicates that in a number of NMS unemployment would have been lower and employment higher, if real wages had been growing at a slightly slower pace throughout the analysed period. This gap is particularly wide in the case of Slovakia, where it is responsible in most part for the increase in unemployment and decrease in employment after the Russian shock. It can be believed however, that we are dealing with an excessive identification of a wage shock in Slovakia, caused by the fact that the dynamics of real wages in this country evolved differently than in other countries in the region – it followed to a greater degree certain discretionary government decisions (see Box I.2).<sup>16</sup>

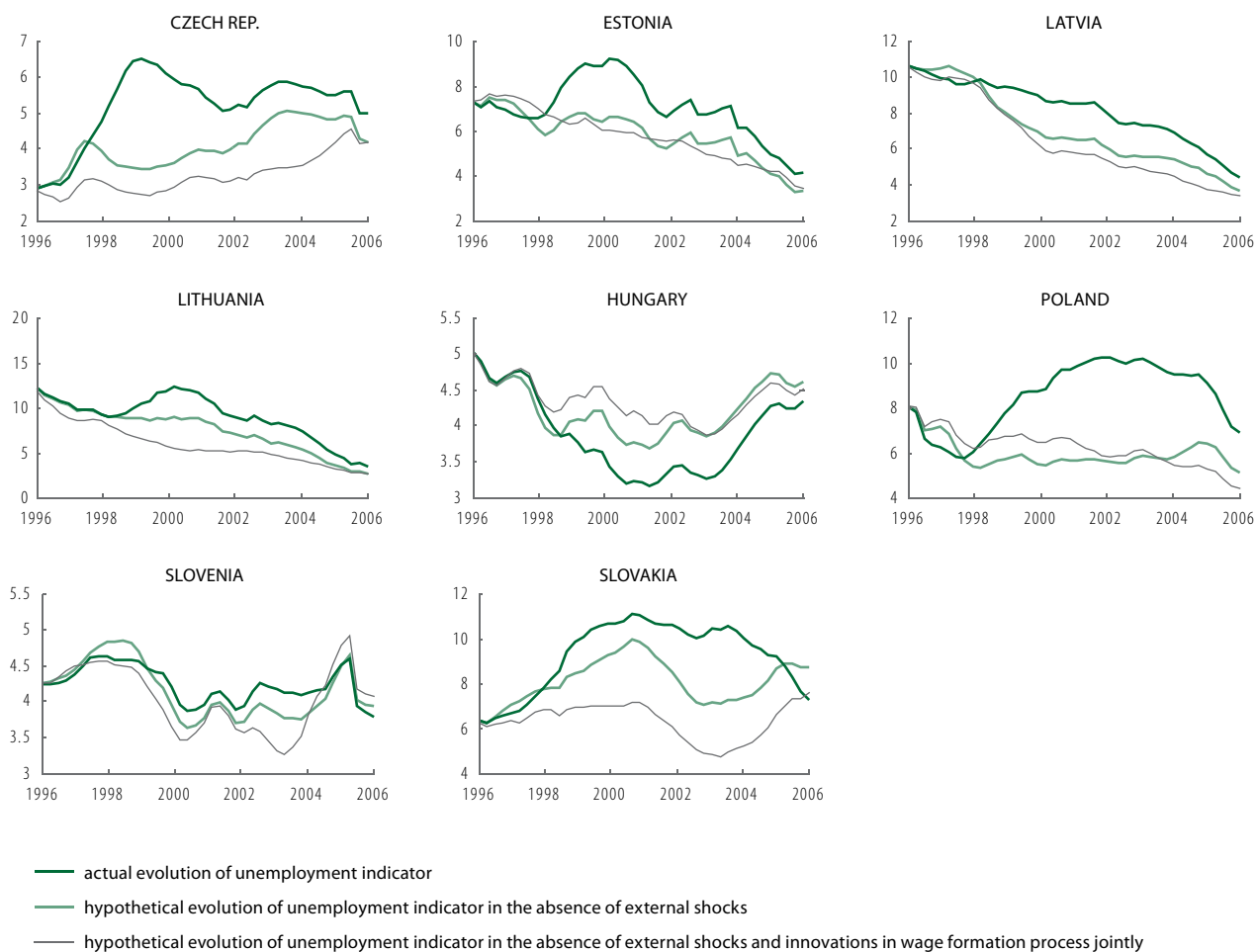
In the Czech Republic wages had a significant effect on the increase, or rather persistence, of unemployment. This was so because both in 1997, after the financial crisis, and in 2002-2004, the dynamics of real wages growth in this country clearly exceeded the increase in productivity, thus contributing to the inertia of consequences of negative disturbances in the labour market, which preceded the above two episodes of “excessive” wage dynamics.

As for the Baltic states, which were also subject to a severe external disturbance, namely the Russian crisis, it was only in Lithuania that wages had a significant impact of the level of unemployment or, more precisely, on its inertia during about ten quarters after the Russian crisis. In Estonia, wage shocks played practically no role and in the case of Latvia it can be assumed that – in accordance with the estimation results – after the absorption of the immediate effects of the Russian shock in the labour market, the high wage dynamics slowed down further reduction of the unemployment by approx. 1 percentage point of unemployment indicator each year, which, however, did not mean that the downward trend in unemployment was halted.

Compared with the above, Poland appears to be a country where the evolution of real wages lowered unemployment and bolstered employment throughout the period 1996-2002/2003 (see Charts I.23-I.24), whereas afterwards this effect was reversed. This was largely so because the model indicates a slower, i.e. employment-enhancing, dynamics in real wages at the beginning of the period analyzed, the result of which was that when the Russian shock occurred and unemployment went up, the relationship between productivity and real wages was still generally “favourable”, i.e. they enabled a slightly higher level of employment and lower of unemployment than those which could have been expected had wages earlier not deviated (downward) from their relationship with productivity. Hence, it seems that directly after the occurrence of the Russian shock, the evolution of wages did not intensify its effects.

<sup>15</sup> Jacobson, Vredin, Warne (1997) use a model constructed in a similar way to the model described in this Report but estimate it for particular Scandinavian countries.

<sup>16</sup> Because of “excessive identification”, the model also indicates the occurrence of positive supply shocks in Slovakia, which somewhat “counterbalance” the positive impact of wage determination disturbances on unemployment. Therefore, it seems that this particular result should be interpreted with caution, although, as described in Box I.2, an episode of “excessive” real wage increase in Slovakia can be indicated with a degree of certainty. However, on the other hand, a positive labour supply impulse could have possibly occurred in the last couple of years, in the course of which Slovakia saw a gradual reduction of taxes and a marginal decrease in social transfers (see MPIPS, 2006).

**Chart I.23.****Impact of external shocks and innovations in wage formation process on unemployment in the NMS8 in 1996-2006**

Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

It is worth noting, however, that the model suggests the occurrence of positive, on average, wage shocks in Poland as from 2001. The extraction of the Russian shock (or, more precisely, of the impact of foreign trade disturbances) implies a virtually stable development of the hypothetical unemployment indicator in 1998-2003, whereas if disturbances in the wage determination process are also excluded, the above-mentioned "favourable" impact of the real wage determination process on unemployment in Poland disappears as from 2001 (see Chart I.23). During the period 2000-2002, the dynamics of total factor productivity growth in Poland went down (see MPiPS, 2006), which produced pressures to reduce the pace of wage growth. Even though the real wage dynamics was moderate at that time, it can be assumed that, in view of a severe slow-down in economic growth and drop in firms' profitability, the curbing of the increase in labour costs was not deep enough to prevent (further) dismissals of low-productivity workers. In other words, the model indicates that a more flexible response of wages in Poland to the economic slow-down, which occurred in 2001 after a several-quarter long increase in unemployment and decrease in employment, could have prevented such a considerable increase in unemployment as we have actually observed.

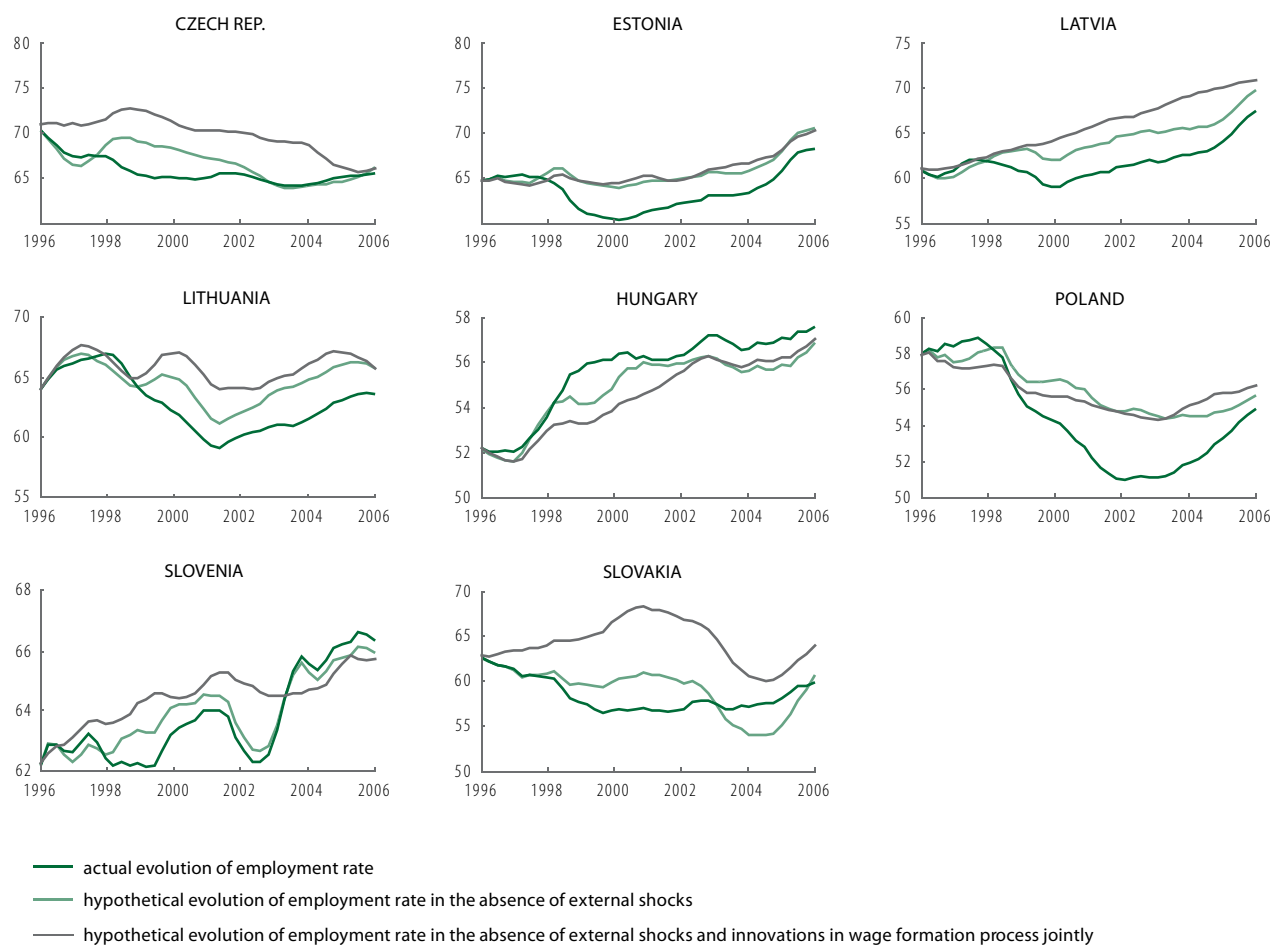
Moreover, the persistence of "excessive" pressure on wages in Poland, as identified by the model, means that, compared with the earlier episode of employment growth in 1996-1998, after 2004 a reverse impulse from real wages followed. This is due to the high dynamics of real wages along decreasing, especially in the last period, pace of productivity growth (see MPiPS, 2006), which according to the model, generally restrains the progress in unemployment decrease. It can be said that, assuming hypothetical absence of external disturbances combined with perfect wage flexibility, the unemployment indicator in Poland would have reached in 2007 levels comparable to those in the Baltic states (see Chart I.23). At the same time, the employment gap would have persisted (see Chart I.24), which accentuates the importance of negative supply shocks which took place in the Polish labour market and which caused the shrinking of the effective labour force.

### Box I.2. Wage shocks in Slovakia

The evolution of real wages in Slovakia was greatly affected by government policy which was closely tied to the political cycle. The year 2002 was an election year and by freezing regulated prices, which played an important role for the costs of living of the households with average and low incomes, dynamics of price increases was lowered to 3-4 percent in a year, i.e. several percentage points less than in other countries in the region at the time. Concurrently, an increase in wages in the public sector was introduced, which translated into high growth of average real wages. However, the year after saw a "counter-reaction" to the above process – the price dynamics went up considerably after the rises in administered prices, whereas nominal wages in the public sector hardly grew, which caused a drop in average real wages. Because of such substantial fluctuations in real wages, the importance of wage shocks in Slovakia was found greater than in other NMS.

**Chart I.24.**

**Impact of external shocks and disturbances in the wage formation process on employment in the NMS8 in 1996-2006**



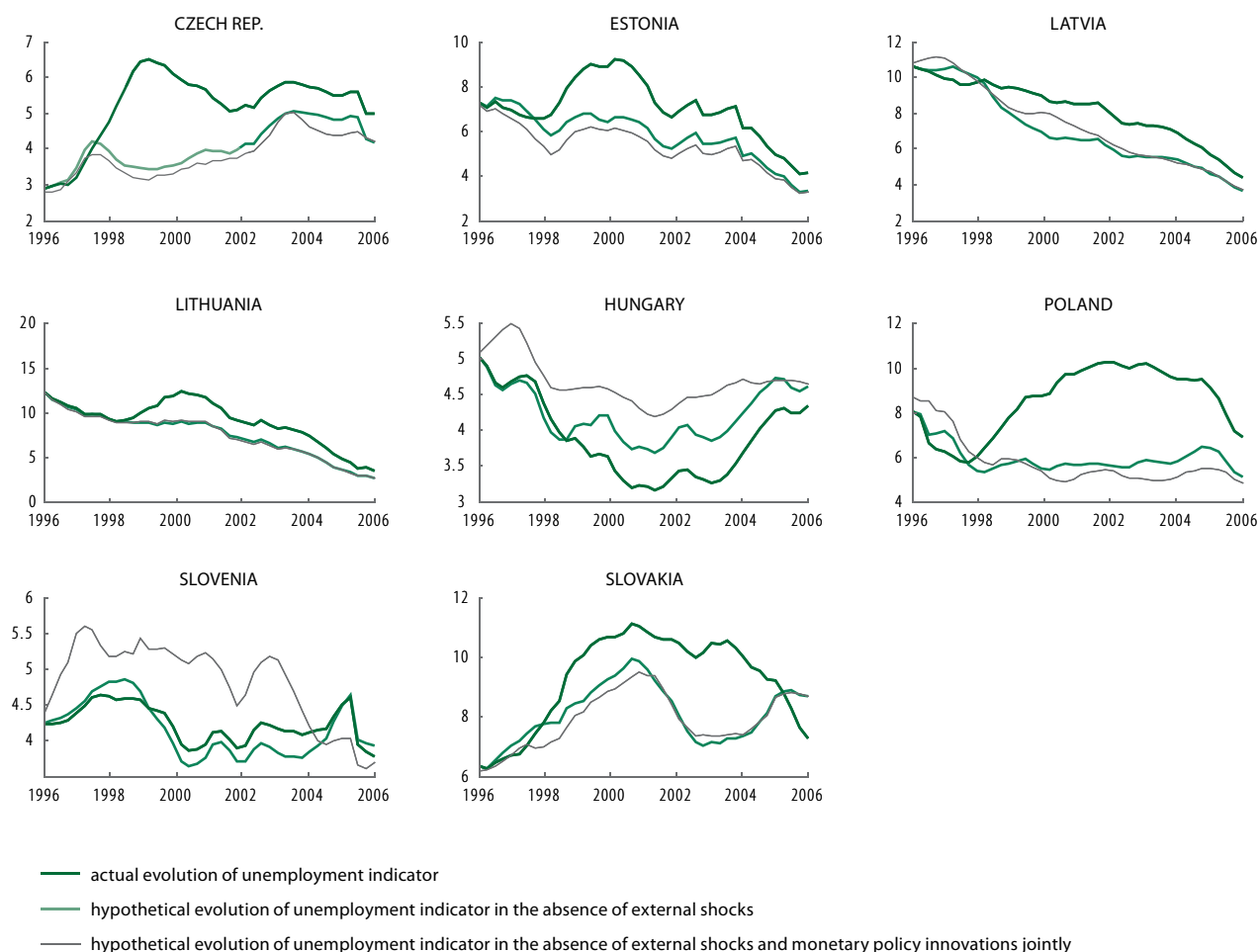
Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

## 2.5. Macroeconomic policy vs. unemployment and employment in the NMS8

The last category of factors which we analyse within the model and which could potentially modify the situation on the NMS' labour markets encompasses monetary and fiscal shocks. Because the importance of the latter turned out to be marginal, in this Sub-chapter we focus on monetary policy. In some countries the model identifies episodes, lasting a couple of quarters, of monetary tightening via increased real interest rates.<sup>17</sup> In all cases these shocks affected mostly unemployment and to a much lesser degree – employment. Therefore we present only the consequences of monetary shocks for the evolution of unemployment in the analyzed countries.<sup>18</sup>

<sup>17</sup> According to the methodology used, a monetary shock is a change in the interest rate independent of the behaviour of, i.e. not in reaction to, other macroeconomic variables used in the model to disturbances.

<sup>18</sup> The model suggests that the monetary policy conducted in Slovenia was reducing unemployment, especially towards the end of the 1990s. Although this effect was marginal and it amounted to about 1 percentage point of the unemployment indicator, it is worth a comment. At that time, Slovenia applied restrictions on capital flows and maintained much lower interest rates than other NMS. Hence, the model estimated on a panel of countries imposes on Slovenia correlations between interest rates and other variables which reflect the "average" relations in the NMS8, of which most conducted their monetary policy in different institutional surroundings. Hence, the artefact visible in Chart I.25.

**Chart I.25.****Impact of external shocks and monetary policy innovations on unemployment in the NMS8 in 1996-2006**

Source: Own calculations based on Bukowski, Koloch, Lewandowski (2008).

The tightening of monetary policy after the financial crisis in the Czech Republic has contributed slightly to higher unemployment in the Czech Republic and Slovakia. However, in the Czech Republic, this effect lasted longer than in Slovakia, where, according to the model, as from 2001 the monetary policy has been neutral for the labour market. It seems, however, that the above reflects a considerable inertia of shocks in the Czech labour market, visible in case of other disturbances as well.

Concerning Poland, the model indicates an episode of restrictive policy in 2001, when the Monetary Policy Council considerably increased the central bank interest rates in response to (as emphasised by Ministry of Labour and Social Policy, 2006) a supply shock which had been identified by the National Bank of Poland as a nominal shock. According to the SVECM model, this decision had a significant impact, though moderate in scale, on the level of unemployment in 2001-2002. In fact, had this tightening not occurred, the unemployment indicator would have been lower by approx. 1 percentage point at the depth of the economic slowdown of 2001-2002. Moreover, an analogous impact could be observed in the case of the tightening of the monetary policy in 2004 in reaction to the transitory increase in the dynamics of prices connected with EU accession. Apart from Poland, only the monetary authorities in the Czech Republic also opted then for such a response, which in line with our results, restrained the the reduction of the unemployment which was falling due to other macroeconomic factors.

Lastly, for the Baltic states, which did not run an autonomous monetary policy because of the fixed exchange rate or currency board regime, the model indicates a marginal importance of shocks, which, in this case, should rather be referred to as "real interest rate disturbances", for the evolution of the labour market. Moreover, the commonly occurring, particularly prior to 2003, disinflationary processes and the increasing credibility of the NMS economies in the global financial market brought a medium-term downward trend, also in real terms, for central bank reference rates and market interest rates alike. As a result, the ability of the model to identify monetary shocks at the beginning of the discussed period, when nominal interest rates and price dynamics were generally noticeably higher than in the current decade, is subject to considerable uncertainty. Hence, also attempts to analyse the actual role of monetary policy in Hungary are rendered difficult because of the strong impulse which occurred right at the beginning of the sample period and which dominated the later innovations.

## Summary

During the last four years, Polish economy managed to completely reverse the unemployment increase and employment fall, which accumulated during the period 1999-2002. A similar situation could also be observed in Slovakia, which, out of all Central-Eastern European countries, is the most similar one to Poland in terms of labour market developments, cause at the turn of the decades, it also experienced a sharp increase in unemployment, which proved to be greater and longer-lasting than in other NMS.

Moreover, a rapid growth in the number of employed has been the key factor behind the falling unemployment in Poland. The said growth concerned all the age groups that are normally distinguished in labour market analyses, although it was the most dynamic among people under 45 years of age, who were also first to benefit from rising labour demand. With some delay, probably as the reservoir of prime-age and younger workers was becoming exhausted, firms reached out for workers from older age-groups, whose employment rates also recorded a clear increase with time. Flourishing job creation in private sector companies spread this upward trend in employment over all sections of the economy apart from agriculture and energy supply. It gained the highest momentum in sectors with strongly pro-cyclical activity but also in high-productivity services and industries. As a result of the above it was possible to integrate into the labour market the ever-growing population of young people who had benefited from the educational boom. On the other hand, the said labour demand increase also translated into a strong growth of employment among people with practical, vocational skills.

These developments reflect the cyclical nature of the upturn on the Polish labour market. In fact, this economic expansion and labour market improvement concerned simultaneously most European countries. It is by all means positive that in the last three years Poland managed to reduce the gap with respect to the EU15 and the NMS9 by 3 and 4 percentage points respectively in employment, and by 8.3 and 6.6 percentage points in unemployment. Nevertheless, the above developments have improved Poland's position vis-à-vis other EU countries only moderately. This is mostly due to the fact that for a number of years Poland has stood out from other European countries as a country with labour market characterised by consistently shrinking participation. The recent years have brought an increase in labour supply in all EU15, whereas in Poland, the earlier, negative withdrawal trends continued. The above distinguishes Poland not only from the old but also from the new EU member states and the importance of the slight drop in labour supply of prime-age workers in Poland, which can be associated with temporary economic migration, is marginal compared with the continuing decrease of labour supply among older people.

The presented decomposition of changes in employment and unemployment that occurred in the NMS in 1996-2006 into contributions of exogenous and endogenous structural shocks shows that although in the past the NMS labour markets were greatly influenced by fluctuations in foreign trade – the Russian crisis played a foremost role – presently the impact of such disturbances is rather limited. Lower vulnerability to the negative effects of the economic downturn of a specific trade partner results above all from the diversification of exports and from channelling its flows into the Western Europe. The extent of cyclical fluctuations in the EU15 and the risk of idiosyncratic shocks affecting their economies, which could potentially have serious consequences for the NMS, is smaller than in the case of Russia and the CIS countries.

Concerning internal shocks, labour supply disturbances and innovations in the real wage formation process were found to be of key importance for the evolution of unemployment and employment in NMS. In 2002, when employment reached the lowest level in nearly last twenty years, negative labour supply shocks, in the form of withdrawals initiated in Poland during the period of growing employment in late 1990s, made an almost identical contribution to the difference between the actual employment rate and its hypothetical evolution in the absence of this type of shocks, as external disturbances did. Moreover, their consequences are still visible. Although in the immediate aftermath of the Russian shock, wage rigidities did not probably occur in Poland on the scale observed in the Czech Republic and Slovakia, where higher wages of the employed had their price of longer-lasting unemployment of the jobless and difficulties in absorbing the initial macroeconomic shock, we can talk of some sort of "excessive" pressure on real wages in Poland after 2001.

The observations that as from 2004 increasing employment and decreasing unemployment are accompanied:

- by a stable or even falling labour supply, which we identify in the model as a negative labour supply shock;
  - and at the same time, by diminishing productivity growth dynamics and by a positive real wage shock;
- indicate that the Polish labour market suffers from labour supply restraints which entail low overall participation as well as relatively limited resources of high-productivity employees with skills matching the requirements on the demand side. In Part II, we present observations, which are consistent with this conjecture, concerning the transformation of the Polish labour market in terms of employment forms and contracts prevailing.

Lastly, labour markets can also be affected by monetary policies, especially during periods of economic downturns. As demonstrated herein, the 2001 episode of policy tightening in Poland led to an additional increase in unemployment, which went beyond the level induced by the Russian crisis and by the cyclical economic slowdown of that period.

## Part Adaptability to economic changes

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## Introduction

The notion of flexibility is one of the most frequently discussed in labour markets issues, it is often studied in academic research and referred to in public debate. The topic closely related to flexibility, although not the same, is adaptability. Flexible labour markets are often considered as markets where the burden of regulation is not too onerous and/or regulations are not very restrictive. From the economic point of view, labour market flexibility is however a much broader issue and labour law stringency as well as possibilities of use of flexible forms of employment (FFE) constitute important but not sole factors determining the degree of labour market flexibility. This is so because market flexibility is the ability of a given market – whether it is a labour, capital or product market – to reach optimal equilibrium. The latter term should be understood as a Pareto optimal equilibrium, i.e. a situation when a departure from such equilibrium implies a welfare loss of at least one of the market exchange participants. Hence, within flexible markets, shocks are absorbed relatively quickly and deviations from the equilibrium are negligible.

Market adaptability, understood as the ability of employed and unemployed as well as of companies to adjust to the alternating market conditions, is also related to macroeconomic shocks. However, adaptability has yet another important dimension, because the challenges encountered by individuals in the labour market differ at various stages of their lives and professional careers. Especially, the importance of the latter for the allocation of time between market work and family duties tends to evolve with age. Education and professional experience also determine the ability of individual workers to adjust to changes in the general labour market situation and in employers' requirements as well as to grasp technological innovations. Hence, labour adaptability on the supply side is a two-dimensional phenomenon – one dimension comprises of evolving market conditions, whereas the other of the changing labour market position due over the life cycle.

We devote this Part of the Report to the issue of adaptability and we draw particular attention to the influence exerted on it by modern ways of contracting employment and of work organisation. Hence, we demonstrate how employment forms other than traditional permanent full-time employment as well as greater than customary freedom to determine working hours and localization may enhance flexibility and adaptability. We consider how the employment structure – in terms of contractual forms – was affected by the recent evolution of the Polish labour market and by institutional factors. Moreover, we scrutinize the implications of these processes for the supply and demand on the said market. At the same time, we put the situation in Poland in the context of trends prevailing in other EU countries and NMS. Finally, we raise the issue of the utilization in the Polish labour market of those employment forms which – as labour economics and international experiences suggest – seem to have the greatest potential to activate individuals marginally attached to labour market. We close this Part with a summary in which we draw out the implications of the development of atypical employment forms for flexibility and adaptability on Polish labour market as well as for welfare in Poland. We also sketch out the boundary conditions, which should be met in order to minimise the risk of negative outcomes of these processes.

## 1. Flexibility and adaptability versus flexible forms of employment

### 1.1. Employment protection legislation and labour market rigidities

The above-mentioned ideal, perfectly flexible market which immediately absorbs shocks, is a theoretical construct that sets the framework of thinking about flexibility but is impossible to observe in reality. This is so because one inherent feature of the economic realm is the occurrence of the so-called rigidities which render the transmission of impulses difficult and hinder the ability of firms and workers to adapt to the changing market circumstances. Hence, when analysing flexibility, emphasis is usually being put on comparative assessment of the relative flexibility of markets in different countries and pinpointing the factors responsible for different degrees of ability of particular economies to absorb disturbances.<sup>19</sup>

Rigidities, which constrain market adjustments to shocks, are to some extent due to phenomena inherent to the economic realm, such as imperfect and asymmetrical information, uncertainty about future, transaction costs and the labour force heterogeneity, which all turn the labour market into one that is far from being perfectly competitive (see Cahuc, Zylberberg, 2004). Adjustments may also be hindered by the regulations and rules of conduct or even by some social and cultural factors. This is of particular importance in labour markets which comprise of a broad set of institutions. Such institutions are indispensable and the reason for their very existence is an attempt to correct the inherent labour market imperfections (Nickell, 1997). They determine permissible methods of contracting and organising work, employer-employee relations as well as the position of the unemployed in the labour market. Moreover, they affect employers' incentives to create jobs as well as households' decisions concerning labour supply. Consequently, the said institutions themselves become sources of rigidities, which can be divided into supply, demand and wage rigidities. Therefore, the nature of the institutional setting within labour markets is a key determinant of equilibrium employment and unemployment. It also determines how profound and persistent are the impacts of external shocks on employment, unemployment and wages. Hence, the ability of individual markets to absorb disturbances is the outcome of their institutional setting, whereas international differences in labour market flexibility are to great extent due to different institutional arrangements (see Bassanini, Duval, 2006). Moreover, particular institutions can be related to rigidities in certain areas, e.g. the social transfer system induces rigidities on the labour supply side, the collective bargaining model and minimum wage influence wage rigidities. Restrictive labour legislation, which limits the possibilities of firms to adjust the input and organisation of labour, contributes mainly to demand rigidities. The latter however depend also on the propagation of knowledge among employers about the ways to modify the size of labour force and reorganise work in accordance with the Labour Code. Nevertheless, the stringency of labour code regulations is of vital importance.

This is so because employment regulation is generally introduced to protect employees against dismissal and to safeguard them in case they have low bargaining power compared with employers.<sup>20</sup> Therefore, these regulations set out certain standards of contracting employment, departures from which are only permitted if they favour employees or else in exceptional cases indicated by the legislator. From the economic point of view, the consequences of employment protection legislation for firms may be positive and negative alike. Since stable employment relations incline employers to invest in the human capital of workers and since some skills, which are necessary to perform a job and which may be company-specific, are learnt by doing, employees strongly connected to the workplace may improve their productivity more rapidly than those with no guarantees of continued employment (Estevez-Abe et al., 2001). On the other hand, employment protection increases the cost of adjustments. Statutory provisions imposing on employers a range of conditions and obligations, which must be observed when employing or dismissing a worker, contribute to demand rigidities and hence increase the labour costs. Such provisions refer above all to dismissals usually they define (see OECD, 1999, Betcherman et al., 2001), among others, a catalogue of permissible reasons for dismissal, duration of notice period, severance payment entitlements and, scope of obligatory notifications and negotiations with the unions and, in some cases, also create the need of their consent to employment termination. The resulting cost may constitute a transfer to the employee (e.g. severance pay), however, for instance, administrative costs and time devoted to satisfying all formal requirements (such as notifying the Labour Office, consulting relevant employee organisations), it represents the "deadweight loss" – it brings no benefits to the dismissed party and only discourages employers from terminating employment. Therefore, it plays a role of a sort of "tax" imposed on dismissals (Bertola, 1992).

<sup>19</sup> This approach has its origins in the studies of various absorption of oil shock by labour markets in the European countries, USA and Japan. This viewpoint has been adopted in the original articles in this field (Blanchard, Summers, 1986) as well as in the latest empirical studies (Bassanini, Duval, 2006). It has been commonly referred to in studies that provide a synthesis of labour economics in this area (Bean, 1994, Layard, Nickell, Jackman, 1991, Blanchard, 2005) and it also appears in research on the impact of labour market rigidities on other macroeconomic topics, e.g. transmission mechanisms of monetary policy (Drew, Kennedy, Slock, 2004).

<sup>20</sup> This line of argument is commonly evoked in public and political debate, and is included, as indicated by Siebert (2006), in the Charter of Fundamental Rights of the European Union. From the economic point of view, two arguments can be raised in favour of legal employment protection. Firstly, EPL is considered as a correction of market imperfections. Therefore, it should lead to greater efficiency of resource allocation than in the *laissez-faire* economy. However, empirical research indicates that the impact of EPL stringency on overall employment is neutral but it is negative on employment of people whose position in the labour market is relatively weak (see MGIP, 2005, Kahn, 2007) and positive on long-term unemployment (Siebert, 2006). Hence, employment protection cannot be justified as a correction of market imperfections which enables better allocation. Strict employment protection contributes therefore to "employment redistribution" from groups whose original position in the labour market is worse to better-positioned groups (Siebert, 2006) and thus it can neither be regarded as a redistribution mechanism justified by social justice (see Rawls, 1994, Gray, 1995). In accordance with the theory of public choice, as developed in this field by Saint-Paul (2000, 2002), employment protection rather reflects the preferences of an median voter, namely an employee working under a standard open-ended employment contract and benefiting from legal protection. Therefore, labour law affects above all the relative bargaining power of different employee groups with respect to one another, rather than that of all employees with respect to employers.

The second class of economic consequences of labour law regulations consists in the limiting of permissible forms of contracting employment as well as of possibilities of adjusting organisation and content of work and determining the time and place when it is done in line with companies needs. As a general rule, labour codes, especially in the continental European countries, restrict the use of contracts other than the traditional open-ended one by indicating, for instance, the number of renewals of a fixed-term contract (or their total maximum duration), by cataloguing jobs or occupations that can be performed by temporary agency workers and by stating the maximum total duration of their work for one employer (see Betcherman et al., 2001, van Eyck, 2003). What is more, regulations also cover the possibility of working at weekends, at night and under civil law agreements. Moreover, provisions pertaining to such issues as the length of the settlement period of the weekly working time norm, possibilities of compensating for overtime by giving extra holidays and of reallocating employees to other tasks than those provided for in their contracts, determine the freedom of managing labour resources within companies and of adjusting the individual and total input labour to company needs (Standing, 2002). As a rule, the said regulations apply not only to workers under full-time open-ended contracts but also those working part-time, under fixed-term agreements or even via temporary work agency.

As argued by Belot et al. (2002), it can be expected that there exists a certain optimal degree of employment protection, balancing the benefits resulting from a stable employment relation and the rigidities and costs resulting from a limited freedom of managing labour resources and work organisation. Moreover, both theoretical and empirical arguments indicate that strictness of employment protection regulation does not have a significant impact on unemployment and employment levels because it adversely affects the rate of job creation and destruction alike (see Boeri, 1998, Cahuc, Zylberberg, 2004, Guelfi 2004, Mortensen, Pissarides, 1994, 1999). However, labour law stringency determines how deep and persistent are consequences of macroeconomic shocks on the labour market (Blanchard, Wolfers, 1999, Bassanini, Duval, 2006). As Bassanini, Duval (2006) estimate from OECD countries data, more restrictive employment protection regulation reduces the severity of immediate consequences of external shocks on the labour market, but at the same time they significantly extend the period of their absorption.

## 1.2. Adaptability versus forms of employment and work organisation

The deregulation of the traditional employment contracts and the proliferation of alternative ways of contracting and organising work, occurred mainly because of labour-demand-related reasons. As from the 1980s, labour markets in the developed countries have seen a multiplication of a number of employment forms jointly referred to as “flexible” or more aptly “atypical”.<sup>21</sup> Besides the oldest ones, namely fixed-term and part-time employment, these forms also comprise of temporary agency work, substitution and on-call work, flexitime employment (evening, weekends, compressed workweeks, etc.) as well as the most recent inventions, which are still least widespread and least covered by legislation, such as employee rental, job sharing and telecommuting (see Houseman, Osawa, 2000).<sup>22</sup>

Structural changes and disturbances affecting labour markets generate challenges for individual employees and employers alike. Technological progress which increases production factor productivity is of utmost importance here, as it implies the need for firms and employees to reorganise businesses, acquire new skills, redefine professional status and behaviour. The ability to take up this sort of challenges depends on human capital and cognitive ability of a person. Less-educated and older workers encounter greater difficulties in adjusting to evolving demand-side requirements and improving their skills. Moreover, heterogeneity of the labour force and different roles that market work plays at various stages of personal and professional life (see Eurofund, 2006) make it necessary to reorganise one's professional career in the life-cycle perspective.

Labour market institutions can enhance the ability to meet the above-mentioned challenges. Some of them, e.g. active labour market policies, focus directly on upgrading the qualifications of their participants – most often unemployed. Other institutions, such as collective bargaining and social dialogue models, may provide employees with instruments that improve their adaptability by accounting for such needs in industrial relations and collective agreements. Lastly, atypical employment forms may also play a vital role in this respect, especially in case of groups relatively weakly attached to labour market and characterised by high elasticity of labour supply, not only with respect to wages but also with respect to the institutional aspects that determine the possibility of reconciling work with other pursuits (e.g. education), family commitments and leisure. These groups include labour market entrants or individuals reaching retirement age, people bringing up children (mainly women), individuals trying to re-enter the labour market after a period of unemployment or economic inactivity. For them, undertaking employment under arrangements which are seemingly less advantageous than traditional permanent employment, but which give a chance to establish a provisional link with the labour market, may be of key importance when it comes to their future employment prospects (OECD, 2002, van Eyck, 2003).

<sup>21</sup> In the relevant literature of the subject, “flexibility” denotes employment forms giving workers substantial autonomy to determine working time and organisation of work (Houseman, Osawa, 2000). Hence, we use the terms “atypical” and “non-standard” to describe all forms other than a traditional one.

<sup>22</sup> Workers, whether employed under open-ended or fixed-term contracts, full-time or part-time, may enjoy the possibility of modifying the time when they start and finish work, which is referred to as “flexible working time”.

Moreover, some of the atypical employment and work organisation arrangements may facilitate the adoption and implementation of technological innovations within companies because, as demonstrated among others by Ichniowski et al. (1996), technological and organisational innovations are complementary to one another. Hence, some of the FFEs, such as telecommuting, which target high-productivity employees, may contribute to increased productivity at company level (Bauer, 2002; Capelli, Neumark, 2002), thus making the picture of the impact of FFEs on the labour market complete. We devote also to them some attention in the subsequent Chapters of this Part of Report.

### 1.3. Employment protection legislation – Poland vis-à-vis the EU and the NMS

Chart II.1 demonstrates the differences in the strictness of employment protection regulation among developed (OECD and/or EU25) countries. The measure which is most commonly used in the literature on the subject, and which we also use in this Report, is the EPL index elaborated by the OECD for its member states. In accordance with the above-presented line of argument, the freedom to adjust the labour force to company needs is a derivative of the stringency of rules applicable to the termination of employment as well as to employing workers via other contracts than the traditional open-ended one. The EPL index quantifies both these aspects and it also accounts for collective dismissals.<sup>23</sup> However, it leaves aside the regulation determining functional flexibility and scope of the task-oriented work organisation as well as the possibilities of reallocating work time and work place in line with law.<sup>24</sup>

The differences in stringency of employment protection within the OECD, as well as within the EU, are considerable. The less strict regulation is typical for the Anglo-Saxon countries, whereas particularly high degrees of stringency can be observed in Southern European countries, two Scandinavian countries – Norway and Sweden, as well as in some continental European countries, namely France, Belgium and Germany. It is worth noting that the Baltic countries (particularly Estonia) and Slovenia are characterised by a relatively strict employment protection legislation. Compared with the above, Poland is a country with a moderate degree of EPL stringency, marginally higher than the average for both the OECD and EU countries. This is largely due to the regulations on collective dismissals which are rather burdensome for employers and which can be considered as remnants of the labour law system established during transition and at times of privatisation of large state enterprises (see MGİP, 2005).

Hence, based on the EPL index, it can be ascertained that:

- Polish labour law makes the dismissal of employees working under open-ended contracts slightly less difficult than in the EU (on average);
- among the NMS8 (excluding Hungary), Poland is the country with least safeguards against termination of the “traditional” employment relationship;<sup>25</sup>
- on the other hand, although restrictions on contracting work under temporary contracts (fixed-term and temporary agency work) in Poland have increased in the last few years,<sup>26</sup> Poland is characterised by a lower level of regulation than the Baltic states and Slovenia, though slightly higher than the average levels for the EU and those for the Czech Republic, Hungary and Slovakia.

In 2006, the group of countries with the most comparable degree of stringency of labour law regulations to Poland, i.e. those which exhibited a similar level of regulation on both terminating open-ended contracts and undertaking temporary work, included: Finland, Austria, Germany and Latvia. Other Baltic states, ever since the 1990s, have been typically characterised by a higher and Hungary by a lower level of regulation in the above two areas than Poland.<sup>27</sup> Last but not least, in the Czech Republic, Slovakia and Slovenia, there has been greater protection for “traditional” employees than in Poland, whereas temporary employment was regulated to a much lesser degree. What is more, in the recent years, Slovakia has reduced the strictness of labour law regulations with respect to both above-mentioned aspects, Slovenia has seen a weakening of tight restrictions on termination of open-ended contracts and a tightening of regulations on temporary work, whereas in the Czech Republic there have been no major changes at all.

The degree of EPL strictness applying to temporary employment has increased in the recent years in all NMS, which reflects the process of balancing the degree of protection of “traditional” workers and the rules applicable to temporary employment, as observed also in the OECD countries (see OECD, 2006a). This, however, was mainly connected with the EU accession and the application of the rule that the third fixed-term contract is to be automatically transformed into an open-ended contract, providing the period between subsequent contracts does not exceed one month.<sup>28</sup> The countries in our region also had to extend relevant legislation on temporary agency work, where the Polish act is the most restrictive in this respect (see Table II.1).

<sup>23</sup> For a detailed description of the EPL index see Bukowski et al. (MGİP 2005) and for detailed international analyses of its components see OECD (2004).

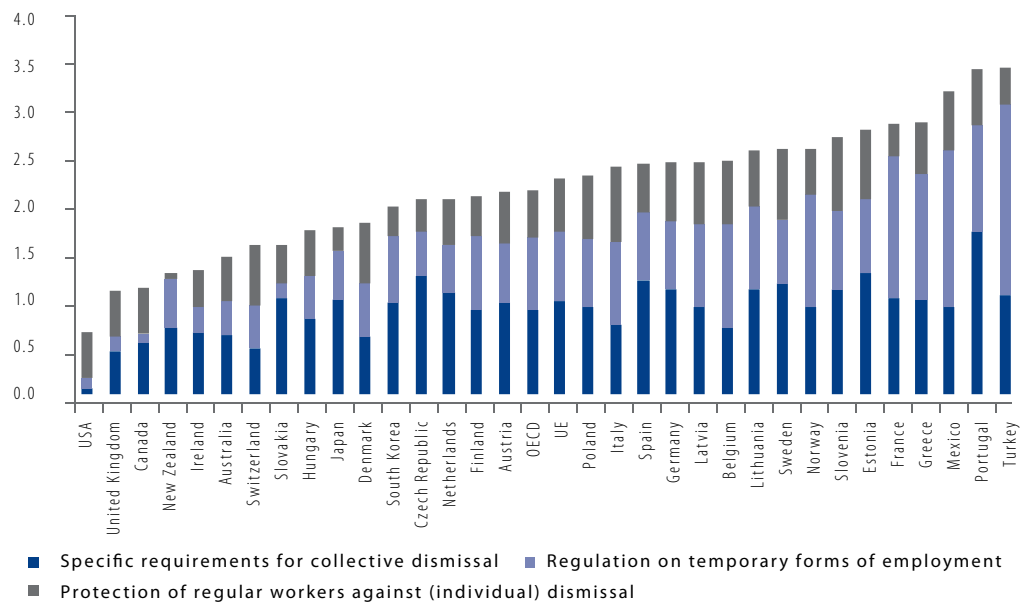
<sup>24</sup> The authors were not aware, at the time of preparation of this report, of any attempts at measuring the regulation of these aspects of employment relationships.

<sup>25</sup> These conclusions apply to currently relevant legislation as to legislation relevant at the end of the last and at the beginning of the present decade.

<sup>26</sup> In the subsequent parts of this Report we point to the reasons behind the increase of the EPL index in Poland.

<sup>27</sup> The multiplication of obstacles to temporary agency work slightly widened the gap between Poland and Hungary.

<sup>28</sup> Although labour law remains under national authority of the EU member states, some directives, including the one on consecutive fixed-term contracts and the one on maximum weekly working time, contribute to the convergence of certain legislative initiatives within the European Union.

**Chart II.1.****Stringency of employment protection legislation measured by the EPL index in OECD countries and in selected European countries in 2006**

Remarks: Index component for collective dismissals, data for 2003.

Source: Own calculations based on OECD data as well as Paas, Eamets et al. (2006) for the Baltic states and Kajzer, Kluzer (2007) for Slovenia

## 2. Atypical forms of employment – theoretical background, empirical findings and actual developments in Poland

Having presented a theoretical outline of the economic impact of statutory regulations on the labour market as well as a picture of international differences in the degree of stringency of labour law, including the picture of Polish regulations compared with other EU countries, in this Chapter we further our analysis by studying individual atypical forms of employment. We focus on some potential advantages and disadvantages that they may bring to labour market participants and we scrutinise the scope of their utilisation in Poland.

### 2.1. Fixed-term agreements and temporary agency work

The fundamental rigidity of the traditional employment contract is due to its unspecified duration. The costs and difficulties associated with terminating a permanent employment reduce the number of dismissals but at the same time they discourage employers from employing workers for an unspecified period of time and induce them to search for employment forms which are free from such obstacles and at the same time enable a company to hire the same amount of labour. Generally, this means employing workers under fixed-term agreements or through temporary work agencies or, under some circumstances, resorting to (often ostensible) outsourcing and civil law agreements (Blanchard, Landier, 2001, Dolado et al., 2002, OECD, 2002). Fixed-term contracts are the crucial alternative to traditional permanent contracts – even if the termination of a fixed-term contract implies the same obligations on the part of the employer as in the “traditional” case of,<sup>29</sup> onerous and costly regulations pertaining to the establishment and termination of an open-ended contracts incline employers to use fixed-term contracts because of their predetermined and cost-free termination.

The motivations to use temporary contracts can also be “positive”. Firstly, temporary employment may be the most appropriate employment form in the case of short-term jobs and in the case of posts which require that screening of employee’s skills (Varejao, Portugal, 2003). Secondly, confronted with macroeconomic turbulence and uncertainty about economic situation and their future labour demand, employers may be less inclined to enter into permanent employment relations and more willing to hire temporary workers. This seems to be the factor behind proliferation of temporary employment in Sweden in the 90s – see Box II.1.

Internships constitute a distinctive form of temporary employment and as such they are usually covered by different regulations than other employment forms. Internships tend to reduce information asymmetry and offer mutual benefits for employers and employees. Thanks to internships, which concern above all labour market entrants and/or inexperienced workers, employers can lower the cost of recruitment and trainings of new staff as well as avoid the risk of employee mismatch to the requirements of a given job. From the labour supply point of view, internships provide opportunities to gain on-the-job experience and to signal skills to prospective employers.

<sup>29</sup> Although temporary contracts usually provide for shorter notice periods and/or no severance pay, which may be obligatory in the case of open-ended contracts.

### Box II.1. Development of fixed-term employment in Sweden

In the last decade of the twentieth century, fixed-term employment became widespread in Sweden. The number of fixed-term workers grew by more than half and its share in total employment increased from 10 to 16 percent. At the same time, in 1990-1993, Swedish economy experienced a recession – output fell by 6 percent, the employment rate declined by 10 percentage points and the unemployment rate soared from 1.5 to 8.2 percent. The increase in the number of fixed-term workers did not result from the extension of the average duration of such contracts but from the increased inflows – almost 70 percent of all new employment contracts were in fact contracts for a specified period. The growing popularity of fixed-term employment was mainly due to new on-call work opportunities, especially among women, and project work (targeting men rather than women).

Fixed-term work arrangements in Sweden concerned above all young people, and in the prime-age group the frequency of fixed-term contracts was twice as high among foreign-born workers as among natives. They were also more common among women than among men. This rising utilisation of fixed-term work covered all sections of the economy, particularly industry and services. The analyses show, that in general, after a period of work under a fixed-term contract, workers more most likely to start open-ended employment or become inactive, and therefore it can be stated that for some people fixed-term employment constituted some sort of transitory stage towards finding (or going back to) permanent employment, and for others, only marginally tied to the labour market, it enabled taking up short-term employment.

It should be emphasised that the above developments occurred regardless of the rather restrictive regulation of temporary employment. The Labour Code allowed establishment of a fixed-term employment relationship only in specified circumstances, for instance, if the nature of a business activity implied the use of this sort of employment relationship. In addition, trial contracts could not be concluded for a period longer than six months. These regulations were only loosened in 1997. Then, the requirement to justify the fixed-term contract was removed and the permissible trial period was extended to twelve months. It is worth noting, that at the same time the new regulations admitted the conclusion of collective work agreements – at local and/or company level – which allowed for a more uninhibited use of temporary employment than prescribed by the Labour Code.

It is worth stressing that the changes in the Swedish Labour Code in the 1990s were two-track. On the one hand, there was a noticeable slackening of restrictions and, on the other, some regulations were tightened. In 1997, for instance, limits were imposed as to the number of employees working under fixed-term contracts within one company (the maximum number of such employees was 5) and as to the duration of fixed-term contracts with one employer. Nevertheless, these changes only occurred after the period of the most rapid expansion of fixed-term employment contracts and therefore their significance for the process should be considered as marginal.

The development of fixed-term employment in Sweden suggests that the expansion of this type of employment was a consequence of the severe economic slowdown and of contraction in labour demand. In the face of the deteriorating economic situation and the uncertainty as to a prospective rebound, employers were more inclined to offer employment under fixed-term contracts, whereas employees – aware of the situation in the labour market, were more willing to accept such employment terms. Moreover, some changes in the employee recruitment model could also have played a role, namely rising bargaining strength of employers and innovations in the area of production and work organisation.

*Based on Holmlund, Storrie (2002)*

The reasons why workers are employed by temporary work agencies are similar to fixed-term, as this also represents a way for employers to avoid fixed cost resulting from traditional contracts. Compared with fixed-term contracts, the substitutability between open-ended contracts and temporary agency work is generally lower, because the latter is believed to be motivated by the volatility of labour demand and the seasonal nature of its fluctuations, especially the seasonality of business activity in some sectors (OECD, 2002). Moreover, temporary agency work can help to remedy sudden, cyclical changes in labour demand occurring in the immediate aftermath of aggregate shocks. This view is illustrated, among others, by the economic upturn of 1996-2000 in France, when the share of temporary workers in the total employment increased, parallel as the total employment rate grew (Jourdain, 2001).

Temporary agency work also enables firms to cover for absent regular employees. What is more, it is sometimes used in the case of tasks which do not constitute the core business of company, which do not require any specific skills and which can be carried out by workers from outside the company. This applies, for instance, to cleaning or simple office jobs. It is worth stressing that the use temporary agency services can also be seen as a recruitment instrument – companies may hire temporary workers and after such temporary “trial” period, employ them under permanent contracts (the so-called *try & hire* arrangements).

From the employees’ perspective, the primary motivations to engage in temporary, both fixed-term and via agency, work are the possibilities to earn additional income, to gain professional experience and/or to stay out of unemployment, and in the longer term also to find a “traditional” job more easily. However, compared with traditional contracts, temporary employment – whether fixed-term or by temporary work agencies – does not guarantee permanent employment or that degree of job and income security in the future. This is why the literature on the subject often stresses negative views on them as sources of uncertainty in the labour market (see Auer et al., 2001). Another debated issue is the problem of relatively worse access to trainings and smaller chances of promotion in the case of workers who are not permanently tied to their employers.



In some countries, the expansion of temporary employment – following a liberalisation of regulations governing their use, combined with the maintenance of tight protection of traditional employment, resulted in the emergence the so-called dual labour markets (Blanchard, Landier, 2001, Dolado et al., 2002). Typical for such markets is the existence of a segment of work performed under less advantageous terms and with little chances of moving to the “better” segment. The case of Spain, as described in Box II.2, is the best illustration of this phenomenon. Research shows, however, that under some institutional conditions, employment contracts for a specified period help people to enter the labour market and increase their chances of getting a stable job later on – such conclusions have been reached for France by Abowd et al. (1999), for UK – by Booth et al. (2000), and for Germany, UK and Italy – by Scherer (2004). Such disparities in perceptions and consequences of the expansion of temporary contracts in different countries reflect differences in a number of factors, including above all the stringency of employment protection legislation applicable to traditional contracts and the resulting cost of their termination.

### Box II.2. Fixed-term employment in Spain – dual labour market

In the mid-1980s, the situation in the Spanish labour market was difficult as the level of unemployment exceeded 20 percent, which gave rise to demands for modification of the Labour Code. The Labour Code, applicable at that time, provided for, among others, extensive employee protection achieved by a short catalogue of permissible reasons for dismissal and by high severance payments – in some cases amounting to annual salary or even 3.5 times the annual salary in the case of “unjustified” dismissals. Furthermore, labour market rigidity was further enhanced by the widespread model of sectoral/regional collective bargaining, concerning the terms and conditions of work and pay.

The modifications introduced in 1984 did not encroach on the strict protection of traditional contracts but they made it easier to hire workers under fixed-term contracts. They were primarily beneficial to employers, who could thus avoid contracts imposing high severance payments and procedural requirements. In the face of high unemployment and low job creation, these innovations were also acceptable for the trade unions, although they generated an evident disproportion between protection granted by law to workers employed under permanent and fixed-term contracts.

The above changes led to the proliferation of fixed-term contracts as employers started using them universally to avoid cost-inducing traditional contracts. Within a span of five years, the share of fixed-term workers in total employment grew from 15 to 30 percent and in 1996 it reached the level of 35 percent. This group consisted primarily of young and poorly educated people whose chances of finding a stable job were scarce. The term dual labour market was then introduced to describe the labour market in Spain, characterised by small degree of worker mobility between its two segments.

In 1994–1997, some attempts were made to balance legal protection of both groups of workers. The list of justified reasons for terminating the traditional employment was extended and that of situations where fixed-term contracts could be used was narrowed down. In addition, in 1997, the largest two trade unions together with the confederation of employers reach an agreement, which most importantly provided for a new type of open-ended contract with lower severance payment obligations than previously.

During the cyclical economic upturn and rising employment (1997–2000), the incidence of traditional open-ended employment contracts in Spain increased. Nevertheless, it does not change the fact that Spain is still the country with the largest share of fixed-term workers in total employment, as this form of employment started being used more often in the public sector, which made up for its decreasing utilisation in private companies. Moreover, the inflow of EU funds for the financing of active labour market policies contributed to the increasing, as from 1997, employment of the unemployed in public works via fixed-term contracts.

Therefore, this partial deregulation of labour law in Spain led to the emergence of a dual labour market consisting of two groups of workers, which differed not only in terms of wage levels and employment stability but also in terms of their prospects for future position on the labour market. Although fixed-term employment contributed to employment growth and to the shortening of average unemployment spells, it did not play a key role in decreasing of total unemployment. The upturn in the labour market in Spain resulted from other structural factors. The modifications of labour code intended to reverse the effects of the 1984 amendment clearly suggest that its impact on the labour market was adverse.

*Based on Dolado, García-Serrano, Jimeno (2002)*

Part-time work constitutes the most commonly used form of temporary employment, and its various scope is largely responsible for the international differences in the use of non-permanent employment contracts.<sup>30</sup> Although fixed-term employment has become wide-spread as early as in the 1980s, the frequency of its use still varies in international comparison. The most considerable increase in the share of fixed-term workers in the total working population occurred above all in Spain (see Box II.2), but also in Portugal, Italy and in France, Belgium and the Netherlands. On the other end, there were countries such as Denmark, and Greece, where the importance of employment for a specified period fell, whereas in the Anglo-Saxon countries this type of employment invariably concerned only a small fraction of the labour force. In the countries where fixed-term employment is least popular, namely in the Anglo-Saxon countries, the degree of stringency of employment protection is usually also small. On the other hand, the proliferation of temporary employment often happens in the aftermath of legislative changes facilitating its use. However, different strictness of EPL are not enough to explain the international diversity in the use of non-permanent employment (see OECD, 2002), because other factors, such as the model of active labour market policies, taxation, educational systems (especially in terms of vocational training) and the public sector employment model are also of key importance.

<sup>30</sup> Some exceptions can be found, for instance, in German-speaking countries, where internships are an integral part of the educational system and therefore, compared with other countries, a much greater share of temporary workers is made up of interns. This issue is further discussed in the next Chapter. On the other hand, however, in Italy, the symptoms of market duality have emerged due to the propagation of work by temporary work agencies. These exceptions however do not change the general point.

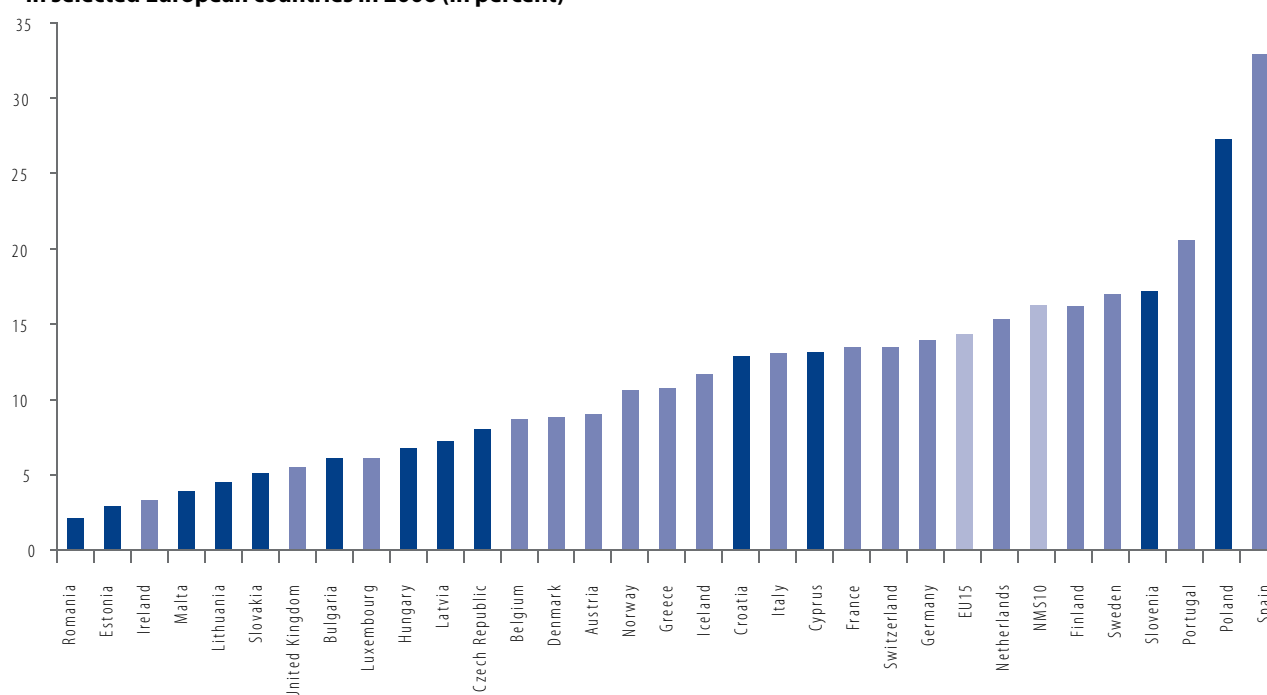


Chart II.2 demonstrates clear differences in the use of temporary employment in the EU15 and in the NMS. In the present decade, only the increase in the number of temporary workers exceeded the growth of open-ended contracts only in a couple of countries. In Poland, as stated in Part I, the number of permanent workers even declined and the increase in the share of fixed-term workers in the total employment was the most dynamic among all European labour markets. Consequently, in 2006, out of all NMS, only in Poland and Slovenia this share was greater than the EU15 average of 16.2 percent. Except for these countries, in the NMS, temporary work was generally less popular than in the EU15.

Another important difference between the labour markets in Western Europe and in the NMS, including Poland, was a different relative incidence of temporary work among men and women. In all EU15 and in other Western European economies constituting European Economic Area, excluding Germany and Austria, various temporary contracts are relatively more common among women than among men. In the NMS (excluding Cyprus and Malta), as well as in Croatia and Turkey, this proportion is reversed. It can be assumed that these differences in the incidence of temporary employment among men and women are largely due to contrasting historical contexts – in Western European countries, the labour supply of women was lower than in the post-Communist countries but its increase resulted from rising availability of instruments enabling women to combine work with family responsibilities and facilitating their entering or re-entering the labour force. Non-standard employment forms also played an important role in the above respect (Killingsworth, Heckman, 1999, OECD, 2002), especially so part-time employment, which we discuss in the next Sub-chapter.

**Chart II.2.**

**Share of fixed-term and temporary work agency employment in the total number of hired workers (aged 15-64) in selected European countries in 2006 (in percent)**

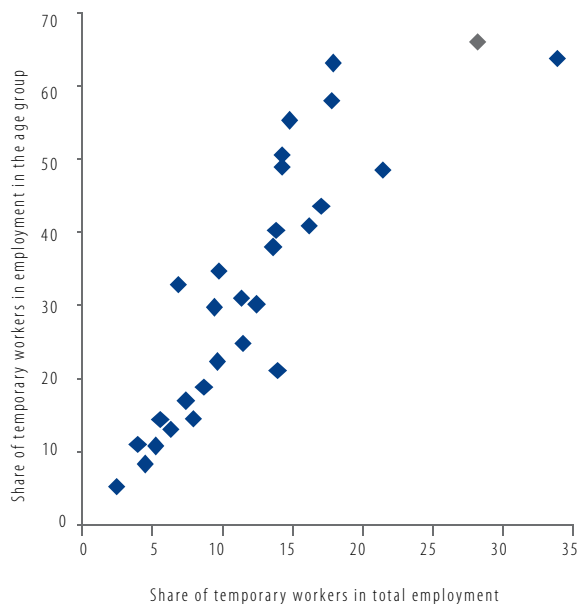


Source: Own calculations based on Eurostat data

As should be expected, young people, labour market entrants and/or relatively inexperienced workers, engage in fixed-term and temporary agency employment relatively more often than the other age groups. Chart II.3 illustrates that the incidence of this type of contracts is on average three times greater for young workers than for the total working population. The situation is similar in Poland and the fact that approximately 2/3 of young workers in 2006 were employed for a specified period should be seen as a consequence of the widespread use of temporary employment in Poland rather than a specific feature of the Polish market. Furthermore, as demonstrated in Chart II.4, in Poland as well as in other NMS (excluding Slovenia), young people account for less than 30 percent of temporary workers.<sup>31</sup> Although lower participation and employment rates among the young in the NMS than on average in the EU15 (see MPiPS, 2006) contribute to that difference, the share of fixed-term and other temporary workers in total employment of people aged 15-24 is also smaller in the NMS (excluding Poland) than on average in the EU15. Hence, in all NMS, prime-age individuals constitute large shares of all temporary workers, although only in Poland and Slovenia this translates also into a considerable fraction of total employment – one in five hired workers in Poland is an over-25-year-old employed for a specified period. In the next Chapter we look at this type of employment from the perspective of young people and we investigate whether fixed-term employment helps them to enter the labour market in Poland. We also analyse this issue from an aggregate perspective and we scrutinize why fixed-term employment has grown so popular and what is its incidence among various groups of workers in Poland.

<sup>31</sup> The countries where young people account for almost 2/3 of all temporary workers include Austria, Germany and Switzerland, where this type of work functions as a labour market policy tool targeted towards young people, and Ireland, where the use of temporary work remains scarce and almost 90 percent of young workers is employed under permanent contracts.

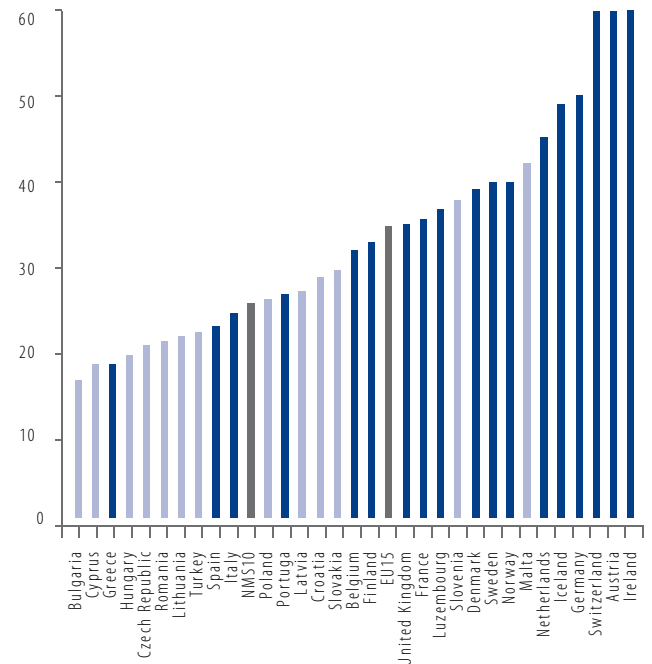
**Chart II.3.**  
**Share of temporary workers in total employment**  
**versus share of temporary workers in employment of**  
**people aged 15-24 in the European countries in 2006**  
**(in percent)**



Remarks: Poland has been marked.

Source: Own calculations based on Eurostat data

**Chart II.4.**  
**Share of people aged 15-24 in fixed-term and temporary**  
**agency workers in selected European countries in 2006**  
**(in percent)**



Source: Own calculations based on Eurostat data

The second most common form of non-permanent employment is employment by temporary work agencies. Nevertheless the universally substantial increase in its incidence during the last two decades, the frequency of employment by temporary work agencies in the developed countries is still smaller than that of fixed-term employment – CIETT (International Confederation of Private Employment Agencies) data indicate that temporary agency employment is most widely used in United Kingdom, where temporary agency workers account for 5 percent of total employment. In other European countries, such share does not exceed 2.5 percent. In Poland, in 2006, the number of people working via temporary work agencies reached almost 290,000, which amounted to approximately 2 percent of total employment and which was 80,000 more than the year before.<sup>32</sup> As a rule, temporary agency workers perform jobs that do not require extensive qualifications, mainly in industry (Arrowsmith, 2006). This pattern also applies to Poland – the largest group of temporary agency workers is engaged in industry, they are also often employed as shop assistants, distributors and checkout assistants (MPiPS, 2007). The utilisation of this form of employment depends also on the specific features of the economy, for instance, in Spain it is dominated by services, in Finland – by office work, in Germany – by technical services and engineering. Interestingly enough, in the Netherlands, Denmark and Sweden, the public sector often resorts to this form of employment, especially so in Denmark, where almost one in three temporary agency workers is employed in health services (Arrowsmith, 2006). Therefore, although employment by temporary work agencies is currently used in a wide range of occupations, starting from low-skill manual work to specialised office work, however, it is still mostly utilised in simple jobs in industry and services.

<sup>32</sup> In 2004, approximately 170,000 people were employed by temporary work agencies. In previous years this number had certainly been smaller, however, agencies had not been obliged then to reporting requirement at that time and thus no accurate data is available.

**Table II.1.****Key aspects of legal regulation of temporary agency employment in the EU and Norway**

Country	Statutory equal rights for temporary agency and permanent workers	Regulations on permissible reasons for application	Restrictions on temporary agency work duration with one user-company	Restrictions on permissible occupations and sectors
Belgium	Yes	Yes	Yes	Yes
Portugal	Yes	Yes	Yes	Yes
France	Yes	Yes	Yes	(no regulations)
Spain	Yes	Yes	-	Yes
Luxembourg	Yes	Yes	Yes	-
Greece	Yes	-	Yes	-
Germany	Yes	-	-	Yes
Italy	Yes	Yes	-	-
Austria, Finland, Netherlands	Yes	-	-	-
Norway	-	Yes	-	-
Denmark, Sweden, Ireland, United Kingdom	-	-	-	-
Romania (regulations introduced in 2003)	Yes	Yes	Yes	Yes
Poland (2004)	Yes	Yes	Yes	Yes
Czech Republic (2004)	Yes	-	Yes	Yes
Slovenia (1998, 2002)	Yes	-	Yes	Yes
Slovakia (2004)	Yes	-	-	-
Hungary (2001)	-	-	-	Yes

Source: Arrowsmith (2006).

Because of the specific, three-parties-engaging nature of temporary agency work, its model differs between countries in the institutional and legal aspect alike. Four different areas of regulations can be distinguished. The first area, widely present in the European legislation, concerns the equal status of temporary agency and other workers, for instance, with respect to terms and conditions of work and remuneration. The other three areas of regulations take the form of restrictions imposed on employers (user-companies).

The catalogue of situations when this form of employment can be utilised may be specified, regulations often determine the total time that a person can work for a given user-company, and often its defined as maximum accumulated time within a certain period, e.g. three years in Poland. Lastly, it is stipulated by law in which occupations temporary agency employment is not permitted. The group of countries with least regulations comprises of UK, Denmark, Sweden and Ireland, whereas Belgium, Portugal and France are among those with the highest degree of regulation. In the NMS, relevant legislation has only been introduced in the present decade and it is least stringent in Hungary and Slovenia. In Poland, such legal instrument<sup>33</sup> was enacted only a few of years ago. However, it seems to be one of the most restrictive in Europe and it imposes on temporary work agencies certain bureaucratic burdens, e.g. a requirement to issue a separate work certificate every time a person is employed and to retain all documentation for fifty years.

It can be assumed that the Polish legislation reflects the legislator's attempt to best safeguard the interests of temporary agency workers, whose employment terms are in most countries actually slightly worse and who enjoy lesser autonomy than permanent workers. However, undertaking temporary employment may increase future odds of finding permanent employment – in the EU15, an average of 43 percent of temporary workers find a different job within a year of finishing their temporary job (Arrowsmith, 2006) and unemployed people who decide to take up temporary employment have greater chances of finding a permanent job afterwards than those who do not engage in temporary work (D'Addio, Rosholm, 2004). Unfortunately, it is not possible to unambiguously assess how the temporary agency work affects individuals' labour market prospects in Poland. This is so because of the lack of detailed information about temporary agency workers and their professional careers which information is required to carry out relevant research. However, the fact that temporary agency workers are employed above all to perform simple jobs as well as the fact that more than a half of all agency workers in 2006 had temporary job spells shorter than three months (MPIPS, 2007) may indicate that temporary agency work is essentially used to accommodate fluctuations in labour demand and to screen and select employees by companies who utilise it. Therefore, it can be claimed that the Polish regulation is overly burdensome with respect to this way of contracting work.

## 2.2. Part-time work and flexible working time

Part-time work is one of the atypical forms of employment which become earliest and most extensively widespread in Europe. It has been traditionally perceived as potentially vital for increasing the total labour supply and employment.<sup>34</sup> Due to the fact that in most cases labour supply decisions involve a choice between labour market participation and economic inactivity (see Bukowski et al., 2006b), part-time work is considered to be of particular significance when it comes to the employment of people who have considerable commitments outside the labour market. In practice, the availability of part-time employment enhances above all the participation of mothers, older people trying to gradually diminish the extent of economic activity, as well as of the young who are still participating in education (Quintini, Martin 2007). In 2006, the share of part-time workers in the total employment in the EU15 countries reached 36.7 percent for women and only 8.1 percent for men. In the NMS, these rates amounted to 11.6 and 5 percent respectively. At the same time, in the EU25, an average of 54 percent of all part-time workers aged 15-24 mentioned their studies/education as the main reason for taking up part-time work. Finally, in the EU15, more than 40 percent of working women at pre-retirement age (55-64) were employed part-time, although for men, this share amounted to only 10 percent. Interestingly, in the NMS10, the use of part-time employment among older women was lower by half and amounted to 20 percent, and among men – it was basically the same as in the EU15.

From the companies' point of view, this form of employment helps to utilise the desired amount of labour when it is not possible to do so by adjusting the number of full-time personnel, especially at times of day when business is especially intensive or in non-standard hours (e.g. in the evening). It is often more profitable to employ new workers under part-time work arrangements than to pay overtime, which is calculated at a higher rate than the standard hourly rate. On the other hand, part-time employment has the drawback of longer period of return on investment in trainings and motivation schemes (incentive bonuses, merit awards, etc.), which may reduce employer propensity to agree with part-time arrangements in case of typically high-profile and high-responsibility jobs which are well-paid and which require a commitment to acquiring and upgrading professional skills (Montgomery, 1988, Manning, Petrongolo, 2005). The total demand for part-time work in the economy also depends on the proportion between services and industry – it is exactly in services that the necessity to work more than 8 hours a day and/or at weekends often emerges and there the business activity is volatile during the day. Indeed, approximately one in three part-time workers in Europe works on a regular basis in the evenings, at night, at weekends or under a shift working system (Allaart, Bellmann, 2007). It can be said that part-time work distinguishes itself from all atypical employment forms as the one that effectively responds to the needs and expectations of both sides of the labour market. In fact, as indicated by Allart, Bellmann (2007) on the basis of a survey carried out in eight European countries, in 42 percent of cases, part-time employment resulted from demand side requirements, in 36 percent – from preferences of workers, and in 22 percent, it was a result of a consensus between employers and employees.

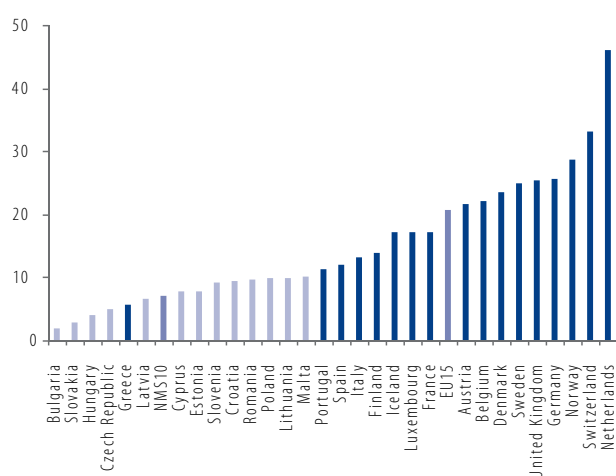
Part-time work is currently the most common atypical form of employment. Compared with the early 1990s, part-time employment in the EU15 countries grew by nearly a half and its share in total employment soared from 14.2 per cent in 1992 to 20.8 per cent in 2006. This development was mainly due to the increasing employment of women under this form of work contract – at present,

<sup>33</sup> Act dated 9 July 2003 on employing temporary workers, effective as from 1 January 2005.

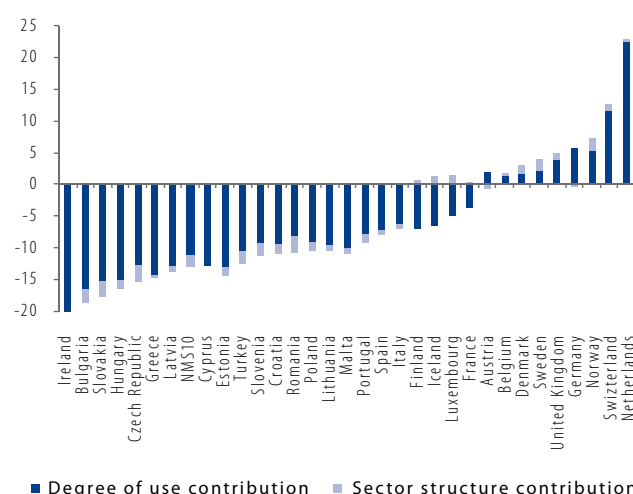
<sup>34</sup> The OECD Jobs Study (OECD, 1994), as well as the current European Employment Strategy (EC, 2005), urge governments to foster the growth of part-time work as a factor that would lead to higher employment.

in as many as 10 countries out of the EU15, more than 30 per cent of all employed women work part-time, and in the Netherlands this share has reached 75 per cent. However, considerable differences can be observed between certain groups of countries – next to the Netherlands, this part-time is most commonly used in the Scandinavian and German-speaking countries, in UK and Belgium. On the other hand, it is clearly less popular in Southern Europe as well as in France and the NMS evidently stand out in this respect. The NMS economies entered the period of transition with relatively high levels of employment among women, even though their productivity was low (Nesporova, 2002, Bukowski et al., 2006b). This high female employment (and participation) gradually decreased. Part-time was not considered as an instrument of employment-enhancing policy, as opposed to a number of EU15 countries, where the propagation of part-time work was supported to increase the labour supply of women. Different sectoral structures could also matter, however, as illustrated in Chart II.6, this factor plays a marginal role in explaining the divergent international patterns in total utilisation of part-time. Various use of part-time work within particular sectors is much more important.

**Chart II.5.**  
**Share of part-time workers in total employment**  
**in European countries in 2006 (percent)**



**Chart II.6.**  
**Decomposition of the difference between the share of**  
**part-time workers in total employment in European**  
**countries and the average for the EU15 in 2006**  
**(percentage points) into the contribution of sectoral**  
**structure of employment and the utilisation of part-time.**



■ Degree of use contribution ■ Sector structure contribution

Source: Own calculations based on Eurostat data (2007)

The share of people working part-time in total employment in Poland is clearly lower than those typical for Western European countries but at the same time it is greater than those observed in most NMS. Interestingly, in 1997-2006, there were no significant changes in the above respect. In other words, the changes in number of people in Poland working part-time was more or less proportional to the changes in total employment and they accounted for approx. 10 percent of total employment.

International experiences indicate that the expansion of part-time employment is a consequence of macroeconomic and institutional factors (OECD, 2002, Eurofund, 2007), which is well illustrated by the case-study of the Netherlands presented in Box II.3. Legal determinants of part-time employment in European countries are discussed in detail in Sub-chapter 3.3, which is devoted to the importance of this employment form to women participation in the labour market. In that section of this Report we discuss also the impact of the tax and social security schemes (Corral, Isusi, 2007), however, it is worth stressing here that generally joint taxation of household income may incline households towards the traditional model with only one household member working, whereas separate taxation, which has a more neutral effect on labour supply decisions, does not discourage from taking up part-time employment (Dingeldey, 2001). Moreover, provided that part-time generates relatively higher non-wage costs than full-time employment, employers will be less inclined to engage in it.

### Box II.3. Part-time work in the Netherlands

The societal changes which took place in the Netherlands in the last decades have contributed to the currently high employment and the highest incidence of part-time employment out of all European countries. Redefinition of traditional roles of women and men played an important part in this process. Until the late 1970s, the one-breadwinner family model was the dominating one in the Netherlands but with time the several factors lead to the departure from this original pattern. Firstly, women's labour market participation started being perceived as good for the economy – at that time, the Netherlands had the lowest women employment rate (below 30 percent) out of all OECD countries and almost full employment among men. This meant that the increase in women's participation was in fact the only possible way to increase labour supply, employment and incomes. Secondly, the schooling of women improved significantly. More and more women with better education were staying in the labour market longer which was accompanied by a corresponding pattern of later motherhood. Additionally, part-time work made it possible to reconcile work with family responsibilities. This was particularly important in the face of low availability of institutions such as nurseries and kindergartens (Visser, 2000). As a result, in 1973-2000, the participation rate for women in the Netherlands grew from 29 to 60 percent.

State policies also formed an important factor. They were intended to support part-time work and guarantee equal status of people working under atypical employment arrangements and of permanent employees. Moreover, in 1990, joint income taxation of spouses was abandoned and replaced with individual taxation, which eliminated discouragement to market work of both partners within a household. On the other hand, the subsidy schemes introduced in the 1980s to support part-time work development were then withdrawn due to their complexity and moderate effectiveness.

The above processes led to an increase in labour supply and contributed to the drop in unemployment in the Netherlands in period 1990-2000 from 5.1 percent to 2.8 percent and the employment rate grew from 61 to 74 percent. The above were accompanied by an increase in the share of part-time workers in total employment from 28.2 to 33 percent and in the case of women – to as much as 70 percent in 2006.

Another form of employment, or rather work organisation, which meets the needs of employees and employers in a similar way that part-time employment does, is atypical or flexible employment. The traditionally regulated daily working time scheme hinders running business continuously, under a daily working pattern that is not a multiple of full-time schedules, at non-standard times of day (especially at night), or on holidays and bank holidays (Kümmerling, Lehndorff, 2007, Chung, Kerkhofs, Ester, 2007). Flexibilising this aspect of work organisation may be attempted within the context of a "traditional" employment relationship, e.g. by way of extending working time settlement periods or introducing a special category of employment contracts that involve work during compressed weekly hours, work at weekends or work under equivalent or task-based working time systems. In Poland, these work organisation methods were provided for in the 2003 amendment of the Labour Code. Another possibility is the use of the so-called interrupted working time, which permits to engage workers at specific times of day when business is in full swing. Modifications of this kind are generally introduced at employers' initiative, although with the consent of employees, whom they concern directly.

Compared with the traditional working time schedule, work at non-standard times of day often entails lower welfare and job satisfaction of workers (OECD, 2002, Kümmerling, Lehndorff, 2007), although under some circumstances it can be advantageous, for instance, in the case of working parents or people who participate in education. Generally, it is more advantageous for employees when working time is rendered more flexible by giving them the possibility of determining their work starting and finishing hours or of reallocating the work over week or longer periods. Such solutions create favourable conditions for combining work with household responsibilities and leisure. Therefore the literature on the subject (see Berg et al., 2003) refers specifically to them as "flexible working time" arrangements.

Hence, non-standard working time serves rather the needs on the demand side of the labour market and concerns mainly poorly qualified workers and those working in services, retail and transport (Chung, Kerkhofs, Ester, 2007). As for flexible working time, it is a privilege offered above all to workers with medium or high qualifications and it is used most frequently in office work and by highly-skilled professionals (Berg et al., 2003, Kümmerling, Lehndorff, 2007). Although information on the incidence of flexible working time in the European countries is scarce, it can be assessed that it is available to a small share of workers. Moreover, it seems that it plays a role of a bonus to highly qualified workers (EGGSIE, 2005) rather than of a instrument enhancing participation among those who bring up children – in fact, a special study by Eurostat (2007) indicates that the incidence of flexitime arrangements among working parents in the European countries is generally lower than among people without children. We further discuss the issue of availability of flexitime arrangements in Sub-chapter 3.3, where we study the interactions between flexible employment forms and women's participation in Poland.

### 2.3. Workplace flexibility - telework

The last atypical form of employment discussed herein concerns arrangements flexible in terms of place of work. By this we mean forms which have emerged and developed thanks to communication and information technologies, namely telework. Contrary the scenario envisioned by Nilles (1975, 1976), who claimed that traditional company-based work (on-site work in the firm) would be replaced by telecommuting (home-based work using telecommunication tools), telework has become popular in developed countries only to a rather limited degree, although apart from home-based telework some other employment forms have also emerged. These include nomadic work (on-site and in-house work accompanied by work at other locations including at client's facility, during travel, in hotels, etc.) and telework in the so-called telecentres.<sup>35</sup> What is more, teleworkers can be both permanently employed by a company or their relationship can be short-term.

From the point of view of employees, working in locations other than on-site of the employer may save time spent on commuting, make it easier to reconcile work and family commitments and help adjust working time in line with individual preferences. In the case of parents or people physically disabled, home-based work may in fact be the only way to participate in the labour market. On the other hand, however, telework may entail lower concentration on professional duties and the separation of an employee from the working environment increases the risk of loosening his social ties formed through work and of blurring the traditional dichotomy of home and work. Especially the latter aspect has grave consequences as it hinders the accommodation of job-related stress (see Hartig et al., 2007). At the same time, a considerable share of teleworkers does not work at home at all but during travel or at client's facility (see Gareis, 2002). In fact, such people constitute a very mobile group for whom telework is often a necessity dictated by the nature of their jobs.

The advantages of nomadic telework for companies include the possibility of carrying out activities at client's facility and of coordinating the work of employees scattered across many locations. As for home-based telework, it may constitute a bonus offered to workers whom companies wish to attract or a way to retain employees who would otherwise quit work because of, for instance, their parental duties or the onerousness of commuting. Home-based telework also enables to work the people whose state of health stops them from working in the on-site office but does not prevent them from carrying out their duties. Regarding the savings in office expenses made through telework, their importance – especially in the medium and long term – is found to be marginal (Baruch, 2000). Telework can also increase the effective labour supply because it allows employers to hire workers who cannot work on-site due to geographical distance or in special case when a company wants to retain employees when moving its facility even if they are unwilling to migrate. This is why companies use telework through special centres. The disadvantages of telework for companies are primarily related to the fact of replacing direct contact with and supervision of employees with indirect links using communication technologies which entail difficulties in monitoring and verifying the working time and employee effort (Venkatesh, Vitalari, 1992). Already the first studies of telework in Western Europe indicated the reluctance of managers to abandon the traditional management and motivation mechanisms as the main obstacle to its implementation (Huws et al., 1990).

Hence, telework may potentially bring many benefits and thanks to its diversity it may serve a wide range of businesses and employees. On the other hand, however, it requires specific infrastructure, self-reliance and time organisation skills on the part of employees and an unconventional approach to staff supervision on the part of employers. Consequently, telework is less commonly used than the above discussed atypical employment forms. Due to lack of consensus in assessing what amount of work performed in locations outside employer's facility permits the use of the term telework,<sup>36</sup> as well as due to the fact that among European countries only in United Kingdom information about telework is collected via in labour force survey, reliable international comparisons concerning telework are difficult.<sup>37</sup> Relevant data are gathered via special surveys. For instance, to illustrate the differences in incidence of telework the results of the project *Statistical Indicators Benchmarking the Information Society* can be used. SIBIS provides cross-sectional data for 2002-2003 for a number of European countries and the United States.<sup>38</sup> The results should be interpreted with caution because such surveys cover small samples and it is practically impossible to extrapolate them to the general population.

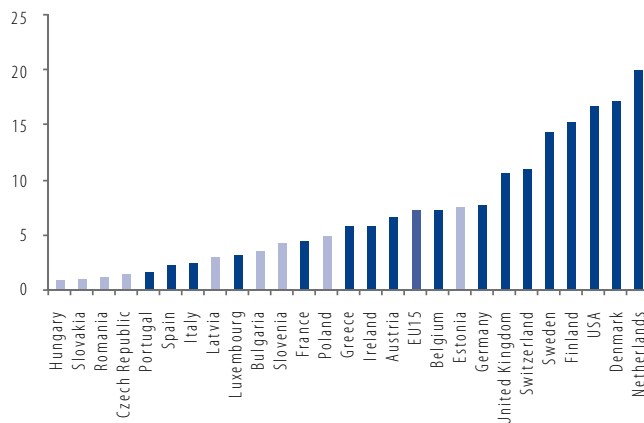
<sup>35</sup> They can be either in-house, when they constitute a sort of company department, or external, when the services and facilities are available to the public.

<sup>36</sup> It is often assumed that one day of telework a week is enough to classify someone as a teleworker (see Garrett, Danziger, 2007, Hartig et al., 2007).

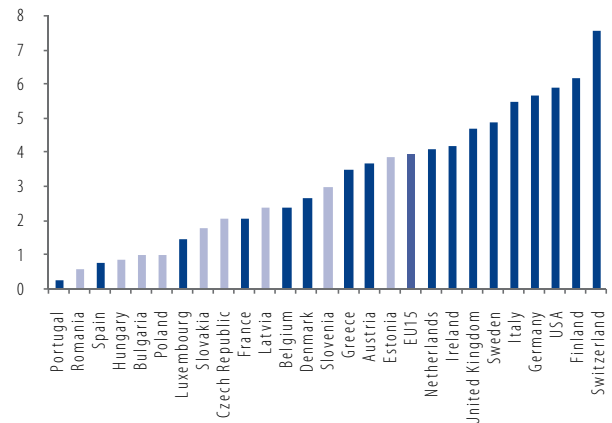
<sup>37</sup> Qvortrup (1998) study reflects this measurement difficulty on the example of UK, where the incidence of telework is relatively high. Various definitions provided an estimated number of people involved in telework in 1992-1994 in the range from 110 thousand to 1,22 mln.

<sup>38</sup> The survey consisted in telephone interviews with a total of 11,832 people from the EU15, Switzerland and the United States and a total of 10,379 face-to-face interviews in the NMS. To the best knowledge of the authors of this Report, no other, more up-to-date data were available at the time that this Report was written.

**Chart II.7.**  
**Share of home-based teleworkers in total employment in selected countries (percent)**



**Chart II.8.**  
**Share of nomadic teleworkers in total employment in selected countries (percent)**



Remarks: Total population of teleworkers: home-based teleworkers – people employed and teleworking from home; nomadic workers – workers teleworking in different locations outside the company facility for at least 10 hours a week.

Source: Own calculations based on data derived from SIBIS GPS 2002, SIBIS GPS-NAS 2003.

It can be conjectured that the incidence of telework – as indicated by the SIBIS data – amounting to 13 percent on average in the EU, is overestimated, especially in view of the 8 percent share of teleworkers in Poland. Nevertheless, it seems credible that the use of telework is almost twice as high in the United States as on average in the EU, and that there is a significant gap in this regard between the NMS and the EU15. The incidence of telework seems to reflect the level of economic development and of technological forwardness of the economy,<sup>39</sup> although the institutional features of the labour market modify this relationship. In particular, in Southern European countries and France, which are characterised by considerably higher labour productivity and output per capita than the NMS, the frequency of telework is low. Hence, when it comes to the popularisation of telework, there are clearly some analogous differences between groups of countries,<sup>40</sup> like in case of employment forms discussed in the preceding sections. Furthermore, telework is also covered by national legislation to different degrees – in some countries, such as Belgium and Germany, it is the provisions pertaining to work at home that are considered applicable (although they do not take account of a number of telework options mentioned above), whereas in others telework is regulated by more extensive legislative packages on flexible forms of employment (e.g. United Kingdom and the Netherlands) or by the provisions of the Labour Code (e.g. Poland).

It is worth noting that home-based teleworkers tend to work away from the office only occasionally, i.e. on average, less than one day a week. At the same time, home-based telework is more common than nomadic and freelancing work with the use of information technologies. Hence, it can be said that the main usefulness of telework is in practice to facilitate the balancing of work and family responsibilities and possibly to save time otherwise wasted on commuting during rush hours, rather than to completely replace office-based, on-site work.

These characteristics have important implications for the potential expansion of telework in Poland and for the impact of the applicable law regulations on this process. The amendment of the Labour Code of 2007, which defined telework as a separate form of work organisation, seems to refer to full-time work outside the office and in a specific place but not necessarily at home. It seems that the status of people working away from the office only for a fraction of their total working time and especially in different locations, remains unspecified. The provisions which impose on employers the obligation to provide employees with appropriate equipment, “workstation” or even equipment insurance, and which – on the other hand, give employers the right to control employees working at home, may discourage the former and the latter alike from formalising telework. Moreover, these provisions might generate cost which would constitute too much of a burden for many businesses, if telework was to serve the purpose of occasional supplementation of regular work in the office, which is the case in other countries. Due to the lack of data on the use of telework in Poland as well as due to its incidence currently presumably being rather low, no more attention is devoted to it in the next Chapter, which discusses in a more detailed way certain aspects of the functioning of atypical forms of employment in the Polish labour market.

<sup>39</sup> This is well illustrated by Estonia, where the share of teleworkers is close to the EU15 average, and by the Scandinavian countries, which lead the way in terms of development of information society and promotion of telework.

<sup>40</sup> The following classification seems to be justified: Nordic countries plus the Netherlands; Anglo-Saxon countries; Germany, Austria and Switzerland; France and Belgium; Southern-European countries; Central European countries.



### 3. Atypical forms of employment used in the Polish labour market

#### 3.1. Propagation of fixed-term agreements in the Polish labour market

Episodes of dynamic propagation of temporary work within a given labour market are generally a consequence of legal and institutional on the one hand or macroeconomic factors on the other. In the first case, it is because of the so-called partial liberalisation of labour law, which inevitably guarantees extensive protection against dismissal to “traditional” workers but which also opens up possibilities of employing workers for a fixed duration of time. This may lead to the emergence of a dual labour market (see Box II.2). On the other hand, temporary work provides companies with flexibility to determine the amount of labour without establishing long-term commitments, which means that businesses can resort to it particularly often when facing recession and uncertainty towards future economic developments. The case of Sweden, described in Box II.1, indicates that temporary work may grow increasingly more frequent irrespective of rather restrictive regulations on its use or even within a labour market which is seen as one that guarantees a good standing and economic security to employees. It may happen, if a negative macroeconomic shock is “sufficiently” severe.

It is worth stressing that in both cases the shift in the employment structure in favour of temporary work may turn out to be relatively durable. In Spain, where the regulations pertaining to its use have been gradually tightened and where the cost of terminating the traditional employment relationship has been lowered, the share of temporary workers remains highest in Europe, whereas in Sweden – after fifteen years from the original impulse, it still amounts to approx. 17 percent. These two cases, however, differ when it comes to the consequences of temporary work for those who engage in it – in Spain, there occurred exclusions from the “better” segment of the labour market (Dolado et al., 2002), whereas in Sweden, temporary work allowed companies to flexibly adjust the amount of labour to their needs without reducing the chances of employees to take up permanent employment (Holmlund, Storrie, 2002).

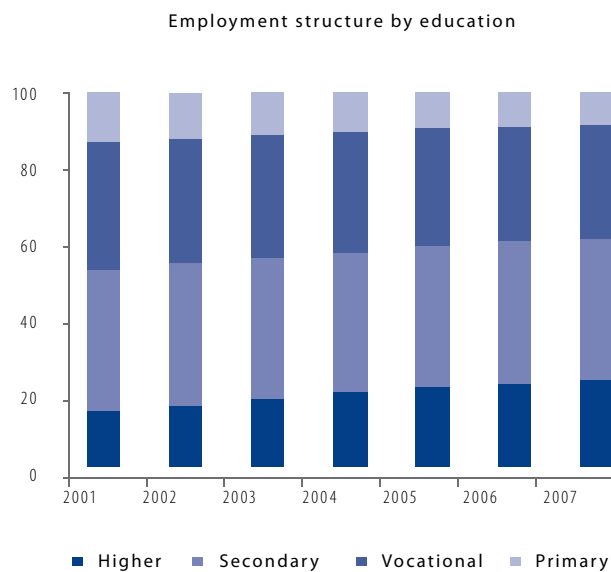
The propagation of temporary work in the Polish labour market does not clearly follow any of the above models but at the same time it combines some elements of both. The scale of use of temporary work, its relatively high incidence among prime-age workers and large shares – amounting up to 2/3 – of temporary workers in the young population constitute similarities between the Polish and Spanish labour markets. On the other hand, however, one cannot really speak of either stringent temporary employment protection or of partial liberalisations of the Labour Code in Poland – quite the opposite, compared with other countries, it has been relatively easy to dismiss workers in Poland, the period of notice has been short, the amount severance pay has been low and the possibility of entering into temporary employment contracts has generally been limited to two such contracts in a row.<sup>41</sup> Hence, in Poland there was no sign of those features of the institutional setting of the labour market, which were driving its dualisation in Spain. As for similarities to the Swedish case, temporary employment became common during a period of economic slowdown, which led to decreasing production costs and which gave rise to uncertainty towards the future performance of companies. Rising unemployment, which reduced the employee bargaining power and bolstered their propensity to accept temporary work, may have made it easier for employers to use this employment form. It can be assumed that the use of temporary work among the prime-age workers is also due to some structural factors (such as the so-called second wave of restructuring), which produce a situation where the qualifications and productivity of individuals having certain nominal work experience may have been less identifiable in practice than in labour markets which have not been subject to such changes and which have not experienced any significant drops in employment.

Attempts at assessing the process of propagation of temporary work in Poland are difficult due to the lack of information appropriate for that purpose and related to the previous labour market history of those who decide to accept it.<sup>42</sup> What is more, the regularities of this process generally indicate that they have been proceeding in a rather similar manner across all sections of the economy and among people with different nominal human capital levels. As demonstrated in Charts II.9-II.10, together with the evolution of the working population structure in terms of education, the frequency of fixed-term contracts grew in all groups. Of course, the higher the level of education, the lower the share of temporary workers, but at the same time this share in the populations of people with higher and secondary education grew in 2001-2007 at a relatively faster rate than in the populations of people with vocational and primary education.

<sup>41</sup> Apart from the year 2003, when the share of temporary workers in total employment went up to 20 percent from the level of 6 percent in 2000, and then continued to grow by 2.5 percentage points a year.

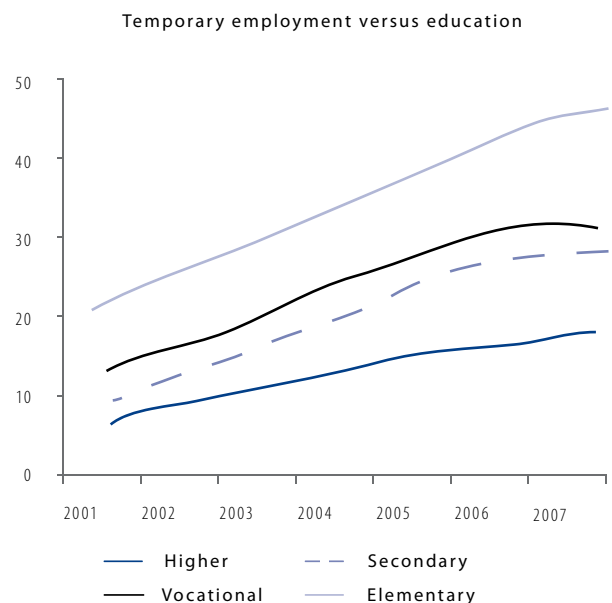
<sup>42</sup> Information about the labour market status of particular individuals in the time perspective longer than one or two years is essential, even if only for the reason that the Labour Code admits fixed-term contracts up to two years. As for BAEL, it only makes it possible to compare the status of particular individuals in the time perspective of one year, or perhaps two years. In the next Sub-chapter, we analyse the situation of young people for whom the essential data are available.

**Chart II.9.**  
**Employment structure in Poland by education level**  
**in 2001-2007 (first two quarters)**



Source: Own calculations based on BAEL data

**Chart II.10.**  
**Share of people employed under fixed term contracts**  
**in the population of employees by education level**  
**in Poland in 2001-2007 (first two quarters)**



The popularisation of temporary employment in Poland did not lead to pushing the low educated out of the permanent work segment. At the same time, the only group of workers who saw growing overall employment as well as the falling number of open-ended contracts, which is a distinguishing feature of the Polish labour market in 2000-2006 (see Chart I.16) – were people with a general secondary level of education. It can be assumed that within the above group, nominal qualifications constituted less of a reliable signal for the labour market than in the case of those with higher education or those with vocational training. This is why it was exactly in this group that the dynamics of growing popularity of temporary work was the highest.

A similar picture emerges from the analysis of the popularisation of temporary work from the perspective of economy sections. Although temporary work is most common in those sections that employ workers with vocational and primary education (construction, hotels and restaurants, retail), the relatively largest increase in its use occurred in sections, which had previously been characterised by long-term employment relationships, namely in industry and transport. It is worth noting that temporary work has also become more popular in the public sector, in sections that have been liberalised only to a small degree (mining, energy industry) and on the other hand in high-productivity services. A rather regular nature of these changes allows to think that they may have been a consequence of decreasing employee bargaining power during the period of high unemployment and of integrating this form of contract in the company organisation model as an employee recruiting tool which helps to verify the suitability of employees to the needs of a given company.

**Table II.2.**  
**Fixed-term employment by NACE section in Poland in 2001 and 2007 (first 2 quarters)**

	Share of fixed-term workers in a given section		Share of a given section in employment	
	2001	2007	2001	2007
Agriculture and fishery	1.8	3.8	19.1	15.0
Mining and quarrying	1.5	10.3	1.9	1.6
Manufacturing	10.7	30.2	19.9	20.8
Production and supply of energy, gas and water	2.5	7.3	1.9	1.4
Construction	17.5	33.8	6.7	6.5
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	10.9	28.1	14.1	15.0
Hotels and restaurants	18.6	37.8	1.8	1.9
Transport, storage and communication	5.0	16.9	6.0	6.2
Financial intermediation	6.9	15.6	2.4	2.4
Real estate, renting and business activities	14.4	26.9	4.4	6.1
Public administration and defence; compulsory social security and common health insurance	6.8	14.1	5.3	6.1
Education	8.0	16.2	6.7	7.6
Health and social work	6.1	16.7	6.4	5.8
Other community, social and personal service activities	12.2	22.6	3.2	3.4
Households employing workers	60.1	79.7	0.1	0.1

Source: Own calculation based on LFS data

Labour market flows of fixed-term workers indicate that in 2005-2006 almost 90 percent of temporary workers were in employment, whereas almost 20 percent found permanent jobs. Obviously, compared with people who had permanent jobs in 2005, temporary workers tended to lose their jobs slightly more often and they were less likely to switch to open-ended employment a year later. However, in the context of job loss risk these differences were not substantial, especially when comparing people with similar individual profiles and jobs but working under different contracts<sup>43</sup> – in the population of fixed-term workers the increase in the number of unemployed people amounted to only 4.8 percentage points, which can be attributed in two thirds to the type of contract involved and in one third to the individual profiles and jobs. As for economic inactivity flows, these proportions were analogous. However, on the other hand, the situation of temporary workers was clearly better than that of the unemployed – they were much more likely (by approx. 65 percentage points) to be in employment a year later, although the number of people in this group who later found permanent jobs grew only by slightly more than 10 percentage points. In fact, this difference can be attributed to the fact of these people being in temporary employment rather than to different social and demographic characteristics of the populations of unemployed people and of fixed-term workers.

<sup>43</sup> We have compared annual flows of fixed-term workers and people in control groups among those working under open-ended contracts and among the unemployed (people with similar individual profiles, similar characteristics of their dwelling places and in the case of working people – also of their working places). We have used the PSM methods, which has been described in greater detail in Part IV as well as in Appendix IV. Differences relative to the control groups constitute a measure of impact of the labour market situation in the initial year. It should be born in mind that these groups may differ from the analysed population in terms of some characteristics, which are impossible to capture in BAEL but which affect the chances of finding or losing a job.

**Table II.3.**

**Labour market flows in 2005-2006 of fixed-term workers relative to the population of unemployed people and to the population of people working under open-ended contracts**

Labour market situation in 2005	Labour market situation in 2006			
	Open-ended employment	Fixed-term employment	Unemployment	Economic inactivity
Fixed-term employment	17.7	71.4	6.0	5.0
Unemployment	4.1	17.1	58.7	17.7
Relative to the population of unemployed people	11.1	54.3	-52.7	-12.7
Relative to unemployed people with similar profiles	11.3	53.1	-52.5	-10.8
Relative to the population of people working under open-ended contracts	-76.1	69.2	4.8	2.1
Relative to the population of people with similar profiles working under open-ended contracts	-72.5	67.3	3.1	1.5

Source: Own calculations based on BAEL data

Hence, the number of people who were in employment a year later is clearly much greater in the population of temporary workers than in the population of the unemployed, although most of the former continued working under non-permanent work contracts. At the same time, those unemployed who found jobs were much more likely to work under non-permanent rather than permanent employment contracts. It should be emphasised that a span of one year is not long enough to assess how "permanent" a temporary job is but unfortunately BAEL does not allow for a longer-term analysis. It is possible, however, to compare labour market flows of people who undertook temporary work after a period of unemployment with those who remained unemployed.<sup>44</sup> Such comparison makes it possible to evaluate to what extent the fact of undertaking temporary employment allows the unemployed to enter the labour market or in fact to find a permanent job.

**Table II.4.**

**Labour market flows in 2005-2006 of people who were unemployed in 2004 and who were working under fixed-term contracts in 2005 relative to the number of the unemployed in 2004 and 2005**

Labour market situation in 2005	Labour market situation in 2006			
	Open-ended employment	Fixed-term employment	Unemployment	Economic inactivity
Fixed-term employment	16.5	69.2	9.4	4.9
Relative to the number of people who remained out of employment	11.4	55.1	-54.3	-12.3
Relative to the number of people with similar profiles who remained out of employment	11.0	53.4	-53.7	-10.5

Source: Own calculations based on BAEL data

The fact of undertaking temporary work by the unemployed seems to play a role of an employment "bridge" – the population of workers in 2006 was greater by almost 80 percentage points in the group of people unemployed in 2004 than in the group of those who were out of employment in 2005. The former group was also more likely to undertake non-permanent employment. Moreover,

<sup>44</sup> We have used the retrospective question included in BAEL 2005 about the labour market situation one year before the survey, i.e. in 2004. Out of the people who declared being unemployed one year previously, we have selected those who were working under contracts for a specified period in 2005 and their flows in the labour market in the period 2005-2006 have been compared with the flows of people who remained out of employment, including those in the control group of people with similar individual profiles (sex, age, education, marital status) and with similar characteristics of their dwelling places (voivodeship, town/village).

in the group of people who were unemployed in 2004 and who were in temporary employment in 2005, there were fewer flows to unemployment or non-participation (see Table II.4). These differences were also apparent in relation to the control group of the unemployed with similar individual profiles to those of the unemployed who then undertook temporary work.<sup>45</sup>

The regularities concerning the increasing incidence of temporary work in Poland reveal a picture which is not reflected in the experiences of other European countries. It can be assumed that it resulted from macroeconomic reasons, namely from the economic slowdown and the deterioration of the labour market situation of 1998-2002, which intensified the necessity of reducing labour costs and the uncertainty of companies with respect to future economic developments, and perhaps even the structural mismatch of labour demand and supply. At the same time, there has been no dissonance in Polish labour law between the protection of "traditional" workers and the possibilities of hiring and dismissing temporary workers, which was at the basis of dysfunctions of labour markets in Spain and France. Moreover, there is no evidence suggesting the emergence of a dual market structure in Poland, although on the other hand, there is no evidence in support of claims that temporary work makes it easier to assess the suitability of workers for particular positions, improves the adjustment of labour demand and supply or helps the unemployed to gain access to the labour market. In the next Sub-chapter we discuss this problem with regard to young people. The presented empirical research indicates, however, that the probability of a dual labour market emerging in Poland should be perceived as limited.

### 3.2. Flexible work arrangements and participation of young people in Poland

In Poland and in other NMS, the participation and employment levels among the young are clearly lower than in the EU15, which is due to the limited opportunities of taking up work by those who are still in education and of entering the labour market by graduates. Atypical employment forms, especially part-time and/or temporary work, may make it easier to gain qualifications and set on a professional career both when still in education and afterwards. In the first case, it is possible thanks to part-time employment opportunities (OECD, 1999), especially internships. In Poland, they are still not very popular but there are examples of countries where internships are common thus combining education with work experience under the so-called **dual system**. This system has a long tradition in Austria, Denmark, Germany and Switzerland, and the situation of young people in these countries is relatively better than in countries which use school-based forms of vocational training only (van der Velden et al., 2001, Gangl, 2003, Quintini, Martin, 2007). The internship system improves the adjustment of skills acquired by students to the needs of the labour market and the work experience gained in the course of education may facilitate the choice of further career and bolster the chances of finding a job most suitable for a given person.<sup>46</sup>

Box II.4 describes the construction of the vocational training system in Germany, which differs from the Polish system in a number of ways. Further education opportunities for vocational school graduates, the accreditation and skill certification systems as well as the network of ties between schools that offer different types of vocational training and employers are highly developed in Germany and hardly existent in Poland, where vocational school students graduate at the age of 18 and have few options of broadening knowledge in their field. The German case may thus be seen as a model, which demonstrates potential improvements of the vocational training system in Poland so that it would better equip its participants to enter the labour market and to successfully operate within it, especially that the closing of the transformation changes and the accommodation of negative disturbances which occurred in the Polish labour market at the turn of the last and the present decades improve the chances of integrating vocational training with the functioning of the private sector.

As much as the use of part-time work among students is rather rare in Poland and its nature is not institutionalised, the popularity of fixed-term work among the young is considerable. As argued in Chapter 2.1, this is so due to the unprecedented increase in the frequency of fixed-term work contracts in the open labour market. In the case of young people, temporary work may also serve as a "bridge" between education and the labour market which shortens the period of searching for a job which fits their skills.

We discuss the question about undertaking temporary work to start a professional career in the context of participants of the programme **First Job** because it is for this group of graduates that information is available on entering the labour market after completing education.<sup>47</sup> In Charts II.11-II.12, the so-called Kaplan-Meier curves reflect the conditional probability that graduate who stay out of employment until the moment  $t$ , remain unemployed, in the sense of possibilities of engaging in open-ended or temporary work<sup>48</sup> (for a description of this method see Appendix V). These Charts indicate that the longer the unemployment periods for graduates, the smaller their chances of finding a job. This should not come as a surprise because, above all, due to non-observable factors, such as for instance motivation to work, people who are better predisposed find jobs earlier, and secondly, as unemployment periods get longer, the human capital gets depreciated and the intensity of job searching declines.<sup>49</sup>

<sup>45</sup> Due to the nature of BAEL data, some potentially essential factors (such as unemployment duration in 2004, total length of service, acquired profession, number of children, etc.) are not verified. The compared groups may not be fully homogeneous.

<sup>46</sup> The advantages of young people undertaking work for their later situation in the labour market also arise when the nature of such work is less institutionalised. It is claimed that work does not generally prevent students from performing well at school, if the working time does not exceed 15-20 hours a week (Kablaoui, Pautler, 1991, Mortimer et al., 1996, Schoenhals et al., 1998), and at the same time it lets them network in the professional world as well as gain knowledge about job offers and professional prospects in a given field.

<sup>47</sup> We have used data derived from the Graduate Participation Survey carried out as part of the programme First Job, an EFS project from 2006 coordinated by the Labour Market Department at MPIPS.

<sup>48</sup> This category embraces fixed-term contracts, work under civil law contracts as well as work performed during internships and vocational traineeships.

<sup>49</sup> The competing risk hazard model has been used to provide controls for a series of features affecting the probability of taking up employment, including: level, type and course of studies, etc. If we take them into account, we can still observe a negative dependency between the length of unemployment and the chances of taking up the first job.

### Box II.4. Dual system – case study of Germany

In Germany, traineeships are an important part of the curriculum as well as a way to teach practical skills. Vocational school students enter into traineeship agreements with employers, under which they are obliged to study and work part-time over a period of three years (three days a week). Traineeships are supervised by tutors. School – based learning and work are complementary – hence the term dual system. Traineeships provide an opportunity to specialise in a wide range of professions and for the sake of guaranteeing quality of education, the curriculum is monitored and adjusted in accordance with the needs of the labour market. The accreditation of skills gained at work plays an important role in the system. Work agreements are registered and monitored by associations of employers from various businesses and their curriculum is regulated by law provisions enacted at the federal level by the government and social partners. At the end of their traineeships, trainees take a vocational examination and obtain a certificate. This gives vocational school students a guarantee that the qualifications gained with a given employer will be recognised when searching for a job with a different company.

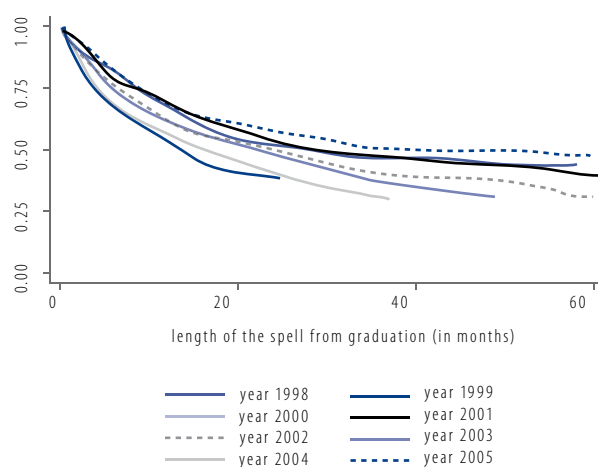
One important element of the dual system is the method of distributing the cost of traineeships. The costs of schooling are covered by local authorities, whereas employers finance the training at the workplace (apprentice and trainee wages, labour cost of tutors, equipment cost, etc.). The employment terms applicable to trainees are determined under collective agreements for particular professions – in most cases trainee wages reach approx. 25-45 percent of the average wage in a given profession and at the same time they constitute – as a rule – one third of a wage that a young worker receives after the end of his or her traineeship. The success of the German dual system is largely attributed to the participation and cooperation of schools, employers and trade unions in the process of occupational preparation of young people.

Notwithstanding the above, this system is criticised, among others, because the list of professions which allow for the organisation of traineeships is being extended too slowly compared with the changes in labour demand. Moreover, there is lively public debate on the distribution of cost of traineeships, which presently burdens mainly employers. The main drawback of vocational training is a narrow range of specialist skills taught to young workers which is the reason why these people – due to a limited level of general knowledge – may experience difficulties with reskilling. On the other hand, the supporters of the dual system emphasise that it shortens the job searching time of people who – because of, for example, limited cognitive abilities and/or motivation to study, would not be able to complete education at the higher and more general level (Arum, Shavit, 1995). From this perspective, the adverse consequences of vocational training for further career and professional mobility are to some extent a “smaller evil”, whereas its one unquestionable advantage is the fact of providing less talented or ambitious teens with a “good start”.

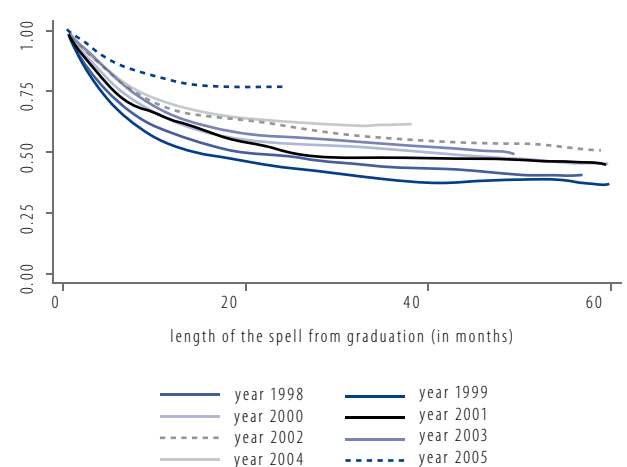
*Based on Cockrill, Scott (1997), Ryan (2000), Euridice (2006), Quintini & Martin (2007)*

Importantly enough, these curves are “steeper” in the case of temporary work. Hence, people who do not find a job within a couple of months from the completion of their education stand greater chances of finding a job in the form of temporary or casual work rather than open-ended work. They are more inclined to accept temporary work than immediately after the end of studies, whereas from the point of view of employers, temporary work makes it possible for them to verify the skills of graduates who remain jobless for a relatively long period. This does not mean, however, that increasing incidence of fixed term contracts contributes to decreasing job search duration by graduates, but the fact that such job offers are available in some sense opens up working opportunities to people whose stand relatively little chance of taking up open-ended work as their first job.

**Chart II.11.**  
**Kaplan-Meier curves showing the probability of staying unemployed conditional on not finding a temporary job among young people by graduation year**



**Chart II.12.**  
**Kaplan-Meier curves showing the probability of staying unemployed conditional on not finding a permanent job among young people by graduation year**



Remarks: The curves present the conditional probability of staying out of employment and of not taking up employment of a given type during period  $t$ , provided that a graduate remains unemployed up to the moment  $t$

Source: Own calculations based on data derived from the School Leavers Survey carried out within the project A Study on Labour Market Activity of Graduates in the Context of the Programme First Job

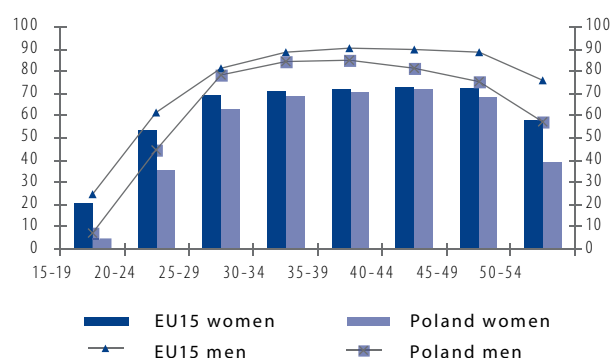
Unfortunately, on the basis of available data it is impossible to assess what are the further professional paths of graduates undertaking temporary work and especially whether such work experience helps them find stable employment in the future. However, in the case of the unemployed aged 15-29 – similarly to the entire population of the unemployed discussed in the previous sub-chapter – there are good reasons to claim that people who take up temporary employment stand greater chances of taking up permanent employment than those who remain unemployed.<sup>50</sup> In 2005-2006, temporary workers were much more often employed a year later and the share of workers employed under open-ended contracts was greater by 8 percentage points than in the control group of unemployed people in 2004 and 2005 alike. Hence, it can be assumed that the fact of taking up temporary work – apart from providing higher income to those who worked than those who remained unemployed – improved the labour market prospects of young unemployed people.

Last but not least, it is worth noting that the increasing use of non-permanent work contracts in the Polish labour market has translated into the change of dynamics of graduates entering the labour market – the probability of their undertaking the first job under an open-ended contract was deteriorating from year to year over the period 1998-2005 (see Charts II.11-II.12) and the probability of their undertaking temporary work was increasing.

### 3.3. Part-time work and flexible working time versus participation of women in Poland

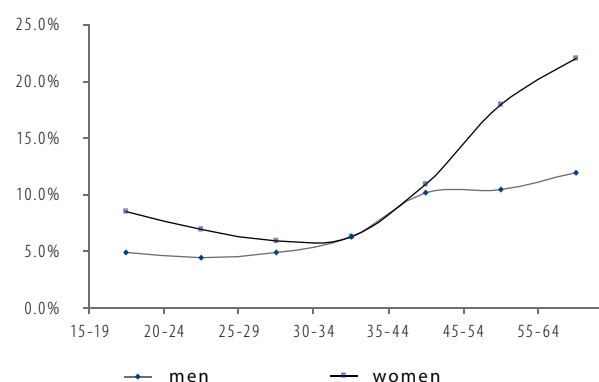
The relatively lower participation of women in comparison to of men results from their higher propensity to leave the labour market at two life stages. The first stage comes at early reproductive age, when resignation from work is due to bringing up children, whereas the second one comes at pre-retirement age. The comparison of women's participation patterns in Poland and in the EU15 indicates that women's labour supply is highest between the age of 30 and 50, although in Poland the participation of women is slightly more diversified in terms of age. The interrelation of atypical employment forms and labour supply among older people is further discussed in the next Sub-chapter – here the emphasis is on the participation of women, who persistently constitute a “vulnerable” group in the Polish labour market because family duties are still largely the domain of women rather than of their partners. The economic inactivity of women in Poland corresponds to their commitment to care over children and the elderly (see Charts II.13-II.14). Studies concerning preferences for different family models in the Polish society demonstrate that young people are much more inclined to approve of the equal partner relationship model (Kotowska et al., 2007). This means that in their generation men will contribute to child-rearing more often than it was the case in their parents' generation. Nevertheless, the problem of combining work and family responsibilities as well as the policies solving this problem and related to atypical employment forms concern above all women.

**Chart II.13.**  
**Participation during the life cycle of men and women in Poland and in the EU15 in 2006**



Source: Own calculations based on Eurostat data

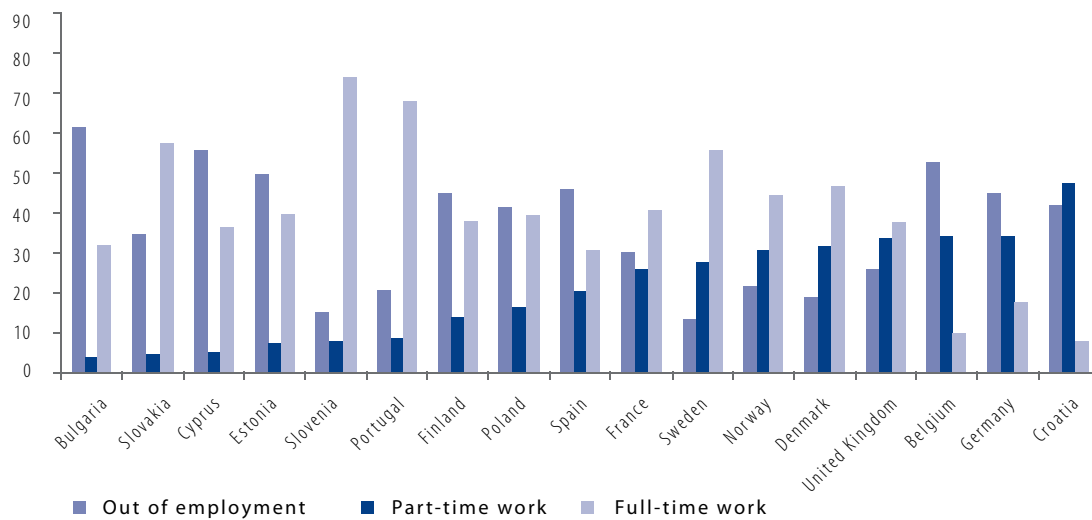
**Chart II.14.**  
**Share of people taking care of children or the elderly by age and gender in Poland**



Source: GUS, 2005.

The possibility of reducing working time is an attractive solution to the conflict between professional career and family life. In the literature on the subject it is often argued that the increase in women's employment in Western Europe was above all due to the fact that child-rearing mothers limited their working time rather than resigned from work (OECD, 2001), which made it possible for them to stay in touch with the professional environment throughout the maternity period. In Poland, however, few women with small children follow this route (Kotowska et al. 2007, Matysiak, Steinmetz, 2005, OECD 2001) and they are much more likely to opt for full-time work or to withdraw from the labour market. Chart II.15 shows the labour market status of mothers rearing children of up to 7 years in selected European countries. Poland as well as other Central and Eastern European countries are characterised by decision polarisation when it comes to labour supply of mothers, namely by low part-time employment plus a relatively high share of non-working women and a rather large share of women who combine full-time work with child-rearing.

<sup>50</sup> Similarly to Sub-chapter 3.1, we have compared the flows in 2005-2006 of people who were out of employment in 2004 but who had temporary jobs in 2005 with people having similar individual profiles who remained out of employment in 2005.

**Chart II.15.****Labour market status of women aged 18-39 with a child of less than 7 years in selected European countries in 2006**

Source: Own calculations based on data derived from ESS 2006.

Labour supply decisions are determined by institutional and structural factors and women's labour market participation patterns are related to some extent by the welfare regime. The classification of welfare regimes presented by Esping-Andersen (1990) distinguishes three major regimes: "liberal", "social democratic" and "conservative". Part-time work is an element of activation of women under the second regime, whereas under the liberal regime, social policies do not enhance women's participation but – as opposed to the conservative regime – they also do not provide systemic solutions which strengthen the traditional division of labour. However, post-communist countries, including Poland, do not neatly fit into the above-mentioned classification. Hence, it is worthwhile to compare the empirical regularities of time allocation of women as well as the institutional determinants in three countries representing the above welfare state models and in Poland. We intend to assess how family situation – especially the number and age of children – affects the probability of women aged 18-39 undertaking part-time work in Poland, Germany, Sweden and United Kingdom against the probability of their staying out of employment or working full-time.<sup>51</sup>

### Box II.5. Welfare regimes

In accordance with the typology presented by Esping-Andersen (1990), under the liberal regime, social and economic processes are regulated by market forces and state intervention is limited in scope. The above statement also concerns labour supply throughout the lifecycle as well as division of labour within households. The state does not encourage or discourage the participation of women in the labour market. The United States and United Kingdom are examples of this regime.

The social democratic regime assumes that the state is largely responsible for the welfare of citizens. Family policies are intended to provide child-rearing families with high living standards – also in the situation when women are out of employment and devote themselves entirely to family duties. On the other hand, women who want to combine work with family responsibilities have access to a wide range of childcare services. This regime applies to Sweden and Denmark.

Under the conservative model, the state does intervene but it does so in a selective manner: the preference is given to the "traditional" family model, in which the woman does not work but she devotes herself to family responsibilities. Other institutions are also of key importance, for example family and the church. Italy and Germany are examples of this regime.

The Esping-Andersen classification does not cover Southern European countries. They apply a social policy which is characterised by a limited scope of transfers but also by low participation of women and which falls outside the above classification. Hence, it can be considered as a separate regime (see Ferrera, 1996, Bonoli, 1997).

In United Kingdom and Germany having a small child (up to three years) clearly increases the risk of staying out of employment, whereas in Sweden family circumstances do not have a considerable impact on labour supply of mothers. The situation is similar in the case of mothers with two children or more. Poland finds itself between the two extremes – motherhood does not affect decisions on resigning from work more than in United Kingdom and in Germany but it modifies labour market participation much more than in Sweden. However, taking account of factors at individual level, the polarisation of choices concerning time allocation does not seem to be too strong in Poland.<sup>52</sup>

<sup>51</sup> Due to the fact that ESS data used for this purpose are cross-sectional and not panel data, it is impossible to assess the implications of part-time work on professional career evolution.

<sup>52</sup> The considerably lower probability of two "extreme" options emerging among women living in the countryside than those living in cities – which is typical for Poland, may be attributed to the specificity of agriculture.



**Table II.5.**  
**Model results for multinomial probability of women aged 18-39 staying out of work or reducing working hours**

	Poland		Sweden		Western Germany		United Kingdom	
explanatory variable	no job	full-time job	no job	full-time job	no job	full-time job	no job	full-time job
<b>family situation</b>								
1 child aged 0-3	5.71**	1.16	0.18	1.41	15.71**	3.58	8.14**	10.44**
1 child aged 4-7	1.50	5.22	2.55	6.53*	4.47*	1.15	2.56	3.13
1 child aged 8+	1.12	0.61	3.13	0.67	1.85	2.56	3.15	4.76*
2 children or more	9.08**	2.24	1.72	1.56	10.39**	7.22**	18.27**	15.06**
<b>place of residence</b>								
Small town	0.98	0.50	1.49	1.37	1.22	0.79	0.79	1.34
Village	0.47*	0.25**	0.65	1.53	0.61	0.72	0.93	1.48
N	302		285		269		379	
Log likelihood	-243.83		-246.05		-249.84		-346.22	
Pseudo R2	0.199		0.168		0.144		0.164	

\* relevant at the level of 5 percent; \*\* relevant at the level of 1 percent. Control variables: age and squared age, woman's education, presence of a partner and partner's education (no partner, partner with higher education, partner with secondary education, reference group: women living in cities, having no children and having a partner with primary education). The table shows the results for variables which turned out to be statistically relevant for women in Poland. Data for Germany concern exclusively the former Western Germany lands.

The key institutional determinants leading to different participation patterns among women are:

- legal regulations, which enable the reduction of working time and which determine the relevant rights and obligations of employees and employers;
- availability of childcare services which determines the success of parents' decision on their continued participation in the labour market combined with child rearing;
- tax system structure and the design of the social transfer system which determine the financial attractiveness of part-time work.

In the subsequent part of this Chapter we discuss how the above aspects shape the situation in Poland and how it compares with other European countries.

Table II.6 presents the legal determinants of part-time employment in Poland as well as in Germany, United Kingdom, Sweden and in the Netherlands, where part-time work is most prevalent of all European countries (see Chart II.5). In Poland, the legal solutions adopted during the transition period did not enhance the use of non-standard employment forms but the recent amendments to the Labour Code have opened up possibilities for adjusting working time to individual needs. It does not seem that Polish legislation regulating the protection of part-time workers and working time flexibility differs from the regulations introduced in Western European countries.

As for access to childcare services in Poland, it is almost the lowest in all of Europe. The share of children covered by institutional care at the age of 3 years or less amounts to 2 percent, whereas in Sweden it is as high as 39.5 percent and in United Kingdom and Germany it is 25.8 and 9 percent respectively. Such disproportions also occur among pre-school age children (3-5 years) – in Poland this indicator amounts to only 36.2 percent, whereas in Sweden it is 86.6 percent and in United Kingdom and Germany – approximately 80 percent (OECD, 2007). Indeed, public nursery fees in Poland can be considered relatively low (see Table II.7) in comparison with other countries but the number of available nursery places which is small as compared with the demand, may constitute barriers to taking up work by parents.

**Table II.6.**  
**Part-time employment legislation**

<b>Germany</b>	The act pertaining to part-time employment was amended in 2001 in such a way that it increased the bargaining power employees who face the choice between full-time and part-time work. In companies which employ more than 15 persons, employees acquire the right to reduce their working time after a period of 6 months. Employers may disagree to allow for such reduction, if the specificity of company business does not allow for such changes to its organisation. There are also some detailed rules concerning part-time work of parents with children up to 3 years old – they have a statutory right to reduce their working time..
<b>United Kingdom</b>	A number of measures have been taken to propagate part-time work and flexible working time arrangements. Among others, the working time settlement period has been extended (to 12 months) and a possibility of compensating for overtime with shorter working hours which lets employers avoid costly overtime rates. In 2003, new regulations were introduced to guarantee parents with small children greater freedom to adjust working hours to their needs. Parents of children younger than six years who have worked for at least 26 weeks with one employer have the right to flexible work arrangements defined as the possibility to alter working hours, days or locations. Employers are obliged to consent to requests of this sort under the above circumstances. Nevertheless, they can refuse to do so due to economic reasons.
<b>Sweden</b>	Sweden was one of the pioneers when it comes to implementing flexible working time organisation and part-time working arrangements addressed to parents of small children. As from 1979, parents of nursery-age children can reduce their working time to 30 hours a week until their children reach the age of eight. The only condition imposed is that their length of service with a given employer must amount to at least 6 months. People employed part-time have the same right to awards and bonuses as other employers. The possibility of switching back to full-time work is guaranteed, however, upon 3-month notification of the employer.
<b>Netherlands</b>	In 1996, the Act on equal treatment of full- and part-time workers (WOA) was adopted. It guarantees equal working terms and conditions (rates, bonuses and training opportunities) irrespective of working time arrangements. The observance of the provisions of the above act is monitored by the Equal Treatment Commission (Comissie Gelijke Behandeling). Once every two years, employees with service length of at least one year with a given employer have the right to express their preferences as to the number of working hours. Employers may ignore such requests only if company interests are threatened. The provisions of the above Act do not apply to companies which employ less than ten workers.
<b>Poland</b>	In 2004, in Poland, the Labour Code was amended in such a way that it now provides for a shorter working week, work at weekends and task-based working time. This amendment introduced legal protection of part-time workers, which includes granting equal treatment and pay for part- and full-time workers, and obliges employers to respect employee preferences as to their working time. Moreover, in 2002-2003, a number of amendments were introduced to Polish labour law which intended to make it easier for women to maintain links with the workplace when on parental leave. These amendments provided for a possibility to divide such leave into parts, replace the right to post-maternity leave with part-time work and take up work or studies in the course of the leave.

Source: EGGSIE (2005), Sundstrom, Stafford (1992).

Finally, the choice of a working time option is affected by financial factors determined among others by the structure of tax and social benefit systems. For the purpose of comparing how these systems work in Poland, United Kingdom and Germany, we have used the results of microsimulation models published in the paper of Haan et al. (2007).<sup>53</sup> The above mentioned simulations concern income available to couples with two children, where the man works full-time earning a median wage for a given country, whereas the woman (if working) earns an equivalent of the tenth percentile of wages in a given country. This way one can compare how the fact of taking up work by women and the choice of a working time option translate into the increase of net income available to households, i.e. taking account of taxation and transfers. Table II.8 presents a relationship between income available to a family where only the man works (full-time) and income available when the woman works as well – full- or part-time.

Among the analysed countries, full-time work is financially relatively most attractive in United Kingdom, where available household income that consists of the man's wage and transfers is 40 percent lower than when the woman works full-time. In Poland and in Germany these differences are less considerable and comparable to one another. These relationships are the same when the woman works half-time. Finally, also the fact of the woman in such a hypothetical household reducing her working-time is similarly "costly" in Poland and in Germany – the net income would then amount to 14.6 and 15.2 percent respectively, whereas in United Kingdom – to 18.7 percent (Haan et al., 2007).

<sup>53</sup> No data available for Sweden. The simulation results are quoted from Haan et al. (2007), whereas their interpretation has been done by the authors of this Report.

**Table II.7.**  
**Availability and cost of institutional childcare**

Germany	<p>The availability of institutional childcare differs in the Western and Eastern Germany. In the former Federal Republic of Germany the share of small children covered by institutional care amounts to approx. 3 percent and in the DDR to 37 percent. In 1996, a federal law was enacted which stipulated that every child older than three years has the right to institutional care but most nurseries are only open for half a day and they do not serve meals.</p> <p>Fees depend on parents' income and they differ across regions. Average monthly fees amount to approx. 110 EUR in public nurseries and to approx. 690 EUR in private ones. In accordance with the OECD estimates (2007), the relationship of average fees to gross wages in Germany is approx. 9 percent and the share of contributions made by parents to the cost of public childcare amounts to approx. 23 percent.</p>
United Kingdom	<p>Most childcare facilities operate on part-time basis and offer services addressed to 3-4-year-olds. The cost of their operation is mainly covered from contributions made by parents – the share of such contributions in the overall expenditure on childcare amounts to approx. 75-93 percent. It is estimated that the cost of childcare accounts for approx. 23-25 percent of an average wage.</p>
Sweden	<p>Institutional childcare is commonly available and all children aged 1-12 are entitled to it. Fees differ from region to region and the maximum permissible cost amounts to 3 percent of joint parent income, where the maximum is 140 EUR per month for the first child and 93 and 47 EUR for the second and third child respectively. The relationship of childcare fees to wages is approx. 4.5 percent, which means that it is twice lower than in Germany and several times lower than in United Kingdom</p>
Poland	<p>In Poland, the cost of childcare oscillates from 50 EUR for public nurseries to 700 EUR for private ones. In the case of the former, this cost constitutes approx. 7 percent of an average wage, which is a moderate amount compared with other countries. However, this concerns situations when a child stays at the nursery for only five hours – longer hours (if available) entail additional cost on the part of parents.</p> <p>The main limitation of the use of childcare services is their low availability: in the 1990s, a number of nurseries were closed or privatised and the network of non-public nurseries was not sufficiently developed. The shortage of places in public childcare institutions was particularly apparent in the 1990s, when there were 2.5-2.9 children aged 1-6 to one available place. Since then, the situation has improved but mainly due to lower fertility rates rather than to an increased number of places available in public childcare institutions.</p>

Source: EGGSIE (2005), OECD (2007), GUS (2007).

In Poland, the tax system structure, reduces – to a similar extent as in Germany and more than in United Kingdom – the financial incentives to take up part-time work and even more so full-time work by poorly paid women with two children, as demonstrated in the above simulations. In the face of low availability of childcare in Poland (see Table II.7) as well as of a relatively higher cost (as a share of available income) of goods and services if purchased in the market than if otherwise provided by a non-working woman in the hypothetical household, it can be assumed that although in nominal terms the net tax structure has a similar effect on employment decisions made by parents in Poland and in Germany, incentives in favour of the polarisation of labour market participation may be greater in Poland. Hence, the gap between the EU15 and Poland in terms of popularity of part-time work may be considerable due to the interaction of the above-mentioned insignificant institutional differences.

**Table II.8.**  
**Available income replacement rate by number of working hours of the second earner in the family (in percent)**

Number of working hours of the second earner in the family	United Kingdom	Germany	Poland
20 hours per week	73.2	79.8	77.4
40 hours per week	59.5	67.7	66.1

Source: Haan et al. (2007).

What is more, this gap may result not only from little incentive to choose this employment form but also from difficulties in finding it. Although sectoral differences within countries are of marginal importance for international differences in the use of part-time work (see Chart II.6.), job creation dynamics in sectors which often resort to it and especially in services may be highly relevant. Pissarides et al. (2004) indicate that the popularisation of part-time work in Western Europe was a by-product of specific economic processes as well as of an employment shift towards services which brought a general improvement in the labour market situation of women.

In other words, supporting part-time employment as a tool for integrating people with family commitments in the labour market may be efficient, if it coincides with development of enterprises, which use flexible working arrangements, including part-time work. The creation and development of such companies may be hindered by barriers to doing business which are more pronounced in Poland than in other developed countries (see Box II.6).

### Box II.6. Obstacles to setting up a business versus employment of women

Law provisions which regulate the entry of new businesses in the market have a significant impact of the labour market. Lopez-Garcia (2003) argues that institutional obstacles to setting up business slow down the reallocation of labour to the services sector and the transition to an economy based on services is less dynamic and related to increased unemployment. Barriers in setting up business are particularly significant when it comes to employment of women. Pissarides et al. (2004) indicate even that in the 1980s and 1990s they determined the growing dynamics of women's employment in Western European countries. In countries, which provide favourable conditions for setting up business, the development and the expansion of small companies – combined with structural changes in labour demand (i.e. growing importance of services), has led to an increase in the number of jobs in small enterprises operating in such areas as retail, catering, hotels and restaurants, etc.

The situation of businesses in Poland may be illustrated by making reference to the ranking Ease of Doing Business prepared by the World Bank. The higher the place in the ranking, the better and usually simpler the provisions regulating business activity. In the recent years, Poland ranked 74.-75. among 174 countries covered by the study. This harsh assessment is mainly due to obstacles to business formation – in this sub-domain Poland came 114.

It is worth noting that part-time work may have adverse effects on wages and on further career prospects<sup>54</sup> and this is why especially highly-qualified workers and those who pay particular attention to professional development may despise the idea of reducing working time and perceive it as lowering their professional status. Alternative methods of combining work and child-rearing, which are free from the above drawbacks, include among others flexible working time and telework. In fact, these options are considered attractive also in Poland – Kotowska et al. (2007) indicate that more than a half of young women who are out of employment due to child-rearing duties declare that they would enter employment, if they could work at home or under flexible working time arrangements. For comparison, 17.8 percent of women pointed to part-time work availability as a condition of re-entering the labour market.

In 2006, however, the possibility of working at home concerned only as little as 12.3 percent of all women employed (GUS, 2006). Also when it comes to the flexibility of starting and finishing work, the situation in Poland is not favourable, especially in comparison with other Western European countries. The share of women aged 20-49 who declared that it was impossible for them to adjust the time of starting and finishing work for family reasons amounted to 26.4 percent in the EU15 and to 42.4 percent in Poland (Eurostat, 2006). Hence, although flexible working time and home-based work are often a preferred way to combine a professional career with family life, it is only a small percentage of working women who have the possibility to use this option.

## 3.4. Flexible work arrangements and work integration of older people in Poland

Withdrawal from the labour force before the statutory retirement age plays a key role when it comes to the gap in labour market participation and employment between Poland and the EU15 and the NMS (see MPIPS, 2006a and Part I of this Report). It is largely due to the design of the social security system (MPIPS, 2006a, Bukowski et al., 2006b) but the difficulties that older people experience in upgrading their qualifications and adjusting to the changing market conditions increase the incentives to withdraw from the labour market. Their participation decreases as well as health deteriorates with age – in Poland, more than 10 percent of people at pre-retirement age, i.e. relatively many compared with other European countries, declare that bad health complicates their everyday life, whereas older people – especially women (see Chart II.14), often take care of other family members (GUS, 2007). In fact, in Poland, labour market policies addressed to older people have generally had a deactivating effect and they have not done much to make it easier for this group to stay in the labour market. In this section we discuss flexible employment forms, especially part-time work and flexible working time could potentially contribute to increasing labour market participation of the elderly.

Favourable conditions that extend the working life can be created even in the context of standard employment forms, e.g. by matching tasks to individual capabilities and by increasing the freedom to determine working time and work intensity (Illmarinen, 1999).<sup>55</sup> Nevertheless, it is part-time work that is the relatively most common – in fact, institutionalised, method of modifying work organisation which enhances economic activity in older age groups (Jolivet, Lee, 2004, OECD, 2006). Part-time work can serve as a bridge job between full-time work and retirement thus making it easier to adjust to new life circumstances and to avoid a potential crisis connected

<sup>54</sup> Part-time workers may receive lower hourly rates because it takes longer to acquire job-specific skills (Hirsh, 2004). Moreover, employers bear the costs of hiring workers, which do not depend on the number of hours worked by an employee (Montgomery, 1998). Due to the low reliability of data on wages declared in LFS (wage distribution is much lower than that resulting from studies on wages conducted by GUS), an empirical examination of part-time penalty is difficult but does not suggest part-time penalty in Poland.

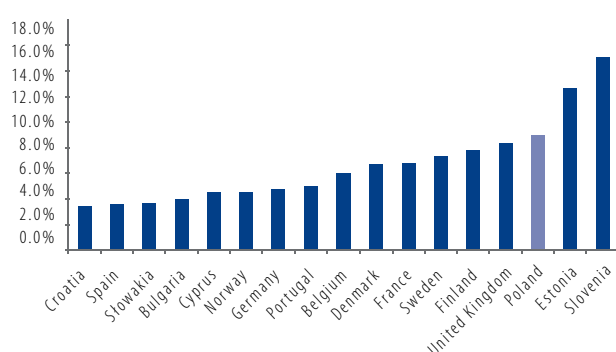
<sup>55</sup> The potential importance of flexibility in organising work for longer participation in Poland is evidenced by the study of factors that encourage later retirement (GUS, 2007). One person in four declares that "flexible working time arrangements" would incline them to stay longer in the labour market, although these are declarations only.

with retiring from professional activity and losing work-based social ties (Latulippe, Turner, 2000, Casey, 2006). Indeed, in European countries, over-55-year-olds belong to groups in which part-time work is particularly popular (European Commission, 2006). In Poland too, although in general the share of employees working part time is low, part-time work in the age group 55-64 is slightly more frequent – in 2006, it amounted 20 percent in Poland compared with 23 percent on average in the EU15.<sup>56</sup> Importantly enough, part-time work among older people reflected employee preferences much more often than among prime-age workers (European Commission, 2007). High incidence of this employment form in older age-groups accompanied by its considerable acceptance seems to indicate that working time reduction is attractive for older people and that it can prolong working life.

It is difficult, however, to assess how many older part-time workers in Poland work under such arrangements as a result of working time reduction at pre-retirement age. Panel data derived from the survey *Social Diagnosis 2007* indicate that from the group of people who were 50-54/60 years old and who worked full-time outside the agricultural sector in 2000, 48.6 percent did not participate the labour market five years later and only 2.9 percentage points of them worked part-time in the meantime (i.e. in 2003).

**Chart II.16.**

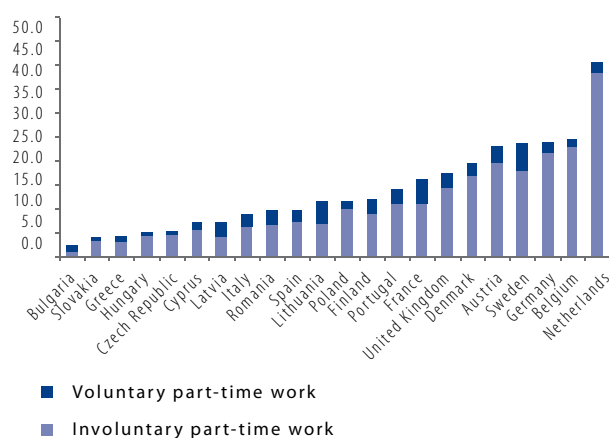
**Share of older people (aged 50-64) who experience difficulties with everyday activities due to illness or impairment**



Source: Own calculations based on data derived from ESS 2006.

**Chart II.17.**

**Part-time employment indicator among older people in European countries in 2006 indicating their motivation to take up work**



Source: Own calculations based on Eurostat data.

As for the share of people who reduced their working time, it amounted to 5.7 percent. This implies that in Poland a significant share of older people working part-time mainly reflects working time reductions effected at prime-age and only to a small degree – gradual withdrawal from the labour market.

In some countries, those forms of gradual retirement that involve flexible employment forms were institutionalised. These experiences indicate that – as exemplified by Finland – compensation for income lost due to reduced working time with the same employer is costly and it can lead to abuses and deadweight loss because of restricting labour supply of people who are ready to work full-time. On the other hand, however, the use of bridge jobs in Japan and in the United States allows to expect that external job mobility – i.e. a simultaneous reduction of working time and change of position – may provide an opportunity to continue work under new conditions which involve lower pay but which are better-suited to the capabilities of older people. In the two above-mentioned countries, however, these are the specific features of the labour markets that are of key importance – in the United States they include generally low unemployment, highly developed cheap services and no minimum pay, and in Japan – unique work organisation and specific corporate culture.

Gradual retirement programmes, in order to be effective, must be integrated in the social security system, especially in the retirement and pension system. One of the conditions of cost-effectiveness of working time reductions at older age is to base retirement benefits on income generated throughout the entire period of economic activity and not only in its latest phase, which is common under traditional systems with determined benefits. In Poland this condition is met under the retirement system applicable to people born after 1948 and based on determined social benefit premiums.

Secondly, the availability and relative financial generosity of transfers addressed to older people constitute alternative costs of part time work and decrease the net benefit from such employment, which is well illustrated by the example of France described in Box II.7. As indicated among others by Bukowski et al. (2006b) and by the previous issues of *Employment in Poland*, this is exactly the consequence of the passive labour market policy that Poland adopted in the last two decades.

<sup>56</sup> We should bear in mind the significant disproportion in terms of the employment indicator among older people in Poland (28 percent in 2006) compared with the EU15 average (45 percent). Hence, in terms of share in population, the frequency of part-time work among older people in Poland is twice lower than on average in the EU15.

Thirdly, making part time work pay is more difficult if benefits to which senior workers are entitled are means tested (OECD, 2006). In Poland, pensions and early retirement pensions are subject to reduction when income generated from work exceeds 70 percent and to suspension when it exceeds 130 percent of average wage.<sup>57</sup> Such solution may reduce the labour supply of pension beneficiaries who would otherwise be able to obtain income that exceeds the above thresholds. At the same time, it should be kept in mind that it is particularly the early retirement scheme that constitutes the most deactivating element of the social security system. In order to increase the labour supply of older people in Poland, it is essential to decrease the possibility of withdrawing from the labour market before reaching the statutory retirement age, in accordance with the provisions of the retirement system reform of 1999. What is more, attention should be paid to income thresholds that do not affect the amount of benefits of those who continue working and especially so in the case of pensions on the basis of continuing inability to work.

### **Box II.7. “Gradual retirement” in Finland, Japan, France and the United States**

#### **Finland – subsidising part-time work**

In Finland, part-time work of older people is subsidised. Workers aged 56 and more can obtain compensation amounting to 50 percent of income lost due to working time reduction and at the same time they retain all their retirement rights. It is difficult to assess to what extent this solution translates to the increase in effective labour supply – in an ex post survey a large number of beneficiaries declared that they would have had continued working full-time, if subsidies had not been introduced (OECD, 2006). As from 2005, the subsidy programme has been available to over-58-year-old and some retirement rights have been withheld.

#### **Japan – Teinen system**

Although the statutory retirement age in Japan is 65 years, most people carry on working much longer. Extended economic activity is encouraged by the teinen system. The moment that a person reaches pre-retirement age (58-60 years) their work contract is terminated. Upon such termination, the previous employer plays an active part in finding a new one, usually it is one of the —supplier companies. The terms and conditions of such a new job are different – they usually include shorter working hours and limited responsibility.

#### **United States – “retire and rehire”**

In the United States, retirement programmes are often designed in such a way that it is most beneficial to retire at the age of approx. 58. Many workers opt for retirement at this age but because of low retirement income they take up work which usually involves shorter working time and a less demanding position. In many cases such jobs can be found with the same employer as before retirement. Moreover, the American tax system “favours” retirees.

#### **France – “solidarity employment contracts” reform**

In the early 1980s, the early retirement system in France was reformed to provide for a possibility to reduce working time to part-time and to retain the right to benefits which partly compensated for the loss of income resulting from shorter working time. The programme attracted little interest. One reason was that the gross income of a senior employee transferring to part-time and to “retirement” amounted to 80 percent of their previous salary (50 percent of salary plus 30 percent compensation), whereas in the case of full retirement – to 70 percent. After tax the difference was too small to make part-time work pay off.

*Based on Wadensjö (2006), OECD (2006), Casey (1998)*

<sup>57</sup> Meaning income generated from activities that are subject to mandatory social insurance. Activities subject to mandatory social insurance include employment, service and any other paid work as well as non-agricultural activity.

## Summary

Employment protection legislation strictness as well as the availability of atypical forms of contracting and organising work constitute one of the key institutional dimensions affecting the flexibility of the labour market, the adaptability of its participants to economic changes and to challenges that naturally arise over the life course. Theoretical arguments and international experiences indicate that in markets characterised by a high degree of protection of the traditional employment relation as well as by obstacles to the use of alternative types of contracts, the process of absorbing disturbances takes longer and the reallocation of production factors is not as smooth as in markets that are subject to less restrictive regulations. Hence, in the developed countries it is now common to use a wide range of atypical employment forms. In Poland, similarly to other Central European countries, this process is generally less advanced than in Western Europe.

The presented evidence indicates that in comparison with other countries in the region, Polish Labour Code poses relatively few obstacles and does not substantially increase the cost of establishing and terminating traditional employment contracts, as well as offers fair flexibility in terms of shaping working time arrangements and securing possibilities of working part-time, whereas with respect to temporary employment it is more restrictive than relevant regulations in other NMS. At the same time, the last few years have brought a dynamic propagation of fixed-term work in Poland and have seen an integration of temporary work into the functioning of the labour market in Poland. These processes have been accompanied by considerable fluctuations in total employment and unemployment rates. It can be assumed – contrary to common belief – that the relatively low strictness of labour law regulations as well as the modification of the model and of contracting work facilitated the absorption of negative disturbances from a couple of years ago, supported employment rebound and reduced unemployment to the levels which no longer distinguish Poland from other European countries. Notwithstanding, the spread of atypical employment forms – although making it easier for companies to adjust the amount of labour to their needs and to react to evolving market circumstances, may also entail some negative consequences for temporary workers, who are thus deprived of the stability guaranteed by traditional open-ended employment. There is no evidence, however, to support the claim that we are witnessing in Poland a labour market dysfunctionality – similar to the one which emerged on the Spanish labour market, although it can neither be argued with confidence that temporary employment improves the professional prospects of those who engage in it. An expansion of temporary work in all section of the Polish economy, which concerned workers with different education profiles, indicates that this phenomenon may be due to macroeconomic impulses as well as to the structural mismatch between labour supply and demand or a negative correlation between formal education and practical professional skills.

Nevertheless, in Poland, the development of atypical forms of employment which support the professional integration of groups whose situation on the labour market is relatively weak, should be considered as relatively low. The lack of previous work experience – whether in the institutionalised form or not – means that when young people enter the labour market their qualifications might be difficult to recognise, which results in young people being commonly employed under temporary contracts. What is more, the potential of atypical employment forms that allow to combine work and family duties or to continue working despite advanced age or poor health, has not been fully used in Poland. The low incidence of part-time work, especially among child-rearing mothers and older people, is largely due to passive labour market policies as well as institutional deficiencies.

In the area of relevant legislation Poland has largely converged with countries which are considered as favouring the use of atypical employment to increase the participation in the labour market of most fragile groups. Hence, it is of crucial importance that the elements of the social security system which deactivate older people are abolished and that arrangements promoting flexible work organisation, especially in the case of parents and older people, are integrated within the industrial relations and social dialogue. In the contemporary labour markets it is the employability and adaptability of its participants that ought to be enhanced and not the protection of specific existing jobs. This can be achieved through the use of atypical employment forms, which balance the need for flexibility on the part of employers and the security and adaptability of employees, who are further supported by active labour market policies in case of dismissal.

## Part Wages in macro- and micro-perspective

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## Introduction

In the context of the rapid changes in the Polish labour market in the years after 1990, a question arises as to the role of wage-setting processes in the absorption of aggregate disturbances. Quick adjustments of wage levels to the changing economic conditions make it possible to reduce the cost that comes in the form of extensive fluctuations in unemployment and employment. Consequently, economies where wages are flexible take less time to overcome economic slowdowns and crises in their labour markets are less pervasive and acute. In this Part, we trace the evolution of wages in the Polish economy in the period 1995-2006 in a bid to answer the question how the wage level reacted to the considerable economic downturn at the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries and whether the wage-setting processes aided or maybe hindered quick absorption of macroeconomic shocks. We also discuss how cyclical developments in the Polish labour market compared with the processes occurring in other NMS8 and in other developed countries.

In the subsequent sections, we abandon the macroeconomic perspective and probe deeper into the analysis of wage changes in particular socio-economic groups. We look at how the wage distribution has changed in the recent years in Poland and what factors have been responsible for the observed direction of changes. We also answer the question to what extent the increase in real wages translated into changes in income available to specific professional and social groups.

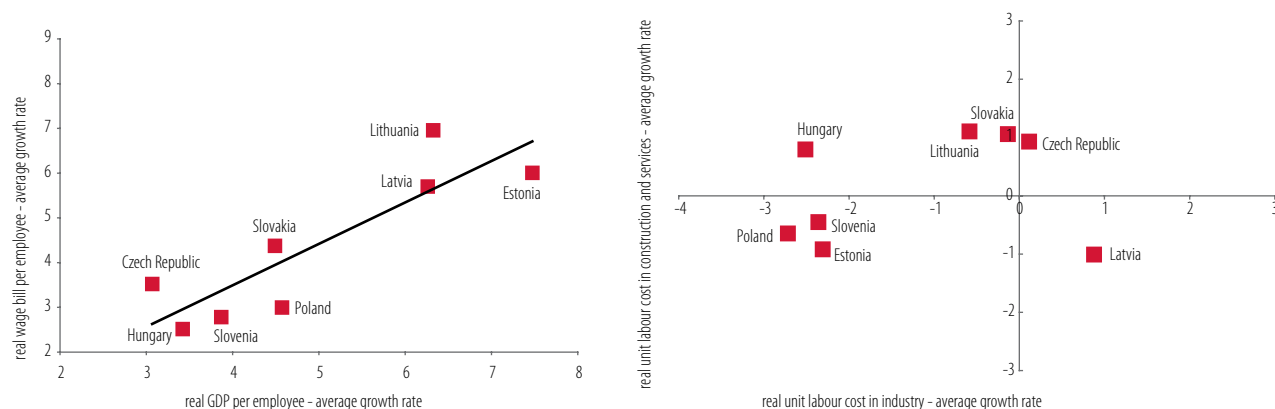
In the next chapters, we discuss the results of the wage structure transformation in Poland in the years 1996-2006 and we present a detailed description of factors determining the wage distribution towards the end of this period. Due to different natures of wage systems we introduce into our discussion a dichotomy between public and private sector and we point to some differences in the rules and effectiveness of the two systems. We also carry out detailed analyses which let us assess the role of education and other features of human capital in the process of determining wages. Moreover, an extensive discussion on wage determinants elucidates wage differentials across occupations.

## 1. Productivity and wages in macroeconomic perspective

The main point of reference for the analysis of changes in average wage level in the economy is the evolution of labour productivity. This is so because as a rule labour cannot be remunerated at levels which are considerably lower or higher than its marginal productivity.<sup>1</sup> Hence, the dynamics of real wages in the long term is strongly correlated with labour productivity growth. At time the dynamics of these two measures may diverge temporarily due to real and nominal frictions which result in the prolonged adjustment of wages to new equilibrium levels in response to macroeconomic disturbances (e.g. productivity shocks, monetary and fiscal shocks).

**Chart III.1.**

### Wages and productivity in the NMS8 in 1995-2006



Remarks: Real unit labour cost is equal to total compensation per employee divided by GDP per employee. The dynamics of real unit labour cost is negative when wages grow slower than labour productivity. Real unit labour cost is equal to the labour share. In the subsequent sections, these terms are used interchangeably. The services sector includes market services (sections G-K).

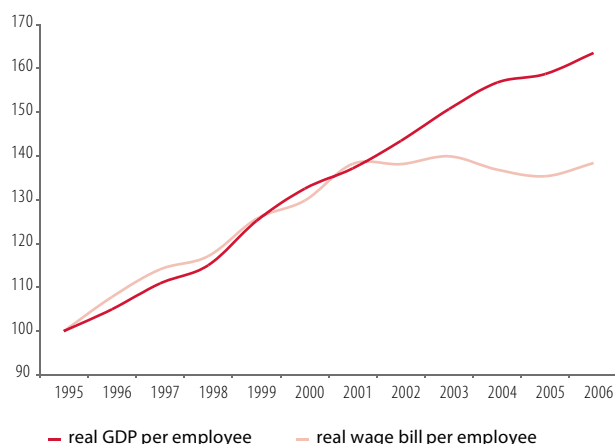
Source: Own calculations based on Eurostat data.

The above observations prove correct in the case of countries in our region. The average productivity growth rate in the years 1995-2006 was evidently connected with the average growth rate of unit labour cost. At the same time, the Baltic states stand out from the group with a clearly higher dynamics of both measures. It is worth noting that in most NMS8 (excluding Lithuania and the Czech Republic) labour productivity was growing slightly faster than real wages, which may be due to a number of factors. Firstly, calculations of unit labour cost do not precisely take account of wages earned by the self-employed. Had these wages been growing in the examined period at a faster rate than wages of hired workers, then the presented data would be understating the real wage dynamics. As indicated by Askenazy (2003)<sup>2</sup>, in the last decades, the composition of the self-employed population has been changing continually – the share of people working in agriculture has been steadily decreasing as the share of self-employed professionals (lawyers, doctors, etc.) has been growing, which bolstered the average wage dynamics among the self-employed. Secondly, the analysed period is quite short and it cannot be ruled out that it is not sufficiently long to allow for a full adjustment of wages to changes in productivity. Thirdly, the NMS8 may be repeating the trends observed throughout the last 30 years in the developed countries, where the real unit labour cost (quotient of wage fund per employee and GDP per employee) has been gradually decreasing (see Box III.1).

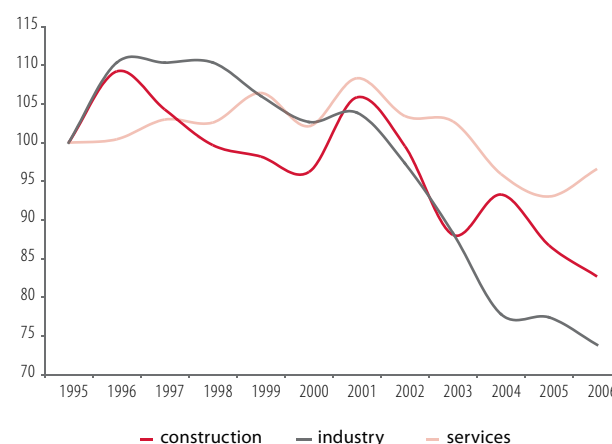
<sup>1</sup> Departures from this rule have to do among others with the use of efficiency wages and with differences in the bargaining powers of employers and employees. In the former case, employers decide to pay workers above their marginal productivity in order to motivate employees to greater effort and to reduce staff turnover. In the latter case, a strong position of employees (employers) granted by, for instance, high turnover cost which results from the necessity of training new employees, makes it possible for employees to appropriate an extra share of the value added that goes beyond the input of labour (capital) and consequently to set wages above (below) the level implied by labour productivity.

<sup>2</sup> See European Commission (2007)

**Chart III.2.**  
**Labour productivity and real wages in Poland (1995=100)**



**Chart III.3.**  
**Real unit labour cost in given sectors in Poland (1995=100)**



Remarks: Real unit labour cost is equal to total compensation per employee divided by GDP per employee in a given sector

Source: Own calculations based on Eurostat data.

Out of all NMS8, the difference in the dynamics of wages and productivity during the analysed period was greatest in Poland. The fall of unit labour cost in 1995–2006 results above all from the stabilisation of real wages in 2001–2006 with a simultaneous continuation of the productivity growth dynamics<sup>3</sup>. After the economic slowdown initiated by the Russian crisis of 1998, which touched most NMS8 and led to a considerable deterioration of their labour market situation (see Part I as well as Bukowski, Koloch and Lewandowski (2008)), the Polish economy experienced another downturn in 2001–2002, which resulted in a further increase in unemployment.

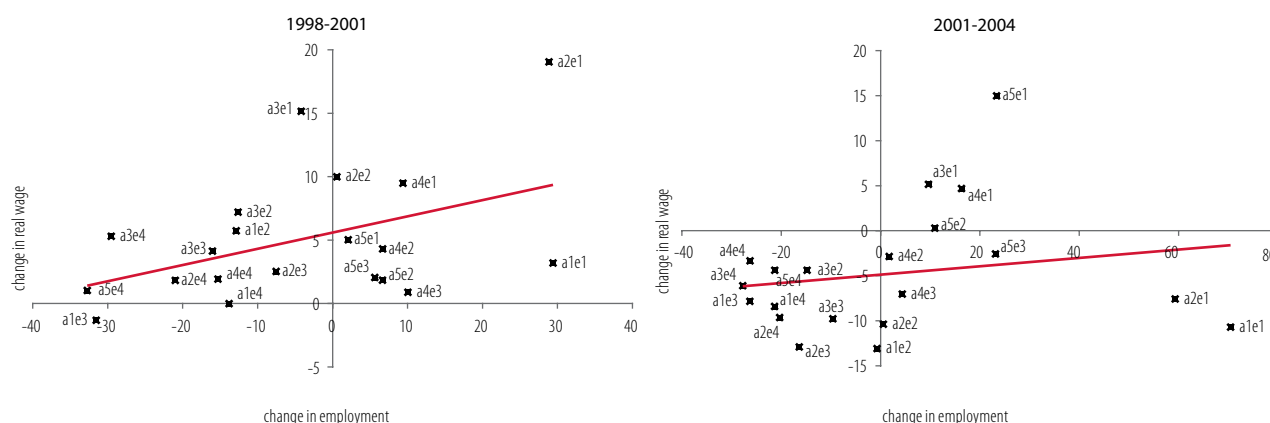
It is worth noting that the reactions of the Polish economy to the crisis of 1998 and to the slowdown of 2000–2001 were different. In the face of the Russian crisis, there was no weakening of the wage dynamics, which led to a decrease in labour input and to a significant increase in unemployment in the years 1999–2000. The increasing relative position of *insiders* made it possible to maintain the real wage growth irrespective of severe unemployment increases. Chart III.4 demonstrates that regardless of employment falling by even up to 20–30 percent in some groups of workers, the real wage dynamics was positive. As pointed out in Part I, during the above-mentioned period, the Polish economy was also under a strong influence of a negative labour supply shock. This process overlapped with the above changes in the relative bargaining power of employees thus bolstering the pressure on real wage growth.

The economic downturn from the beginning of this century caused an intensification of job destruction and consequently an increase in unemployment. Also in this case, in the first phase of the slump there was no fall in real wage dynamics. However, the deteriorating situation in the labour market gradually translated into a relative decline in employee bargaining power and weakening of wage demands as from 2002. In this context, the Labour Code amendments introduced in November 2002 surely played an important role (mainly after 2002), especially those which suspended the application of provisions that limited the number of fixed-term contracts concluded with one employee and those which introduced the possibility to suspend collective agreements for 3 years – upon agreement with employee representatives – in the case of employers experiencing financial trouble.<sup>4</sup> The above institutional changes reduced the cost of employing new workers and thus weakened the relative position of those who were in employment with respect to those unemployed and worked to render wages more flexible. Hence, as much as in response to the Russian crisis the adjustment processes in the labour market took place mainly through labour input, the economic slowdown of 2001–2002 translated into the numbers of employed and unemployed as well as into a fall in real wage dynamics. The reduction of unemployment in the years 2002–2005 was gradual (in 2005, the unemployment rate still amounted to approx. 18 percent), which limited the pressure for wage increases. Consequently, real wage remained unchanged for a longer period.

<sup>3</sup> A clear weakening of the labour productivity growth in Poland could be observed only in 2005.

<sup>4</sup> Labour Code amendments from 2001–2004 were discussed in more detail in MGIP (2006).

**Chart III.4.**  
**Changes in employment and in average real wages in educational and age groups in percent**



Remarks: Symbol "a" stands for age groups: 1 – 15-24, 2 – 25-34, 3 – 35-44, 4 – 45-54, 5 – 55+. Symbol "e" stands for educational groups: 1 – tertiary, 2 – higher secondary and secondary, 3 – basic vocational, 4 – lower secondary and less

Source: Own calculations based on data derived from LFS and SES CSO.

Based on the results of the structural decomposition from the SVECM model presented in Part I and carried out by Bukowski, Koloch and Lewandowski (2008), it can be claimed that although the evolution of wages in reaction to the Russian crisis and to the negative labour supply shock in 1998-2001 partly diminished the negative results of external macroeconomic disturbances<sup>5</sup>, their full absorption would have probably required a stronger reaction on the part of real wages. The wage rigidity, which persisted till 2001, made it impossible to adjust wages and to avoid the unemployment upsurge. As a result, the Russian crisis and the economic slowdown of 2001-2002 led to a severe crisis in the Polish labour market. In the Baltic states, where the real wage dynamics clearly slumped in relation to labour productivity dynamics as early as in 1999-2000 (see Chart III.6), negative effects of the Russian shock were absorbed much faster and they did not cause such an acute deterioration in the national labour market performance.

The period of slower economic growth in 1998-2002 also brought – apart from a lower general level of employment and a rapid increase in unemployment – a certain reallocation of labour demand. As demonstrated in Chart III.4, the rapid slump in employment among people with low qualifications (approximated by the education level) was accompanied by a considerable increase in employment and wages among people with better qualifications (i.e. with higher education), especially among young people. The above developments took place at the time of growing labour supply of people with tertiary qualifications – in the years 1998-2001, the number of the economically active in this group went up by 13.5 percent. Interestingly enough, unemployment in this group was also on the rise during the examined period, which probably resulted from great differences in the quality of tertiary education opportunities. Consequently, some tertiary education graduates experienced problems in finding jobs despite high labour demand. This period also brought a rapid increase in the number of students, which had to do with rising educational aspirations as well as with the baby-boomers of the early 1980s reaching the age of 18-20 years. Consequently, in 2001-2004, the number of economically active people with tertiary qualifications grew by 32 percent, which led to a fall in real wage dynamics in this market segment, despite sustained high demand for higher education graduates.

The lowering of wage demands after 2001 resulting from an upsurge in unemployment and institutional changes made it possible for employers to keep the wage growth below the productivity growth for a couple of years, which led to the increase in capital income at the expense of labour income in the period 2001-2005. A similar phenomenon could be observed in the Baltic states in response to the Russian crisis of 1998. In Poland, we also saw a slight increase in the labour share in 2001, which was connected with the economic downturn that started that year. As indicated by the evidence from other countries, such behaviour of the labour share in the face of an economic slump as was observed at the turn of 2001-2002 is in line with the general features of business cycle. The labour share usually increases marginally during the first phase of a downturn, which is caused by falling return on capital and by no immediate reaction of employment to such a slump (*labour hoarding*), whereas the initial phase of an upturn brings a decrease in this share (see Chart III.8).

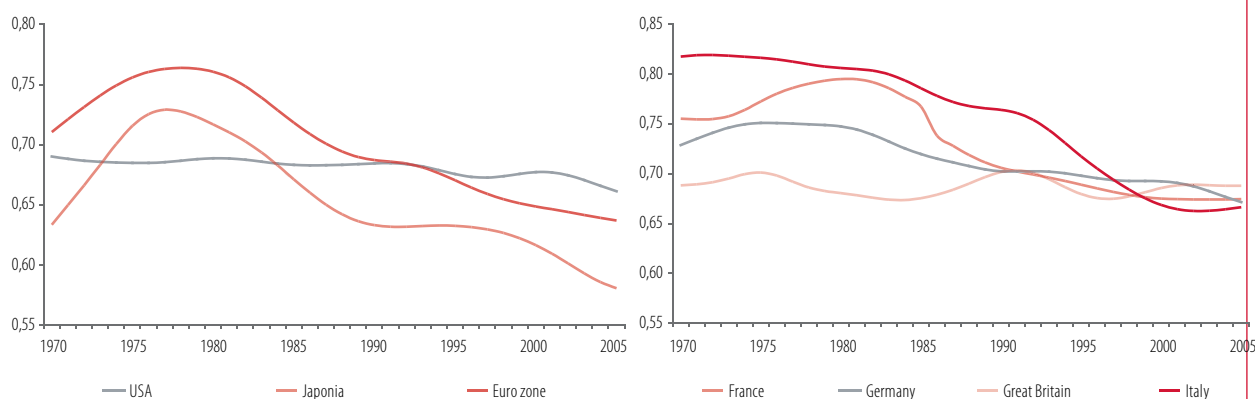
The clear upsurge in wage growth which can be observed in Poland in the recent period can be treated as an inevitable process resulting from an improvement in the labour market situation, which strengthened employee bargaining power. As a result the gap that emerged in 2001-2005 between real wage and productivity has been narrowing. As from IV quarter of 2005, average real wage have been rising at a faster rate than labour productivity. In IV quarter of 2007, labour productivity went up by 2.4 percent y/y, whereas real

<sup>5</sup>The quality of identification of innovations to the wage-setting process presented in Part I largely depends on the precision of estimates of the long-term relationship between real wages and productivity. Due to a relatively short sample period, the long-term relationship may be estimated inaccurately (regardless of the panel nature of the sample). Moreover, the application of a single cointegration relationship for all NMS8 may lead to an erroneous identification of shocks in particular countries. The above problems concern above all disturbances which are small in scale (such as, for instance, innovations to the wage-setting process in Poland), whereas severe disturbances (for instance, the Russian shock and the labour supply shock in Poland) should be identified in a correct manner. Hence, the estimates presented in Part I should be approached with certain caution.

### Box III.1. Decreasing labour share in OECD countries

As from the late 1970s, a gradual shrinking of the labour share in output has been observed in most developed countries. This fall has been particularly obvious in the European countries (excluding Great Britain, where the level of real unit labour cost has remained practically unchanged for the last 40 years) and in Japan, whereas in the United States the workers' share in output has been declining only since the early 1990s. The above developments are seemingly in opposition to the traditional postulate of the growth theory which states that the labour compensation/output relationship is constant in the long run.

**Chart III.5.**  
**Labour's share of output in 1970-2005**



Remarks: HP filtered data

Source: Own calculations based on OECD data

It turns out, however, that it does not necessarily have to be so, i.e. that the gradual increase in the capital's share in output, which was seen in Continental Europe in the last 30 years, probably constitutes a slow adjustment of European economies to new institutional conditions and therefore a transition to a new equilibrium relationship between capital and output. This sort of explanation may be found, among others, in Caballero, Hammour (1998). Taking France as an example, the authors demonstrate that it is above all institutional factors that were responsible for the increasing importance of capital in the production process throughout these years. Although the increasing number of institutional stipulations regulating the employment relationship as well as higher costs of dismissals, higher unemployment benefits and higher labour taxation, in the short term, let employees take over a greater share of output (at the expense of company profit) than before these changes – even in the face of rising unemployment (compare the increase in the share of labour compensation in output in the second half of the 1970s), in the long term, business-owners managed to reconstruct their position by introducing new labour-saving technologies. Consequently, the capital share was growing, whereas the role of labour as a productive factor was diminishing. No such technological "shift" was observed in the Anglo-Saxon countries, where the regulations pertaining to the employment relationship were more flexible during the analysed period.

Among empirical papers that examine the role of particular factors in determining the labour share in developed countries in the last 40 years, it is studies by Bentolila and Saint-Paul (2003) as well as reports by the IMF (2007) and the European Commission (2007) that are worth to mention. The first of the above-mentioned publications points to technological advances as one of the key factors that determine the labour share in the OECD countries in the years 1972-1993. The estimates obtained by the authors suggest also that the substitution of labour with capital was further enhanced by capital-embodied technological change. Moreover, in most sectors, it was the increase in real oil prices that also played an important role. The results of the study carried out by the IMF (2007) indicate that the decrease in the labour share in output, which was observable in Europe in 1982-2002, was primarily due to technological progress and then to globalisation, whereas labour market policies were of hardly any importance. Similar results were obtained by experts at the European Commission (European Commission (2007)). In accordance with their estimates, growing competitiveness within the product markets as well as diminishing employee bargaining power also contributed to the decline in the labour share in Europe in the above-mentioned period.

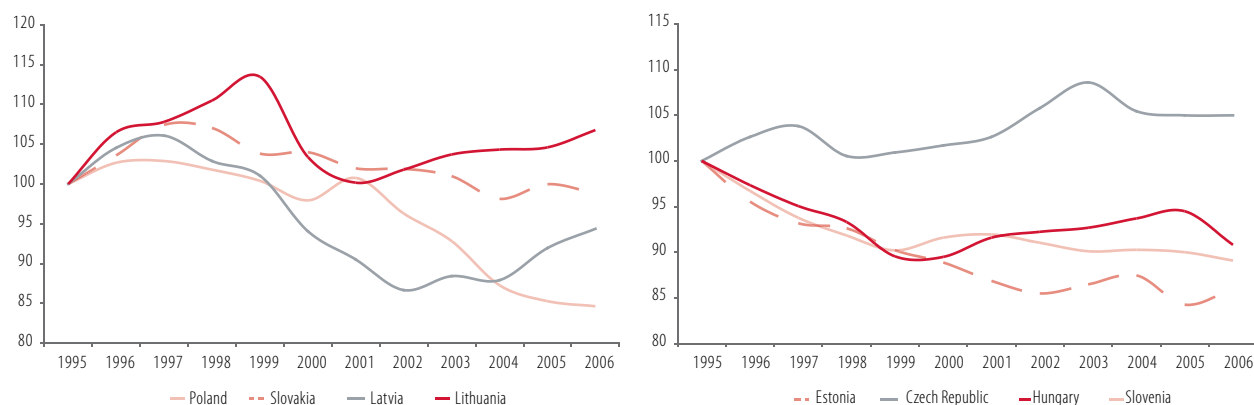
It is also difficult to rule out that the decline in the labour share observed in the last decade partly results from a measurement error. Due to the fact that new forms of remunerating employees are more and more common, such as managerial options or private health insurance financing, which are often excluded from the calculation of total compensation in the economy, it can be expected that the labour share is more and more frequently underestimated. Gomme and Rupert (2004) demonstrate in turn that estimates of the labour share are sensitive to the choice of methodology applied in constructing this indicator and to the related assumptions. They argue that the thesis on the constancy of the relationship between labour compensation and output in the United States can be upheld, if we only consider the non-financial corporate business sector and thus avoid problems with the identification of labour income in the case of the self-employed and private home owners<sup>6</sup>, or if we change the method of estimating this share – despite the fact that the official data of the Bureau of Labor Statistics point to a significant decline in the labour share in the last 20 years (see Chart III.8). Moreover, when calculating the labour share, it is often assumed that average wages of the self-employed are equal to average wages of employees, which – in the face of the changes in the self-employed population structure – leads to the dynamics of real unit labour cost being understated (see Askenazy (2003)).

<sup>6</sup> The system of national accounts applicable in the USA ascribes income from rent to all private home owners, where such income is identified with capital income, whereas it does not impute labour income (connected with the maintenance and refurbishment of real estate).



wages grew by 6.25 percent y/y. Consequently, real unit labour cost reached levels similar to those observed in 2002. If, as expected, this high wage dynamics persists, the gap between real wage and labour productivity will be closed in the coming quarters. Therefore, businesses will no longer be able to reduce mark-ups and non-inflationary growth of wages will no longer be possible.

**Chart III.6.**  
**Labour's share of output (1995=100)**

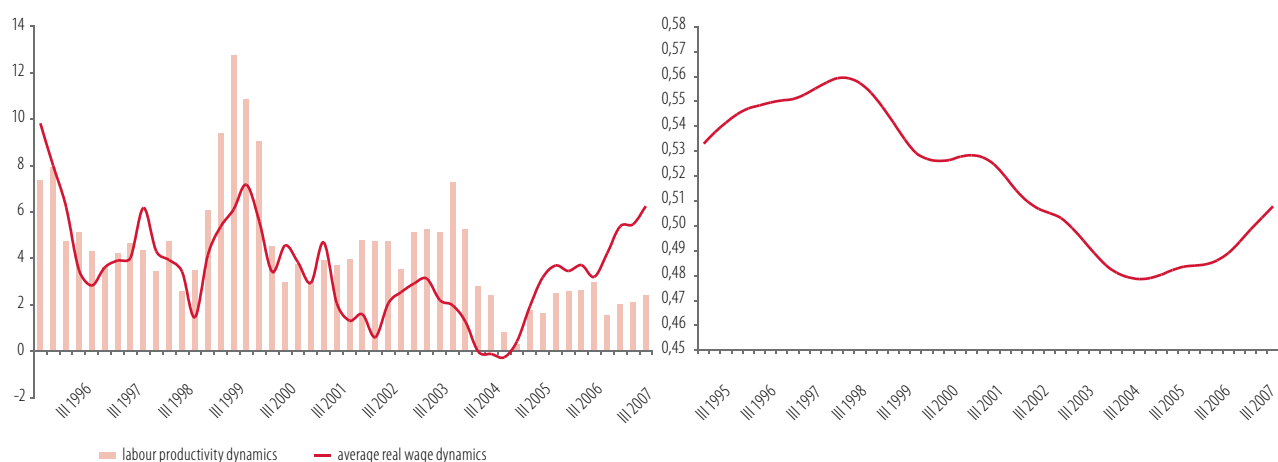


Remarks: The labour share takes account of estimated wages of the self-employed. It has been assumed that the wage rates among employees and the self-employed are equal.

Source: Own calculations based on Eurostat data

It is worth emphasising that changes in real unit labour cost should be examined not only in the context of cyclical fluctuations. In the medium run they also affect the level of competitiveness of economies. In most NMS8, the fall in real unit labour cost in 1995-2006 concerned above all the tradables sector with a steady or rising unit labour cost in services. In Poland, a severe fall in real labour cost in industry has been observed since 2001 (see Chart III.3). One exception in the above respect is Latvia, where this cost was growing at a greater pace in the non-tradables sector thus compensating for its fall in industry (see Chart III.1). At the same time, the fall of real labour cost in other NMS8 was greater than in the developed countries. Hence, during the above-mentioned period, the competitiveness of NMS8 economies in international trade was on the rise.<sup>7</sup> The above observations may indicate that in the NMS8 some substitution of labour with capital may be going on in the tradables sector. Wide access to advanced labour-saving technologies resulting from the opening of these economies to foreign markets makes it possible to increase the capital intensity of production, which leads to the shrinking of the labour share in the face of low average level of skills of the labour force.<sup>8</sup> In view of the above observations, if the sharp increase in wages in Poland continues, we may face a temporary deterioration in the competitiveness of the Polish economy in the near future. Persisting wage pressure in the medium term will in turn encourage companies to use labour-saving technologies more extensively and reduce the labour intensity of production.

**Chart III. 7.**  
**Labour productivity and real wage growth and estimated labour share (right graph) in Poland in 1995-2007**



Remarks: Data cleared from seasonal fluctuations and outliers. Average real wage has been calculated using the GDP deflator (1995=100). The total compensation has been estimated based on average real wage in the national economy and on the number of employed persons in accordance with LFS.

Source: Own calculations based on CSO data.

<sup>7</sup> The competitiveness of the Polish economy and its changes in the context of evolution of real unit labour cost has been discussed in Bukowski et al. (2006).

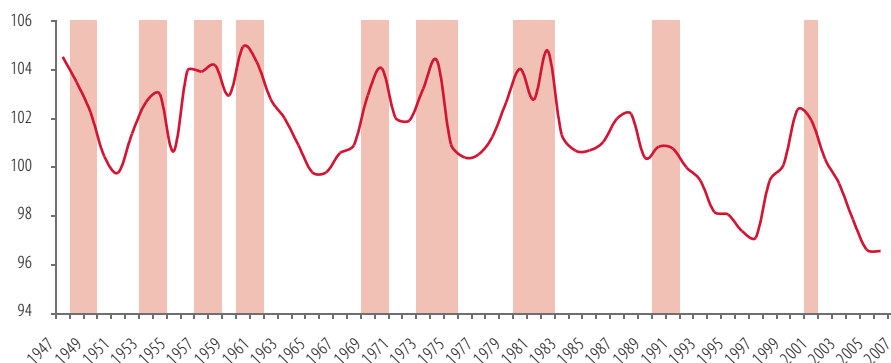
<sup>8</sup> The results of empirical studies (see e.g. European Commission (2007)) indicate that capital and low-skilled labour are substitutes whereas capital is complementary to high-skilled workers.

### Box III.2. Labour share and the business cycle

In accordance with one of the stylised facts of economic growth, capital and labour shares do not change with rising GDP. Hence, the process of economic development does not affect redistribution in favour of any of the factors. The constancy of the labour share in the long term does not rule out its fluctuations in the consecutive phases of the business cycle. As indicated by empirical research, the acyclicity of real wage (or its slight procyclicality) as well as the strong procyclicality of labour productivity impose the countercyclicality of the labour share. What is more, as in the example of the USA, decreases in the labour's share of output is typical for the initial phase of the economic upturn, whereas recessions are usually preceded by increases in this share.

#### Chart III. 8.

#### Labour share (nonfarm business sector) in the US and NBER recessions (1992=100)



Remarks: Shaded areas represent recession periods.

Source: Own calculations base on data published by the Bureau of Labor Statistics (U.S. Department of Labor) and by the National Bureau of Economic Research.

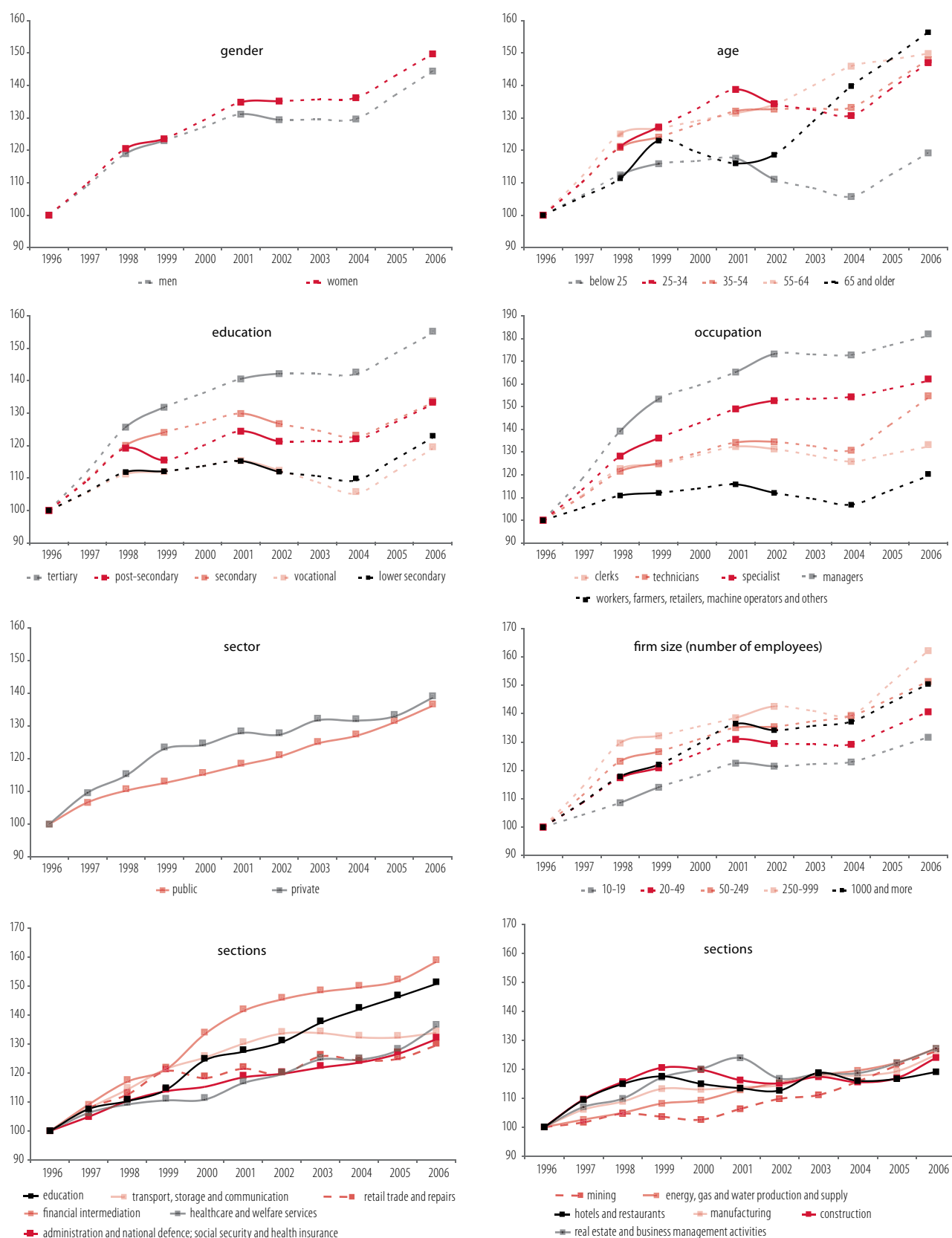
The above behaviour of the labour share in GDP across phases of the business cycle may result from the occurrence of nominal wage rigidities. Wage rates do not change in a continuous manner but they are rather set for a couple of months or years. This is so because frequent wage adjustments would entail considerable cost resulting from the negotiation process (strikes, negotiating time, etc.). Empirical studies conducted in the US, Great Britain and Sweden (Taylor, 1998) indicate that the average length of wage contract is approx. one year. If wage-setting is not synchronised across companies, the period of full wage adjustment is a couple of years long. Consequently, increases in labour productivity growth do not entail simultaneous wage adjustments. It is only after a certain period of time that employees' wage demands – in the face of improving economic conditions and growing labour demand – translate into an increase in real wages.

An alternative explanation can be found in the study of Boldrin and Horvath (1995), who ascribe the stability of real wages throughout the economic cycle to the existence of an implicit contract between risk-averse employees and employers. For most households wages constitute the key component of their income. Extensive wage variability would, therefore, entail significant fluctuations in the wealth of particular households, which is something that most families would not welcome. In addition, in view of their limited access (due to financial constraints or imperfect information) to financial markets, workers have relatively few options to smooth their consumption in the face of macroeconomic shocks. As for the population of employer, it is characterised by a smaller risk aversion and by a broader range of consumption-smoothing possibilities. In such situation, employment contracts also include an implicit insurance agreement under which employees agree to the reduction of variance of their earnings, whereas employers take on the risk of cyclical fluctuations (for an appropriate premium). Consequently, even if productivity growth gains pace, it does not translate immediately into an increase in wages but it causes a decrease in the labour's share in output (in such situation employees pay a "insurance premium" in the form of low real wages) and vice versa – cyclical slowdowns are not accompanied by corresponding real wage adjustments, which leads to the increase in the labour share in GDP (in such situation payments from the "insurance system" are made).

Another explanation associates the non-cyclicality of real wages with the fact that the number of hours worked is not adjusted in a flexible manner in response to economic fluctuations. In practice, economic up- or downturns do not translate into more or less hours worked by a given worker but they entail employment losses. As a result, aggregated labour supply is highly flexible which causes economic fluctuations and the corresponding changes in labour demand to bring about fluctuations in employment levels but only slight changes in real wages. King and Rebelo (1999) indicate that cyclical fluctuations in the degree of capital utilization (e.g. longer machine working cycles, three-shift working system) also weaken the response of real wages to economic developments.

The above changes in the average wage in relation to the evolution of labour productivity do not take account of changes in the wage rates in particular social and occupational groups. As demonstrated in Chart III.9, the processes which occurred in the Polish labour market in 1996–2006 translated to different degrees into the dynamics of wages offered to people with different levels of educational attainment and what comes with it they modified the relative economic situation of particular groups. In the subsequent sections of this Part, we answer the question how the economic downturn of 1998–2002 as well as the following period of recovery and the improvement in labour market performance were affecting the dispersion of wages in the Polish economy. We also analyse the role of institutions in reducing/strengthening wage inequalities and we present a more detailed description of the wage distribution in the Polish economy.

**Chart III.9.**  
**Average gross real wage growth in 1996-2006 (1996=100)**



Remarks: Data in graphs with solid lines (based on the Statistical Yearbook published by CSO) refer to the total number of employed people, whereas other data (based on the SES) only refer to companies employing more than 9 workers. In 2000, some entries in section J (financial intermediary) and L (public administration) were re-classified, which significantly affected the level and dynamics of the presented measures. Wages have been deflated by the CPI index.

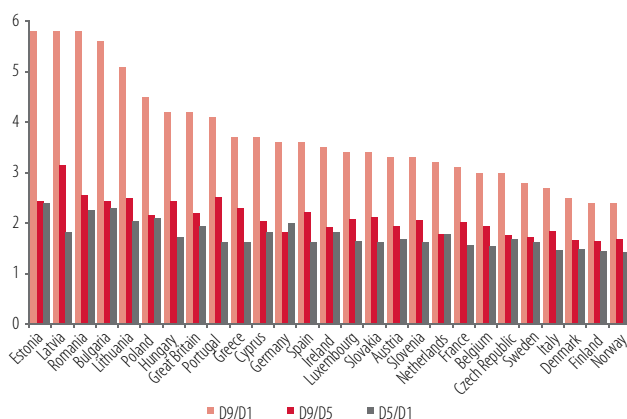
Source: Statistical Yearbooks published by CSO and own calculations based on the SES by CSO.

## 2. Increase in wage disparities

### 2.1. Wage disparities in Poland compared with other EU and OECD countries

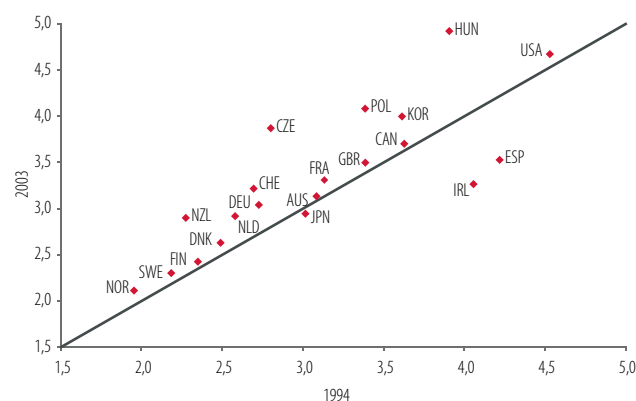
The group of European countries is highly heterogeneous in terms of wage disparities. Lowest wage disparities are recorded in the Scandinavian countries, whereas in Central and Eastern European countries they are highest. The only exceptions to the above regularity are Slovenia, Slovakia and the Czech Republic, where the ratio of the ninth and first decile in the distribution of earnings (D9/D1) was lower than the average for the European countries. In the group of NMS10, Poland ranks in the middle with dispersion indicator scores similar to those of Great Britain and Portugal. Hence, although transition countries are characterised by higher wage disparities than developed countries, the extent of wage inequalities in Poland has not grown as much as in the Baltic states or in Bulgaria and Romania. At the same time, earnings disparities in the upper part of the distribution (D9/D5) are close to the average for the EU countries (these inequalities are clearly lower in Italy, Germany, the Netherlands, the Czech Republic and the Scandinavian countries). On the other hand, there are relatively high disparities in the bottom part of the wage distribution – higher values of the D5/D1 ratio have been recorded only in Estonia, Bulgaria and Romania (with a similar level of disparities in Lithuania and Germany).

**Chart III.10.**  
**Disparities in annual earnings in the European countries in 2002**



Remarks: Data cover industry and market services (sections C-K)  
Source: Mittag (2006).

**Chart III.11.**  
**Change in the D9/D1 ratio in the OECD countries in 1994-2003**



Remarks: the Netherlands - 1994-1999; Hungary, Ireland - 1994-2000; France, Germany, South Korea, Poland - 1994-2002; Spain 1995-2002; Czech Republic, Denmark - 1996-2003; Norway 1997-2002; Canada - 1997-2003

Source: OECD (2006).

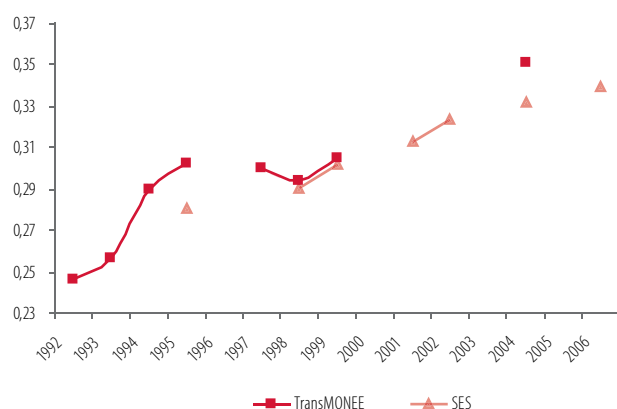
The OECD data indicate that at the turn of the 20<sup>th</sup> and 21<sup>st</sup> centuries wage inequalities were on the rise in most developed countries (excluding Japan, Ireland and Spain). In the US and Great Britain these changes are a part of a long term trend which started in the 1980s, whereas in most other European countries it only became apparent in the second half of the 1990s (see European Commission (2005); Katz, Autor (1999)). Central and Eastern European countries stand out from other OECD countries because of their exceptionally rapid increase in earnings disparities, which should be linked with the process of fast-track transition from centrally planned economy to market economy that took place in the region. In the following sections of this chapter we discuss in greater detail the way that wage inequalities have evolved in the last decade.

### 2.2. How have wage disparities evolved?

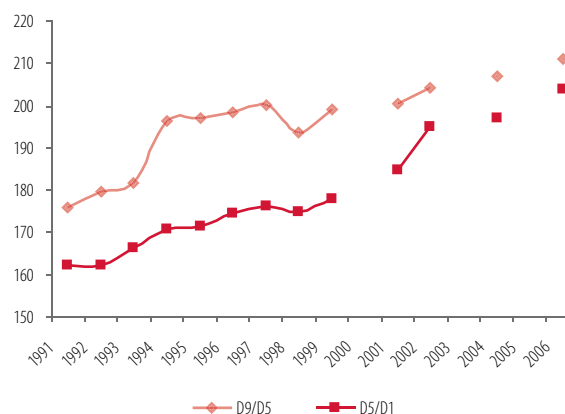
The disparities of earnings in Poland, which were relatively low under the centrally planned economy, have been growing at a faster or slower rate from the early 1990s. Poland does not distinguish itself in this respect from other countries in the region. According to Newell (2001), economic transition caused a rapid and well-documented increase in wage disparities in all Central and Eastern European countries, however, in the first half of the 1990s, changes in wage inequality concerned hourly pay rates only to a small extent, which suggests that it was changes in participation and in the number of hours worked that were of key importance for the increase in wage dispersion. Rutkowski (2001) emphasises that the increase in wage disparities in transition countries was mainly due to the decentralisation of wage-setting mechanisms and to a lesser extent to privatisation and other reforms. At the same time, the analyses presented below prove that – contrary to some expectations and conclusions (for instance, Prasad 2006), the increase in wage disparities did not come to a stop in mid-1990s when the economic transition ended.

Changes in the wage distribution can be measured using different indicators. The most popular of them include the Gini coefficient and decile measures. The increase in the Gini coefficient for wages in Poland by almost a half in 1992-2006 (see Chart III.12), synthetically reflects wage inequalities which intensify irrespective of economic developments or GDP growth rate. Although it results from the TransMonee data that there was a decline in the Gini coefficient in 1996-1998, this observation finds no confirmation in calculations carried out based on the SES survey for this period.

**Chart III.12.**  
**Gini coefficient for wages in Poland in 1992-2004.**



**Chart III.13.**  
**Wage disparities in the upper (D9/D5) and lower (D5/D1) part of the wage distribution**



Source: UNICEF TransMonee database, data from Rutkowski (2001) and own calculations based on the SES survey by CSO.

The scale of changes in the wage structure is further confirmed by the comparison of other measures of inequalities (see tabela III.1). According to Rutkowski (2001), on the eve of the economic changes of 1989, wages in the ninth decile of the wage distribution were approx. 2.4 times higher than those in the first decile. With time this gap increased to 350 percent (in 1999) and to more than 400 percent in 2004. At the same time, wage disparities were growing independently of the economic situation, although at times of economic expansion this growth was less intense. What is more, according to our indicators, wage inequalities were on a steady rise during most of the analysed years. Their exceptionally high growth (especially in the lower part of the distribution) took place in 2002 and it may be assumed that it was probably due to the economic slowdown of 2001-2002 as well as to the resulting deterioration in the labour market situation and – as discussed in the previous chapter – to the decline in real wage dynamics among people with low qualifications and to institutional factors, such as the decreasing minimum wage in relation to the average wage. The potential impact of the institutional environment on changes in wages disparities are further discussed in the subsequent sections of this chapter.

**Table III.1.**  
**Measures of wage inequality in 1996 – 2006**

	p90/ p10	p90/ p50	p50/ p10	p75/ p25	p75/ p50	p50/ p25
1996	3.39	1.96	1.72	1.84	1.38	1.33
1998	3.38	1.94	1.75	1.86	1.38	1.35
1999	3.54	2.00	1.79	1.90	1.40	1.35
2001	3.71	2.01	1.85	1.95	1.40	1.39
2002	3.98	2.04	1.96	2.04	1.43	1.43
2004	4.09	2.07	1.96	2.06	1.44	1.43
2006	4.31	2.11	2.04	2.10	1.44	1.45

Source: Own calculation based on the SES survey by CSO.

### Box III. 3. Wage measurement and wage disparities

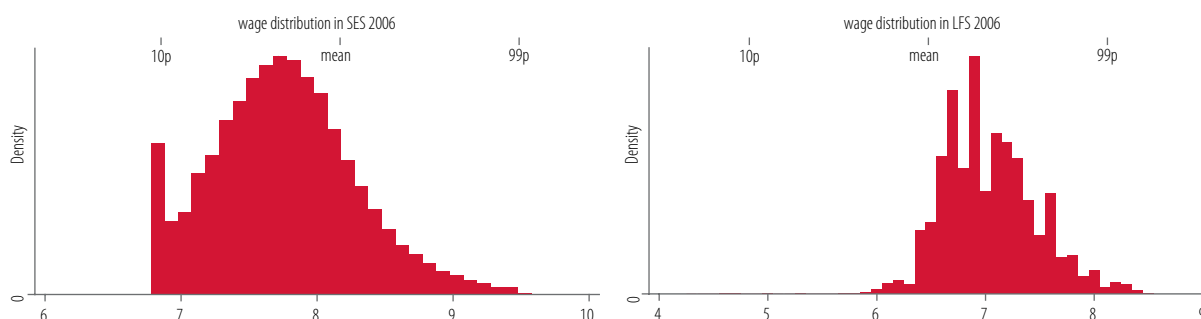
Wage measurement and comparison in time and between countries are considerably limited by the availability and quality of relevant data. The problem of comparability results above all from different definitions of examined wages (net, gross, before/after tax), frequency of their measurement (monthly and hourly wages, differences in monthly wages and those averaged over a year), groups of people whose wages are examined (full-time workers, workers employed by large companies only) as well as the examination method itself (surveys carried out among employees, employers).

In Poland, data on wages (although not always available and used) can be obtained from the following sources:

- monthly, quarterly and yearly company reports submitted to CSO (forms filled by companies) – this is how aggregate data on the total compensation and numbers of employees are obtained; it is based on these reports that average gross wages are calculated.
- The Structure of Earnings Survey (SES) (Study Struktury Wynagrodzeń) – this is the source of most comprehensive data on the distribution on individual wages. It is carried out every two years (1996, 1998, 1999, 2001, 2002, 2004, 2006). This survey is conducted on a random sample of companies (excluding those which employ less than 9 people). Up until 2004, it covered full-time workers only.
- Labour Force Survey (LFS) (Study Aktywności Ekonomicznej Ludności) is a survey which is carried out every quarter. It contains a question on the amount of net earnings received in the last month before the survey in the main workplace. One advantage of this survey is the fact that it covers all working people irrespective of their form of contract as well as those working in the shadow economy. Moreover, it makes it possible to calculate hourly wage rates. Its main drawback, resulting from it being a survey, is the possibility of not giving an answer at all, which is used by approx. 1/3 of all employed people and particularly by those who earn more. Moreover, the quoted amounts are approximated and/or understated.
- A significant potential – though in practice unavailable for research, source of information on wages are data collected by the Ministry for Finance based on tax revenues. These data, by their nature, concern exclusively registered income and they do not cover, for instance, earnings made in the shadow economy.
- Social Insurance Institution (Zakład Ubezpieczeń Społecznych; ZUS) – thanks to the KSI system, has a database of individual data on funding bases for contributions of all insured, including those who are in employment, which is a great asset. Unfortunately, it is currently impossible to carry out analyses on individual KSI data. What is more, these data are not comparable with other sources as they only cover insured workers (officially registered) and the category “funding bases for contributions” cannot always be easily translated into actual wages.
- Moreover, data on wages can be obtained from other surveys such as those carried out by CSO (Household Budget Survey, Survey on Income and Living Conditions – EU-SILC) and by other institutions (e.g. Social Diagnosis). Since these studies are surveys, imperfections of available data are similar to those in LFS, however, it is their great advantage that they are panel data and that there is a possibility of tracing changes in wages across time (excluding HBS, where every individual – similarly to LFS, is observed for two years only).

Available data provide information only on earnings of employed people (under work contracts or other contract forms) but there is no reliable data on income from work generated by the self-employed or by farmers. Moreover, information on earnings of workers employed in the smallest companies (less than 10 employees) is also very limited.

**Chart III.14.**  
**Distribution of the logarithm of earnings in SES and LFS, 2006**



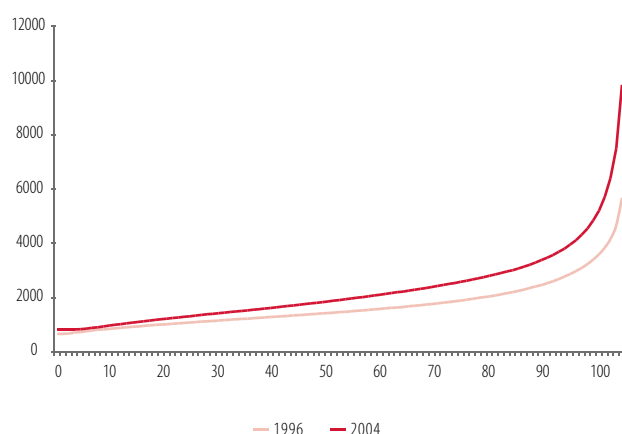
Source: Own calculation based on LFS data and on the SES survey by CSO.

Bearing in mind the above reservations, it is not surprising that studies based on data provided by employers (monthly company statistics, SES) and employees (e.g. LFS) generate different results. In this Report we mainly use data derived from SES and LFS, however, with a view to the above reservations concerning their imperfection and incomparability. A broad discussion on the possibility of using LFS data on earnings can be found in the paper by Newell and Socha (2007). SES data make it possible to conduct a thorough analysis of wage disparities and wages changes in the last decade (data concerning wages for 1996 and 1998 were adjusted from net to gross values to ensure their comparability with subsequent years).

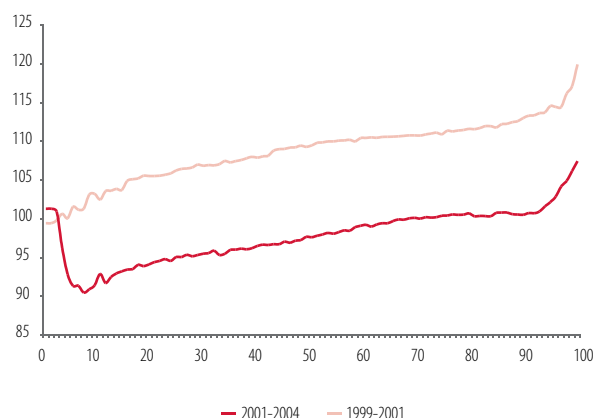
It is important to emphasise that changes in wage dispersion are also marginally attributable to changes in employment structure. In the 1990s, especially after 1999, job losses were relatively more common among people with lowest qualifications (and thus with lowest earnings) and hence average wages automatically went up – even if wages earned by all other workers did not change. The decomposition performed for the purposes of this study<sup>9</sup> shows, however, that this effect was relatively small. Almost 90 percent of the increase in average wages in 1996-2006 resulted from the increase in wages within groups and not from changes in their relative numbers. This result goes in line with the conclusions reached by Myck et al. (2006), who claim that changes in employment structure were responsible for approx. 1/10 of the total increase in average wages in 1996 -2003 and for 1/4 of it in 1998-2002.

The increase in the Gini coefficient resulted directly from a relative change in the situation of workers from the lower segment of the wage distribution. Prior to the economic transition their earnings amounted to more than 65 percent of the median wage (Rutkowski 2001). Later on, these disparities deepened and in 2004 workers from the first decile were making on average 51 percent of the median wage. Their earnings fell radically after 1999 and particularly in 2001-2002, that is during the economic slowdown. What is more, as much as in 1998-2001 wage disparities were growing due to a much faster pace of increase in real wages among the better-paid, in 2001-2004, growing disparities in the lower segment of the wage distribution were accompanied by a drop in real wages in this group. The median wage went down in those years by 2.4 percent and wages in the first decile and quartile decreased by 8.6 and 4.9 percent respectively. As demonstrated in Chart III.16, in 2001-2004, it was only wages earned by workers from the upper segment of the wage distribution, above the seventh decile, that went up, whereas wages of lower-paid workers went down. In other words, the situation of lower-paid workers deteriorated during the period of economic slowdown not only in relative but also in absolute terms. It can be assumed that these changes were largely due to the situation in the labour market: in the face of high unemployment hitting above all people with low qualifications, employee bargaining power (especially of lower-paid employees) weakened and they became more prone to accept only small increases or even decreases in real wages. People from the upper income quartile were less concerned, therefore their earnings kept on rising. It can be assumed that the latter did not experience such weakening of bargaining power as it was the case with lower-productivity workers.

**Chart III.15.**  
**Wages in 1996 and 2004 in 2004 prices, by percentiles**



**Chart III.16.**  
**Real wage dynamics by percentiles, 1998-2001 and 2001-2004 (accumulated)**



Source: Own calculations based on the SES survey by CSO.

In the last 15 years, there has been as significant increase in wage disparities between workers who earn more than the median wage. As much as at the beginning of the 1990s, wages in the ninth decile were 70-80 percent higher than the median, after 10 years, this difference exceeded 100 percent. Relative (calculated with respect to other wage deciles) wages of highest-earners were growing fastest at the beginning of the transition period, which can probably be explained by their adjustment to 'market conditions' after years of significant wage compression and of wage policies typical for the centrally planned economy, which did not associate wages with qualifications or individual productivity. Nevertheless, as much as the combined increase in wage disparities in the initial period covered by our analysis can be attributed above all to changes in the upper segment and to the wage boom among highest-earners, in the second half of the 1990s, and especially after 1999, it was below the median wage that the disparities grew fastest.

In order to identify the role of individual factors in the context of increasing wage inequalities in the Polish economy, we have estimated wage equations using data derived from the SES survey published by CSO for 1996, 1998, 1999, 2001, 2002, 2004 and 2006<sup>10</sup>.

<sup>9</sup>Decomposition performed in accordance with the following formula:  $\Delta w = \sum sh_i \Delta w_i + \sum \Delta sh_i (w_i - \bar{w}) + \sum \Delta sh_i \Delta w_i$ , where  $\Delta w$  stands for an increase in average wages between 1996 and 2006,  $sh_i$  stands for the share of a given group that we have distinguished (one of 72 groups based on gender, level of education and profession) in total employment in a given year, and  $w_i$  stands for average wages in a given group.

<sup>10</sup> A detailed identification of factors which affected wage levels in 2006 is presented in chapter 4. Some differences in the value of the estimated parameters are due to a more detailed specification of the wage equation being used in chapter 4.

The results of these estimations (see Chart III.17) indicate that the increase in wage disparities in the last 10 years resulted from increased returns from education, including above all higher “premium” for work in managerial positions or in positions of a specialist or technician, as well as higher returns from the work experience possessed. For higher education qualifications, between 1996 and 2006 the coefficient went up from 36 percent to 39 percent, for managerial posts – from 44 percent to 66 percent and for specialists and technicians – from 19 percent to 30 percent and from 11 percent to 21 percent respectively. Wage premium for high qualifications was growing faster in the first half of the decade, which is in line with the observations presented above. Successive SES surveys show that companies tended to pay more and more not only for qualifications acquired through formal education but also for knowledge learnt by doing. If in 1996 one additional year of job experience at the beginning of professional career path translated into an increase in wages by 2.9 percent, in 2006, this premium amounted to 3.7 percent (in both cases the premium gradually decreased to drop to zero after approx. 20 years of service). Moreover, the decrease in wages in small companies compared with medium and large businesses also played some role in the expansion of wage disparities.

It is worthwhile to point to changes in wage disparities between the private and public sectors<sup>11</sup>. As much as towards the end of the 1990s a premium for work in the private sector was positive and amounted to approx. 2 percent, in 2006, this difference amounted to approx. 4 percent and favoured work in the public sector<sup>12</sup>. The above changes may result from differences in the evolution of unionisation levels of the private and public sector, which have not been taken account of in the model. Unfortunately, no data is available on the share of workers who are members of trade unions in both sectors and therefore we are unable to verify this hypothesis. Moreover, employment in the public sector is generally characterised by greater stability and wages in this sector are less sensitive to economic fluctuations than in the private sector. Consequently, the weakening of real wage dynamics in 2001-2004 hit the private sector more. At the same time, it is worth noting that changes in the relative advantage of wages in the private sector did not lead to growing wage disparities but only to a symmetrical shift of the premium towards the public sector. Apart from that estimated differences between the two sectors are insignificant.

**Table III.2.**  
**Changes in variance of the logarithm of wages in 1996-2006**

	1996-2006	%	1996-2001	%	2001-2006	%
change in variance of the logarithm of wages	0.1145	100	0.0789	100	0.0356	100
change in variance of the logarithm of wages – explained part	0.0677	59	0.0447	57	0.0230	65
change in variance of the logarithm of wages – unexplained part	0.0468	41	0.0342	43	0.0126	35

Source: Own calculations based on the SES survey by CSO.

The above changes in coefficients provide only some knowledge on the reasons for growing wage disparities between 1996 and 2006. This increase resulted not only from changes in returns from educational qualifications, work experience or occupation but also from other factors which have not been included in the wage equation specification. As demonstrated in Chart III.17, it was also the dispersion of the unexplained part in the model (residual) that was also on the rise in the analysed period. The difference between the ninth and the first decile of the residual distribution amounted from 0.8 in 1996 to 0.95 in 2006. Disparities in the lower part of the distribution (measured using the D5/D1 coefficient) grew slower. Essentially the increase in variance of the unexplained wage component was responsible for 41 percent of the increase in variance of the logarithm of monthly gross wages in this period.<sup>13</sup> Apart from an appropriate level of education and work experience, companies tended to pay more for individual skills and qualifications that affected productivity, such as, for example, quality of education, foreign language skills and computer literacy. Moreover, expansion of higher education opportunities led to increasing disparities in education quality. Standards of educational services provided by some tertiary establishments were often very different from quality standards in other establishments. Hence, there have been increasing differences in the level of actual qualifications within one education level category. In addition, growing wage dispersion was further deepened by the increasingly common use of performance-related pay (among others due to modern organisational solutions being applied in privatised companies).

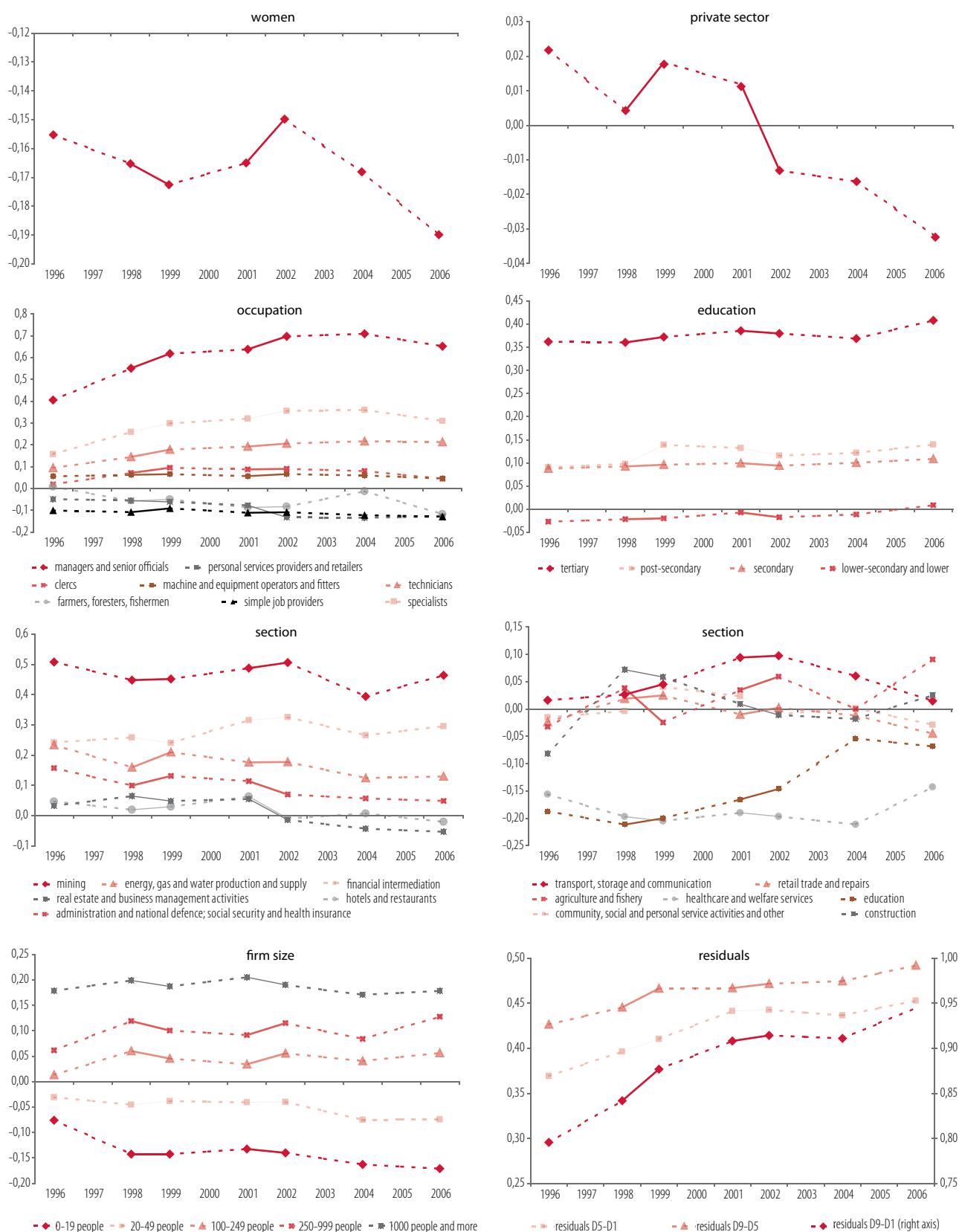
<sup>11</sup> In accordance with the definition provided by CSO, a company belongs to the public sector, if it is state-owned (by the Treasury of State or by state legal persons), if it is owned by local governments or if it is a public-private entity in which public sector players hold a majority of capital (assets). In the case of equal shares of public (50% is owned jointly by: the State Treasury, state legal persons, local government units) and private capital (50% is owned jointly by: domestic natural persons, domestic private entities, foreigners), national economic entities are considered as part of the private sector. In subsequent sections of this Part, all references to public sector are to be understood in accordance with the above definition.

<sup>12</sup> As indicated in Chapter 5, with a more detailed wage equation specification, including occupational groups at lower disaggregation level, the value of this parameter amounts to approx. 0.5 percent and therefore the presented estimations overstate the actual differences between the two sectors.

<sup>13</sup> The remaining 59 percent ascribed to the explained part cover not only changes in the parameter estimations for particular characteristics but also changes in the population structure of full-timers. Newell and Socha (2007) prove based on LFS that in 1998-2002 changes in population structure acted to reduce wage inequalities and therefore the contribution of changes in wage equation coefficients is greater than the presented 59 percent. At the same time, it should be borne in mind that one drawback of variance as a measure of variation is its high sensitivity to changes in the extreme values of the distribution.



**Chart III.17.**  
**Changes in coefficients of wage equation between 1996 and 2006**



Remarks: The above graphs present coefficients in regression of the log wage in successive years on constant, unemployment rate in a given voivodeship, experience (up to 3, power inclusive), age (up to 2, power inclusive) as well as dummies describing: gender, level of education, occupation (large occupational groups), sector of ownership, NACE section and company size. Residual inequality measures have been calculated as a difference of particular deciles of residual distribution (actual wage minus theoretical wage calculated on the basis of the estimated wage equation).

Source: Own calculations based on the SES survey by CSO.

Newell and Socha (2007) indicate that a high share of unexplained variance in the general variance of the logarithm of wages results to some extent from differences in the wage equation coefficients in particular segments of the distribution. In the upper parts, differences in wages between men and women, between the private and public sector as well as returns to education are larger than in the bottom parts. These differences, however, do not change over time and therefore they cannot explain the increase in wage disparities. The above-mentioned authors indicate that the increase in variance of the residual component in particular occupational and educational groups<sup>14</sup> between 1998 and 2002 is positively correlated with the share of young workers in a given group, which may be due to the increase in wage premiums for the work experience in the bottom part of the earnings distribution (people with little work experience earned relatively less in 2002 than in 1998). Estimations carried out on the whole sample cannot single out differences in the extent of dependency between wages and experience in particular segments of the distribution and therefore these differences increase the variance of the residual component.

## Low-paid employment

Changes in the wage structure resulted in an absolute and relative deterioration of the situation of workers with lowest earnings and in an improved situation of those with highest earnings. One effect of growing wage disparities was that the number of workers with very low and very high earnings was growing thus bringing new challenges in the area of social and labour market policies. On the one hand, the existence of many low-paid jobs increases the chances of people with low qualifications and of people excluded from the labour market to find jobs, however, on the other hand, it may require that their income be supported. At the same time, low wages offered in the market discourage some unemployed to take up work thus increasing the number of people benefiting from alternative income-earning opportunities and increasing pressure on the system of social assistance. A higher share of workers with low earnings in the total number of employed may translate into higher poverty rates since income from work constitutes a significant determinant of household wealth.

Available international data (see European Commission 2004, OECD 1995) indicate that, compared with other countries, Poland is characterised by a relatively high share of low-paid employment. If we assume the definition of low pay as wages below two-thirds of the median pay, in 2004, low-paid workers accounted for more than 22 percent of all employment. In Western Europe, in the second half of the 1990s, the share of low-paid employment amounted on average to approx. 15 percent<sup>15</sup> (European Commission 2004), although there were significant differences between countries. It was lowest in Denmark and Italy, where it did not exceed 10 percent and highest in Great Britain (almost 20 percent). It is also the OECD data that confirm that the share of low-paid employment in Poland is relatively high, comparable in fact to the situation observable in Great Britain and the United States.

It is important, however, to what extent – from a cross-sectional perspective, this considerable share of poorly paid jobs translates into inequalities throughout life cycles of individual workers. Such jobs can constitute only an “episode” in someone’s professional career, which helps to acquire experience and skills indispensable to take up a better-paid job. Nevertheless, if they concern the same, fixed group of employees and they largely determine their income and wealth, the challenges for the social and labour market policies are greater. Research on wage mobility of Polish workers (understood as change in the relative position in the wage distribution structure) indicates that indeed it has decreased during the period of deterioration of the labour market situation and is currently lower than in mid-1990s (Magda 2008). At the same time, irrespective of growing wage disparities and the resulting increase in the share of low-paid workers in the total number of employed people, shifts in wage mobility have concerned least those with the lowest earnings. Their probability of changing the relative position in the wage distribution is the greatest, which has a positive effect on their total income in the future.

In the following sections we ponder on the potential reasons for the expansion of low-paid employment and of the increase in wage inequalities which could be observed in Poland in the recent years.

## 2.3. Sources of wage inequalities

The increase in wage disparities in Poland was caused by various factors which include above all structural changes which occurred in the Polish economy. They brought about differences in the amount of premium (return) on particular factors affecting individual wages, both observable and non-observable (e.g. level of education, work experience, private sector evolution). On the other hand, mechanisms that were considered “responsible” for the increase in wage inequalities in many other countries (such as decreasing significance of trade unions and minimum wages, increasing demand for qualifications – see Box 4) were also seen as important.

When considering the potential role of the minimum wage policies in increasing wage inequalities, it is worthwhile making a reference to international experiences in this respect. They indicate that countries with higher minimum wage levels (compared to the median wage) are characterised by lower wage dispersion (at the cost of higher unemployment). Moreover, changes in minimum wage affect

<sup>14</sup> The authors distinguish 20 groups by combining actual professions with educational qualifications.

<sup>15</sup> Average for 13 out of the UE15, excluding Sweden and Luxembourg.

the wage distribution due to changes in the share of workers receiving the minimum wage as well as due to the so-called spill-over effects, i.e. the impact on wages of people who previously earned more than the new minimum wage. Therefore, as much as higher minimum wages reduce wage differentials, the scale of such reduction depends above all on the relative level at which the minimum wage is set (OECD 1998). In the situation where the set minimum wage is high in relation to the median wage and/or the share of people receiving the minimum wage is considerable, further increases in the minimum wage fail to bring about a significant decrease in wage inequalities.

In Poland, the minimum wage in relation to the median is close to the average level in the OECD countries and is slightly lower than the EU average<sup>16</sup>. Although in the last decade there has been a considerable real increase in the minimum wage (by 22 percent between 1996 and 2006), its share in the average wage in the economy went down slightly from 40 percent in 1996 to 36 percent ten years later, and in the median wage – from 48 percent in 1996 to 42 percent in 2006. This decrease in the share of minimum wage in the median occurred mainly in the second half of the 1990s, whereas in the following years there has been a clear upward trend in the share of workers receiving the minimum wage (see Chart III.18). These changes probably contributed to the increase in wage disparities in the lower part of the earnings distribution. It must be emphasised, however, that (relatively) higher minimum wage levels do not “automatically” translate into lower wage inequalities below the median (and lower dispersion is not conditioned by higher minimum wage levels). This is so, among others, because of differences in the share of workers receiving the minimum wage. For instance, in Ireland and Latvia, which are characterised by a comparable D1/D5 ratio, minimum wage levels amount to 66 and 45 percent of the median wage respectively (see Chart III.18).

### Box III.4. Sources of changes in wage inequalities

The literature on potential determinants of changes in wage disparities is vast and the existing theories point to different potential sources of such changes in the last decades.

One of the main theories put forward to explain the increase in wage inequalities (primarily in Great Britain and the United States in the 1980s and 1990s) was the **skill-biased technological change** hypothesis (SBTC). In accordance with this hypothesis, the continuing technological advance which could be observed throughout the last decades as well as the shift of economic activity to more advanced and modern sectors led to an increase in demand for people with higher education and relevant qualifications, which translated into an increase in their wages and in wage disparities, despite a considerable increase in labour supply of this group. According to Acemoglu (2002), the impact of SBTC on wage inequalities depends on the flexibility of the wage-setting process in a given country – for instance, in the US, where wages are indeed flexible, SBTC caused increased wage disparities, whereas in the European market (characterised by more rigid wages) it led to increasing unemployment among lower-qualified groups. The literature on the subject distinguishes several modified and extended versions of the SBTC hypothesis (e.g. replacing certain professions with computers and the emergence of segments of better and worse professions (Autor et al. 2006)). However, they are all highly criticised, among others, because of the fact that considerable rises in wage disparities concerned only some countries (Great Britain, USA, Canada) (see Dustmann et al. (2007)), whereas technological changes are similar throughout the world.

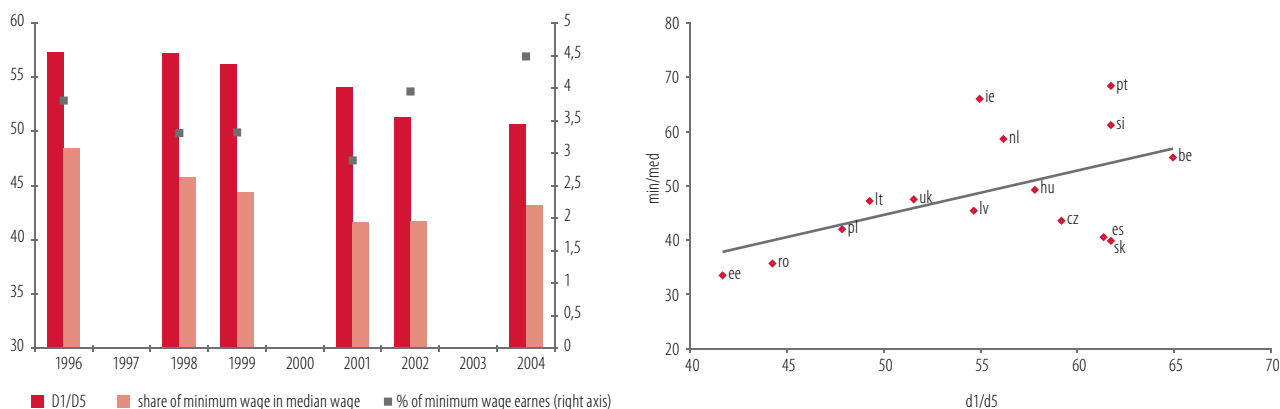
Other hypotheses focus on the importance of the **labour market institutions**, and in particular of the minimum wage and unionisation. The **minimum wage** may have an impact on the reduction of wage disparities by increasing lowest wages, whereas the fact of lowering the minimum wage ceiling usually increases wages inequalities. On the other hand, firms try to retain a hierarchy of wages and therefore changes in the minimum wage level affect other wages (see Grossman 1983), which weakens the positive impact of the minimum wage on wage dispersion.

**Trade unions** play an important role in setting wages – directly through collective bargaining and indirectly through their influence on governmental policies (e.g. on minimum wages). The policy of trade unions aims at compressing the wage structure and downsizing disparities in earnings between and within companies. Countries where trade unions, employer associations and governmental agencies play a greater role usually see smaller increases in wage disparities. Unionisation modifies the distribution of wages in a number of ways: when trade unions consist of highly-paid workers, higher union membership induces an increase in wage disparities, whereas when trade union members are workers with relatively low earnings, high levels of unionisation decrease wage disparities. In this context, the **nature of wage** bargaining may also be of some importance (see OECD 2004).

Some developments on the **labour supply** side may constitute yet another source of increasing or decreasing wage disparities. Such developments may include, for instance, inflows of unqualified immigrants, an educational boom resulting in the supply surge of highly-qualified people, etc.

As for **Poland**, it should be borne in mind that changes in the wage structure may have been affected by factors which have not been observed in other countries and which relate to the structural developments in the economy (e.g. its progressing privatisation). For instance, in the first half of the 1990s, there was a tax on “extra-normative wage payments”, which was imposed on firms that exceeded the fixed wage increase. On the other hand, agreements entered into by investors and trade union organisations in privatised companies often provided for a fixed increase in wages and extra bonuses on top of employment guarantees. Currently, wage-setting/mechanisms (at least in the public sector) may be influenced by, for instance, the Act on remuneration of persons managing certain legal entities (the so-called “Salary Cap Act”), which sets limits on earnings made by management and supervisory board members in state companies.

<sup>16</sup> Subject to availability and comparability of relevant statistics including among others difficulties in comparing wages derived from different data sources (see Box III.3). Moreover, discrepancies in the relationship between minimum wage and median may reflect a different employment structure in terms of gender, level of education, age, etc.

**Chart III.18.****Minimum wage versus wage disparities in Poland in 1996-2004 (left graph) and in international comparison, 2002**

Remarks: D1/D5 stands for the relationship of wages in the first decile to the median wage

Source: Own calculations based on SES by CSO and Eurostat.

The extent to which the minimum wage can act to reduce the level of poverty depends on how much poverty touches households of working people. International research evidences that in many households which experience poverty none of their members are in employment, whereas those whose earnings are close to the minimum wage often belong to households that have over-average incomes (OECD 1998). Hence, as much as increases in the minimum wage may reduce wage inequalities, they do not necessarily translate into changes in income inequalities. Moreover, relevant theoretical and empirical studies evidence that rising minimum wages decreases employment of the low-skilled (especially young workers) and weakens (or even eliminates) the positive impact of minimum wage rises on the level of income inequalities.

In Poland the extent of poverty is more than twice greater in households whose prevailing source of maintenance is provided by unearned income (other than old age or disability pensions) than in households of employees (CSO). To reduce it, a greater number of people would essentially have to be integrated in the labour market (this concerns above all low-skilled workers), which could be achieved through actions undertaken on both the demand side (lowering the cost of their employment) as well as the supply side (increasing the financial attractiveness of work). The experience of other countries proves that the most frequently used tools which let achieve the above-mentioned objectives are benefits paid out to workers with lowest earnings (in the form of, for instance, negative income tax) and/or decreases in tax and non-tax burdens (in particular, social security contributions) on lowest earnings.

International experience indicates that countries where the level of union membership and collective bargaining coverage is high and where wage negotiations are highly centralised/coordinated are characterised by smaller wage disparities (Blau and Kahn 1999, OECD 2004). In Poland, as from the beginning of the 1990s, there has been a considerable decrease in the trade union membership as well as in the collective bargaining coverage (see MGİP 2005). Presently, as little as 40 percent of all employees<sup>17</sup> are covered by collective agreements (of which 3 percent are covered by supra-firm level agreements) and the current wage setting mechanism can be considered decentralised in the public and private sectors alike. Hence, it can be assumed that changes in the collective bargaining, which have occurred in Poland in the last dozen or so years, have also contributed to the increase in wage dispersion.

**Table III.3.**  
**Wages by types of collective agreements, 2004 and 2006**

Wages set under:	2004	2006
Supra-firm level (mostly sectoral) agreements	108.3	117.5
Firm-level agreements	101.5	107.8

Remarks: Wages fixed under other wage regulations=100.

Source: Own calculations based on SES by CSO.

Table III.3 demonstrates that average wages among workers covered by collective agreements are considerably higher than wages set on an individual basis. At the same time, however, the above wage discrepancies result not only from the way that they are set but also from differences between workers' individual profiles and from differences between relevant workplaces. In the subsequent part of the Report, we present the results of our analysis which let us specify the impact of different types of wage agreements on individual earnings.

<sup>17</sup> These data concern exclusively those working in companies that employ more than 9 people (in 2006) and hence it should be assumed that the number of people covered by collective agreements in the entire population of employees in Poland is in fact smaller.

### 3. Individual wage determinants

There are many factors which affect individual wages such as social and demographic characteristics of a given worker (gender, age, education level, length of service) as well as of a given workplace (public / private sector, section of the economy, company size). In this Chapter we try to determine how the significance and impact of key individual wage determinants have changed, whereas in Chapter 4 we identify these factors in detail.

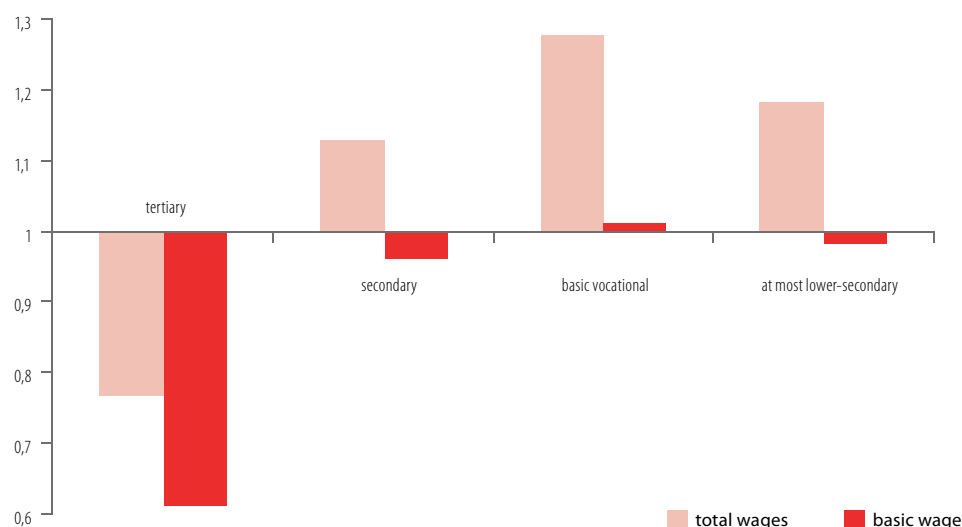
It should be emphasised that the analyses which we have carried out account only for some of the observable worker characteristics (such as gender, age and education level) and they do not allow to identify the importance of certain other characteristics due to lack of data (e.g. on foreign language competence or computer literacy level) and/or difficulties in their measurement (e.g. professional involvement, diligence, creativity, etc.). Increase in wage disparities could have had to do with changes in the valuation and distribution of all these characteristics.

#### 3.1. Education

One of the most important factors affecting individual wages are the individual skills. Since they are hard to measure or identify for a potential employer when recruiting workers (and their evaluation would largely increase the cost of recruitment), they are most commonly approximated by the level and type of education. Return on education under the centrally planned economy was low and education levels hardly affected wage levels. This, however, has been largely changed by the economic transition: educational premiums have grown significantly in all Central European countries (Rutkowski 2001) thus contributing to increasing wage inequalities. According to Rutkowski, prior to the economic transition, wages of workers with tertiary education were higher by 35 percent than those of workers with primary education. In 1996, this gap grew to more than 70 percent and in 2004 – to nearly 120 percent. It can be assumed that in the initial years of the transition this increase in the educational premium resulted from the fact that although education was grossly underestimated under the centrally planned economy, this was quickly adjusted to new circumstances, whereas in the following years it was growing demand for qualifications and their scarce supply that were of greater importance. The increase in returns on a secondary school diploma were much lower than on a higher education degree but discrepancies in wages between workers with different education qualifications have been growing throughout the analysed period (see Chart III.17).

Prasad (2006) noted that in Poland in 1985-1996 it was inequalities in wages earned by people with higher education qualifications that grew most, much more than those in other groups. This tendency could also be observed in the following two years, when this increase in wage disparities among tertiary (and secondary) education graduates was also accompanied by decreasing inequalities in other educational groups. Rising wage differentials among tertiary education graduates resulted not only from growing differences in characteristics which cannot be observed based on available data (such as for example foreign language competency) but also from the changing age structure of workers with higher education qualifications. The education boom as well as the fact that better-educated cohorts started entering the labour market rejuvenated the labour force (the share of under-34-year-olds in the population of tertiary education graduates went up from 27 percent in 1996 to 38 percent in 2004). Younger people are typically characterised by lower wages (but also by better level or quality of education) and hence changes in the age structure of the workforce may contribute to changing wage inequalities. Moreover, it can be assumed that some educational processes which were initiated in Poland during the above period, including in particular increasing participation in education mainly through evening and extramural courses as well as focus on selected study areas including pedagogy, marketing and management (see "Employment in Poland 2005"), were also of some importance as they may have brought increasing differences between higher education graduates in terms of their profiles and skills favoured in the labour market.

Wages of workers with higher education qualifications remain considerably lower in the public sector (in 2004 they accounted for approx. 75 percent of average earnings made by higher education graduates in the private sector). At the same time, this sector (compared with the private sector) pays better salaries to workers with at most vocational qualifications (by more than 20 percent). Interestingly enough, people with at most secondary education are on average paid better in all sections of the economy (see Chart III.20). What seems crucial to explain these divergences is the nature of the remuneration system in the public sector as well as the role played by various additional benefits which are unrelated (or loosely related) to the basic pay, above all seniority bonuses, shift premiums and extra bonuses and incentives. This is evidenced in Chart III.19 which demonstrates that basic pays of people who hold at most secondary education qualifications are practically identical in private and public sectors, whereas the gap of the public sector when it comes to rewarding higher qualifications – is even greater. The said additional benefits in the public sector reduce disparities in individual wages received by people with different education levels.

**Chart III.19.****Wages by education level in the public sector as a percentage share of wages in the private sector in 2006**

Remarks: Total salaries include basic pay, overtime, shift premiums, seniority bonuses, prizes and bonuses, incentives as well as 1/12 of annual supplemental pays for public sector workers and profit-share payments.

Source: Own calculations based on SES by CSO.

### 3.2. Public / private sector

In 2004, approx. 43 percent of all employees worked in the public sector (as defined by CSO, see footnote 11) and women greatly outnumbered men in this respect (approx. 60 percent compared with 40 percent in the private sector). Companies in which the State Treasury (or local government units) owns a majority stake are overrepresented in mining and energy industries as well as in social services which provide employment to approx. 60 percent of all public sector workers (education, healthcare and public administration).

Average salaries in the public sector are higher than in the private one by between ten and twenty percent (13 percent in 2004). One could assume, however, that these differences are in fact smaller due to the register nature of SES data, which may understate earnings in the case of the private sector<sup>18</sup>. Nevertheless, this is not confirmed by LFS or HBS (Household Budget Survey) data which, thanks to their nature, should better reflect actual earnings and which also show that average wages in the public sector are higher by 15-20 percent. As for wage inequalities, they are much greater in the private sector. What is more, over years these differences were increasing because wage disparities in this sector were growing faster. It is worth mentioning that the considerable reallocation of employment from the public to the private sector was of relatively little importance to the total growth in wage disparities, which was mainly due to increasing disparities within sectors.

As demonstrated in Chart III.9, wages in the public sector were at the same time less vulnerable to economic fluctuations. As much as the average real wage in the private sector was going up rapidly in 1996-2001, in the following five years, the wage growth dynamics diminished, whereas in the public sector wages were rising at a stable rate throughout the analysed period.

SES data do not make it possible to compare effective hourly wage rates (SES only records the number of hours paid for) but LFS data indicate that full-time workers in the public sector on average work four hours less per week than those employed in the private sector. Hence, wage discrepancies between sectors are in fact greater than it appears based on the analysis of monthly wages.

A question emerges to what extent the fact that the private sector on average offers higher wages to most productive workers whereas the public sector pays relatively higher wages to people typically characterised by lower qualifications and lower productivity is a consequence of the sectoral employment structure<sup>19</sup> and of the overrepresentation of certain sections of the economy in the public sector. As demonstrated in Chart III.20, this regularity can be observed in the majority of sections of the economy. In the case of people with at most secondary education qualifications only those working in education and in companies operating in energy, gas and water production and supply earn more in the private sector, whereas in all other cases wages are considerably higher in the public sector. People with higher education qualifications are much better-paid in the private sector, apart from those working in healthcare, education and retail trade, although the advantage of the public sector in these sections is relatively small.

<sup>18</sup> Unfortunately we do not have any scientific evidence that proves and demonstrates the scale of practices which involve registering only parts of earnings and taking the rest "under the table" in order to avoid taxation.

<sup>19</sup> In the private sector, there are more employees with vocational education qualifications, whereas in the public sector – employees with higher education qualifications, which translates into higher average wages in the latter.

### Box III.5. Wages in public administration

In our deliberations we adopt a broad definition of the public sector which covers all units (offices, other institutions, enterprises) in which the state holds majority ownership. However, a question arises as to how – compared with other sections and occupations – well- or badly-paid are the jobs that are strictly identified with public service provision. Due to the special nature of activities involved, it is difficult to compare wages in public administration (NACE section L) with wages in other sections. Some approximation of wage attractiveness of jobs in public administration can be derived from comparing wages in selected occupations with those in private financial intermediation (section J), in which the degree of competence and the nature of work are similar.

**Table III.4.**

**Average gross wages and average weekly working time of employees with higher education in public administration and financial intermediation in X 2006**

Profession	average wage in PLN			average working time in hours		
	public administration	financial intermediation	difference in %	public administration	financial intermediation	difference in %
IT specialists	3426	5755	-40.5	38.6	43.9	-11.9
Economists and management specialists	3607	4870	-25.9	39.6	41.5	-4.4
Lawyers	6008	6455	-6.9	40.2	I/S	I/S
Mid-level office clerks	2736	3843	-28.8	39.6	42.9	-7.8
Other office personnel otherwise not classified	2526	2912	-13.2	38.4	I/S	I/S
Public administration specialists	3656	4870*	-24.9	39.1	41.5*	-5.9
Tax, customs and other similar clerks (excluding customs officials)	3131	3843**	-18.5	39.8	42.9**	-7.2

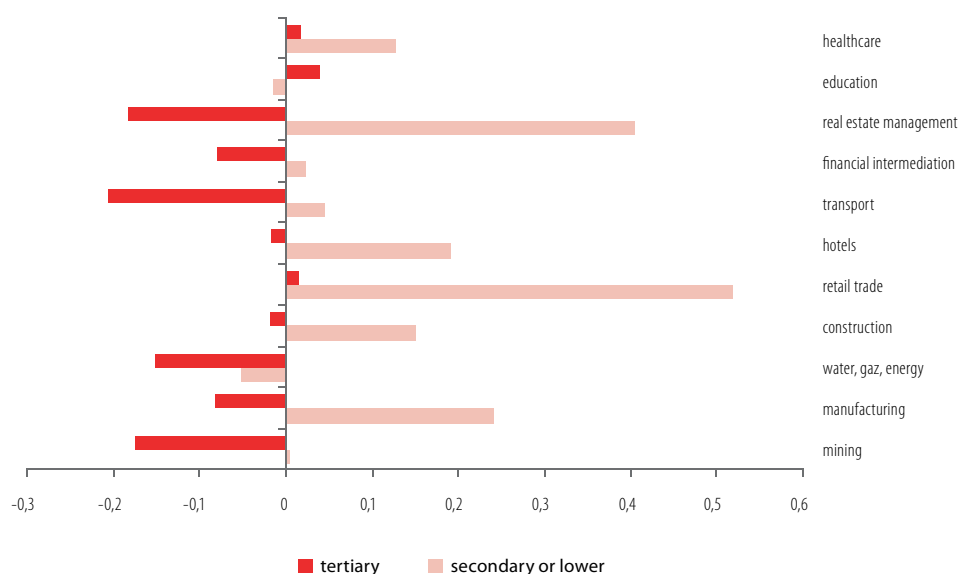
\* When comparing wages of public administration specialists, we have compared them with wages of economists and management specialists in financial intermediation. \*\* When comparing wages of tax clerks, we have compared them with wages of mid-level office clerks in financial intermediation.

Remarks: "I/S" – insufficient sample (less than 16 observations). Only private financial intermediation is taken into account. People performing the above-mentioned occupations (excluding public administration specialists and tax officials) accounted for 38 percent of all people working in public administration.

Source: Own calculations based on LFS and SES CSO.

The comparison of wages for occupations which are common in public administration as well as in financial intermediation shows that only lawyers (employed under permanent full-time contracts) are paid wages that are similar in both sections. Other workers are paid much less in public administration with the difference being largest in the case of IT specialists. Even when we take into consideration differences in working time, wages in public administration are approx. 20-30 percent lower than in private companies which operate in financial intermediation. It is difficult to establish whether the public sector offers good wages in professions that are typical for public administration, such as public administration specialists or tax and customs clerks, due to the lack of control group. For instance, wages earned by public administration specialists are – bearing in mind working time differences, approx. 20 percent lower than those earned by economists and management specialists (economists, financial and HR specialists, etc.) in financial intermediation. Similarly, tax clerks (excluding customs officers) earn on average approx. 10 percent less than mid-level office clerks in financial intermediation. It is hard to judge, however, whether the nature of work in the above-mentioned groups is similar. What should be borne in mind is that jobs in public administration provide greater job and pay stability than jobs in the private sector, which also adds to their attractiveness. In general, it emerges from this study that wages earned by IT specialists, financiers and other specialists working in public administration are low which constitutes an obstacle in recruiting suitably qualified staff and which adversely affects the quality of services provided by this sector.

On the other hand, wages earned by people with at most secondary education qualifications are higher in public administration than in other sections. For example, monthly earnings of cleaners working in public administration are on average over 40 percent higher than those of people working in real estate and business management (section K) and approx. 30 percent higher than in industry. Caretakers in public administration earn 10 and 20 percent more, and porters and janitors – 60 and 30 percent more. Hence, public administration pays too much for work done by low-qualified people and relatively little for work provided by specialists.

**Chart III.20.****Differences in wages between public and private sectors by section and education level in 2006**

Remarks: Presented values show differences in average wages between the public and private sector as a percentage of wages in the private sector. Positive values indicate higher wages in the public sector, negative values – in the private sector. This analysis does not include administration which belongs entirely to the public sector.

Source: Own calculations based on SES by CSO.

Upon a closer look at the wage distribution of people with higher education employed in the public sector proves that the wage gap with respect to the private sector is negative in the lower quartile and relatively small (approx. 11 percent) with respect to the median wage, whereas it widens significantly when highest-paid workers are considered. The so-called "Salary Cap Act"<sup>20</sup>, which sets a limit on salaries paid to presidents of management boards in state companies<sup>21</sup>, greatly affects the approx. 50 percent difference in wages in the upper decile of employees in the public sector vis-à-vis the private sector.

To sum up, the wage structure in the public sector seems to diverge from market realities (which can be approximated by wages in the private sector). On the one hand the existing pay systems that favour lower-qualified workers hinder the outflow of workers to the private sector and provide one of the arguments against privatisation. On the other hand, however, lower wages offered to people with higher education qualifications limit work and management efficiency in the public sector and thus constitute an obstacle in the face of challenges that await Poland relating to the implementation of structural EU policies and spending of EU funds.

<sup>20</sup> Act on remuneration of persons managing certain legal entities dated 3 March 2000.

<sup>21</sup> In accordance with the applicable law regulations, such salaries shall not exceed six times the average wage in the economy.

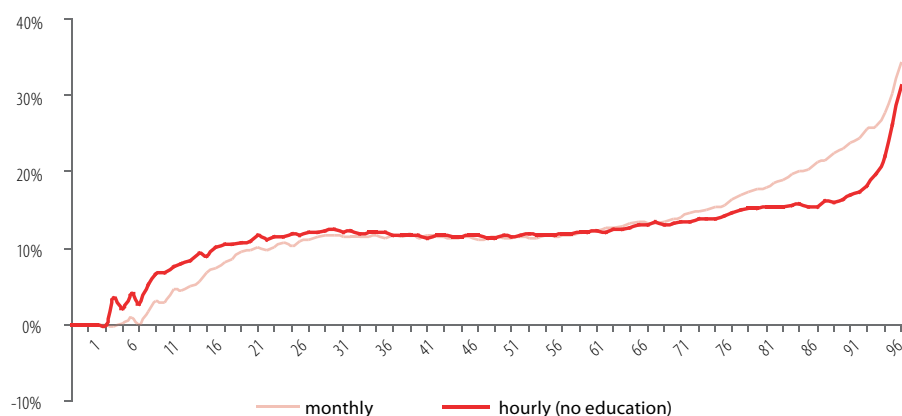


### 3.3. Gender

In international comparison (see Box III.6) the gap between wages of men and women in Poland is small. In 2006, monthly earnings of women (converted to full-time employment) were on average 18 percent lower than earnings of men. At the same time, differences in the median wage were much smaller and amounted to approx. 11 percent. This suggests that considerable wage differences between men and women concern above all the upper part of the wage distribution. Indeed, as much as monthly wages of 10 percent of people with lowest earnings in both groups are comparable, differences in the upper decile of the distribution (i.e. for 10 percent of people with highest earnings) exceed 20 percent (see Chart III.21).

The situation is slightly different when it comes to comparing hourly wages of men and women. In this case disproportions (for full-time employees) are more than twice lower compared with monthly wages: in October 2006 they amounted to as little as 7.5 percent of the average wage and 6.6 percent of the median wage. It turns out, however, that this statistics is greatly distorted by wages paid to people working in education, whose hourly wages are relatively high due to shorter working time under full-time arrangements. Since more women are employed in this sector (they account for more than 74 percent of all employees), its inclusion in the calculations largely reduces the wage gap between men and women. Similarly to monthly wages, an important (10-12 percent) gap in hourly wages can be observed for a majority of employees – including those with lower, average and higher earnings. This gap grows even wider for highest earners of the last decile, whereas its absence in the first decile is to some extent an artefact which results from the applicable legislation on the minimum wage.

**Chart III.21.**  
**Differences in wages of men and women along the wage distribution in 2006.**



Source: Own calculations based on LFS and SES CSO.

It is worth adding that the significant differences in the upper decile of the wage distribution are largely a consequence of the fact that women are underrepresented when it comes to highest-paid managerial positions. In 2004, women accounted for slightly more than 20 percent of senior-level managers in large companies (employing more than 250 workers) and about one third in medium-size companies.

These differences in wages of men and women (taking into account their working time) may be due to different levels of education and human capital of these groups, differences in the observable characteristics which affect individual productivity (e.g. age, seniority) as well as in non-observable characteristics (e.g. motivation, effort), differences in workplace characteristics and “pure discrimination” – i.e. differences in wages of men and women with identical individual profiles and workplace characteristics.

It is hard to estimate the extent to which differences in wages of men and women result from their different characteristics and workplaces and to what extent they reflect pure discrimination because only some differences in employee and workplace characteristics are observable<sup>22</sup>. The most commonly used method of decomposing the wage gap between men and women, which makes it possible to single out the importance of differences in the observed characteristics that affect individual productivity, is the so-called Oaxaca-Blinder decomposition (Blau and Kahn 1996, OECD 2002). It starts off with estimating the wage equation for men and then the estimated coefficients are treated as a “market valuation” of particular characteristics and they act as a point of reference for coefficients from the equation estimated for women. By comparing them and by taking individual characteristics of women into account it is possible to decompose the differences in wages into a component which is explained by different characteristics and an unexplained residual component.

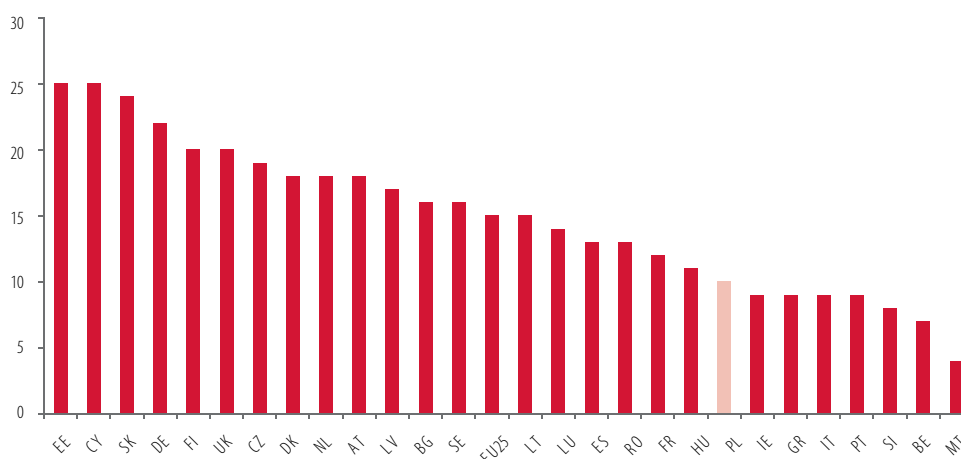
<sup>22</sup> For instance, Chevalier (2007) demonstrated that a large part of the analysed gap in wages of graduates in Great Britain may be explained by their choice of university courses and occupations as well as by their professional motivation and aspirations. He showed that women tend to demonstrate altruistic attitudes more and they are less career-oriented, which are characteristics that are less valued by employers.

### Box III.6. Wage gap between men and women in international comparison

The gender wage gap differs considerably across countries. In 2005, among European countries wages of female workers were 4 percent lower than those of male workers in Malta and up to 25 percent lower in Cyprus and Estonia. The average wage gap for 25 EU countries was 15 percent, whereas in Poland it was lower and amounted to 10 percent. Some differences in the size of the gender wage gap between countries can be explained by different women's employment structures and rates. Various studies (see OECD 2002) indicate, for instance, that there is a positive correlation between female employment rates and wage gap size. This is so because in those countries which are characterised by lower employment rates for women, working women are typically better educated on average than the population of men who are in employment (OECD 2002). At the same time, however, differences in the observed characteristics of men and women explain only some differences in their wages, whereas the rest should be attributed to non-observable characteristics and/or "pure" discrimination.

#### Chart III.22.

#### Differences in wages of men and women in EU countries in 2005



Remarks: The wage gap is calculated as a difference in average hourly wages of women and men expressed as a percentage of an average hourly wage of men, for the population of employees aged 15-64 working more than 15 hours a week.

Source: Eurostat.

International comparisons provide evidence that there are some regularities in the extent of wage differences between men and women. The wage gap grows wider with age, it is much smaller in the public sector than in the private one and higher for married people than for single people (see EC 2006). Moreover, the size of the wage gap seems to be connected with the level of "occupational segregation" in a given country (i.e. intensity of the phenomenon which consists of women working more frequently than men in lower-paid sectors and occupations) and with the existing wage structure (smaller wage dispersion in a given country reduces the wage gap). At the same time, according to OECD studies (2002), theories on wage discrimination of women with children have no empirical justification.

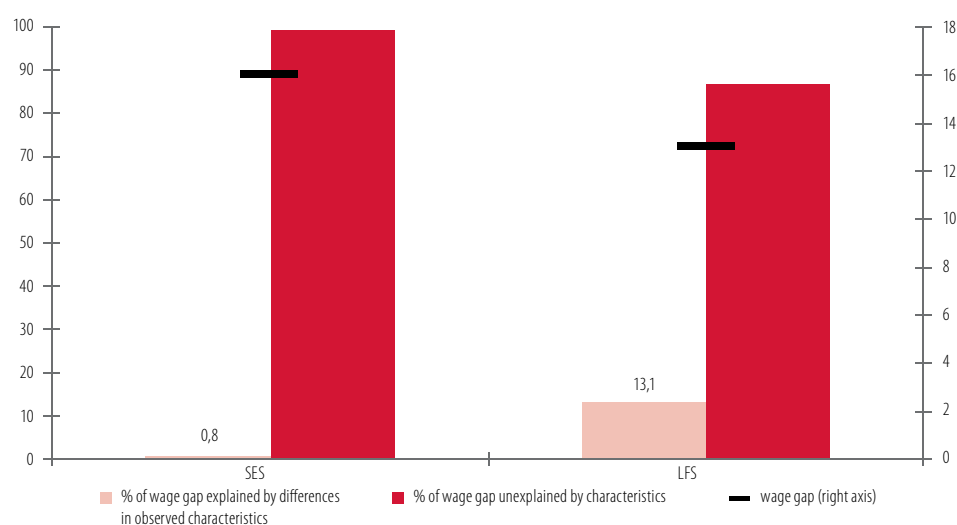
The OECD analysis proves also that the differences in the wage gap between highest- and lowest-earning men and women that can be observed in Poland are typical for only some countries, especially for Scandinavian and English-speaking ones. In a majority of OECD countries there are no differences in the gender wage gap in the lower and upper parts of the wage distribution and in Spain and Portugal it is greater (by a couple of percentage points) in the case of the second decile compared with the eighth decile of the earnings distribution.

We have estimated two equations, based on two different sources of data on wages. In the first equation, based on SES (2006), hourly wages of men and women were regressed on their level of education, seniority (in the first and second power), occupation, type of work contract, working time as well as by company characteristics: its size, ownership structure, section of the economy in which it operates and wage-setting mechanism. We have also taken into account unemployment rates in particular regions (voivodeships). The second model was estimated based on LFS (2006), where missing data on wages have been imputed. The use of data derived from LFS made it possible to correct the wage equation with selection to employment. In the second model we have used the same dependent and explanatory variables as in the first one, except for the lower level of desegregation of occupations (at the level of major occupational groups, compared with minor (three-digit) groups in the case of data from SES), resulting from a smaller size. Education has been excluded from this analysis.<sup>23</sup>

<sup>23</sup> Due to the aforementioned considerable differences in teachers' monthly and hourly wages their inclusion in the decomposition largely decreases the gap (to several percent) and its part explained by differences in group characteristics still remains insignificant (approx. 13 percent for SES data and 5 percent for LFS data).

Chart III.23.

## Decomposition of the wage gap between men and women



Remarks: These calculations do not account for education.

Source: Own calculations based on LFS and SES CSO data.

Hourly wages of women (excluding the sector of education which is dominated by women and where hourly wages are considerably higher), calculated on the basis of SES, are approx. 16 percent lower, *ceteris paribus*, than those of men. Calculations based on LFS indicate that this difference is slightly more than 13 percent. Our decomposition of the wage gap clearly evidences that only a very small part of it can be attributed to differences between individual characteristics of women and men, where the latter are better-equipped due to longer periods of service, better-paid jobs and sections of the economy, etc. More than 85 percent of the wage gap results from differences which we have not observed and which determine individual productivity, as well as (possibly) from discrimination, although it is impossible to assess the potential scale of the latter. Irrespective of the fact that we have included in our analysis quite detailed information on employee's occupations even within these (occupational) groups jobs may vary in terms of prestige, requirements and extent of responsibility and what comes with it in terms of wages. For instance, women may be employed in managerial positions of lower profile and requirements than men which is not reflected in a different value of the variable characterising a certain occupation but which affects their wages. What is more, women, due e.g. to absences at work caused by maternity, may prefer lower-paid jobs which guarantee shorter effective working time and greater employment security.<sup>24</sup>

#### 4. Multidimensional analysis of wage disparities in 2006

The analysis provided in the preceding sections sets out the evolution of wage disparities in particular social and occupational groups and describes their potential sources. However, it does not specify which human capital characteristics have had a decisive impact on wages. For instance, a large part of the difference in wage levels between the public and private sector can probably be explained by different employment structures in these sectors in terms of level of education. This is so because teachers, doctors and public administration officials with higher education qualifications account for a considerable share of all people employed in the public sector. Consequently, when analysing average wages in both sectors, it is difficult to assess whether the public sector jobs are indeed associated with a wage premium – or a penalty. In order to single out the role of individual factors, it is necessary to refer to econometric methods which make it possible to determine, *ceteris paribus*, the influence of a given characteristic on wage levels.<sup>25</sup>

For the purpose of determining the actual importance of individual factors in the process of shaping wages, we have regressed a logarithm of gross wages on some basic characteristics of employees, employers and local labour markets based on SES data from October 2006. All characteristics apart from length of service and unemployment rate for a given voivodeship have been expressed as dummy variables. As reference category we have chosen a man with basic vocational qualifications working full-time as a machine tool operator in manufacturing (public sector; company employing 50-99 people) and employed under a permanent work contract (his wage not being determined on the basis of a collective agreement).

<sup>24</sup> In accordance with LFS data for IV quarter of 2006, the average real weekly working time for hired full-time workers was 38.7 hours for women compared with 42.3 hours for men. Upon the exclusion of teachers these numbers amounted to 40.2 and 42.6 hours respectively.

<sup>25</sup> The estimates presented below describe relationships between wages and particular variables in a sample group consisting of those in employment and not in the entire population. In order to obtain reliable estimates of "rates of return" from particular characteristics in the population one would have to take selection to employment into consideration. Wage equation estimates based on HBS data and taking account of the selection mechanism are presented in Morawski et al. (2008).

**Table III.5.**  
**Wage regression results (monthly earnings)<sup>26</sup>**

Explanatory variables	Coefficients' estimate		
	total	public sector	private sector
woman	-0.1484***	-0.0954***	-0.1763***
postgraduate	0.3612***	0.3133***	0.3993***
undergraduate	0.2581***	0.1966***	0.2735***
post-secondary	0.113***	0.0995***	0.0989***
vocational secondary	0.0838***	0.0734***	0.0756***
general secondary	0.0845***	0.081***	0.0722***
lower-secondary and less	-0.0082***	-0.0245***	-0.0049*
length of service	0.0184***	0.0374***	0.0132***
length of service <sup>2</sup>	-0.0008***	-0.0014***	-0.0007***
length of service <sup>3</sup> (/100)	0.0011***	0.0017***	0.0012***
tenure	0.0231***	0.0151***	0.0249***
tenure <sup>2</sup>	-0.001***	-0.0007***	-0.0011***
tenure <sup>3</sup> (/100)	0.0013***	0.0011***	0.0015***
age	0.0159***	0.0108***	0.0236***
age <sup>2</sup>	-0.0002***	-0.0001***	-0.0003***
private sector	-0.0046***	-	-
agriculture and fishery	0.0722***	0.2113***	-0.0746***
mining	0.3404***	0.3495***	0.3791***
energy, gas and water production and supply	0.0981***	0.0916***	0.1487***
construction	-0.0022	0.0287***	-0.0011
retail trade and repairs	-0.0455***	0.0158**	-0.0278***
hotels and restaurants	-0.0425***	-0.098***	0.0149**
transport, storage and communication	0.0281***	-0.0475***	0.0445***
financial intermediation	0.2586***	0.2137***	0.2851***
real estate and business management activities	-0.0256***	-0.0188***	0.0124***
public administration and national defence; social security and health insurance	0.019***	-0.0025	-
education	-0.0519***	-0.1517***	-0.0706***
healthcare and welfare services	-0.1126***	-0.161***	-0.0081
community, social and personal services and other	-0.0023	-0.0475***	0.0056
10-19 people	-0.1706***	-0.0439***	-0.233***
20-49 people	-0.0762***	-0.0305***	-0.1062***
100-249 people	0.0543***	0.0498***	0.0468***
250-999 people	0.1171***	0.0868***	0.1368***
1000 people and more	0.1658***	0.1698***	0.154***
supra-firm work agreement	0.0384***	0.0157***	0.0454***
firm-level work agreement	-0.0212***	-0.0051***	-0.0184***
temporary work contract	-0.1264***	-0.1093***	-0.1244***
other type of contract	-0.013***	0.0315***	-0.0643***
part-time contract (0-0.25)	-0.0536***	-0.0553***	-0.0493***
part-time contract (0.26-0.5 )	-0.0276***	-0.0444***	-0.0119***
part-time contract (0.51-0.75)	-0.0222***	-0.0572***	-0.0001
unemployment rate at voivodeship level	-0.0074***	-0.0088***	-0.0059***
constant	7.1533***	7.0323***	7.0835***
corrected R2	0.5508	0.6018	0.5307
number of observations	660353	330911	329364

Remarks: \*\*\*, \*\*, \* stand for significance at the level of 1, 5 and 10 percent respectively. The equation for the private sector does not include the L section.

Source: Own calculations based on SES CSO.

<sup>26</sup> The table does not present parameter estimates for occupations (at three digit codes). Estimates for the entire population (upon the exclusion of the variable describing the section from the set of explanatory variables) are provided in Appendix VII.

## Gender and education

Estimation results indicate that women's monthly wages are lower than those of men with the same individual and workplace characteristics by approx. 14.8 percent. Taking into account more detailed workplace characteristics by way of using a four digit occupational code lowers the size of the gender gap only to 14 percent. The above estimates demonstrate that a part of the above-mentioned 18 percent gap between average wages in both groups (see Sub-chapter 3.3) results from different employment structures for men and women. Wage disparities are greater in the private sector where the wage gap is almost 17.6 percent, whereas in the public sector it is only 9.5 percent. When it comes to hourly wages, the wage gap is even smaller. As demonstrated in Sub-chapter 3.3, LFS data indicate that the difference in hourly wages is approx. 13 percent (excluding teachers).

In addition, estimation results based on a sample restricted to people earning below the third quartile prove that wage disparities between men and women are greatest, *ceteris paribus*, in the upper part of the wage distribution and relatively small in the case of people with low and medium wages. The value of the wage gap between men and women is then twice smaller (7.6 percent). In view of differences in the average number of hours worked between men and women, the size of wage gap in the first three quartiles of the wage distribution may be considered small. This confirms the findings presented in Sub-chapter 3.3.

The higher the education qualifications the higher the wages and earnings of master's degree holders exceed wages received by basic vocational school graduates, *ceteris paribus*, by 36.1 per cent. Premiums for a bachelor's degree (after undergraduate university studies) are 10 percentage points lower than those for a master's degree (or equivalent).<sup>27</sup> However, future wages do not depend on whether secondary education qualifications held are specialist or general.<sup>28</sup> It is worthwhile remembering that education premiums calculated in this way should be interpreted as an average and not individual increase in wages for obtaining higher qualifications within particular occupations (and for people with identical characteristics and working for companies of the same size, in the same sector and voivodeship). For instance, in occupations which involve two different types of educations, e.g. basic vocational and secondary vocational, people holding secondary education qualifications earn on average 8.4 percent more.

Estimation results for the private and public sectors confirm our observations presented in Sub-chapter 3.2, namely that the private sector offers relatively higher wages to better-educated workers. In the private sector wages of master's degree holders are on average 40 percent higher than wages of basic vocational school graduates and the premium for a bachelor's degree exceeds 27 percent, whereas in the public sector these values amount to 31 and 20 percent respectively. However, both sectors offer similar wages to people with secondary education qualification (7-8 percent).<sup>29</sup>

## Length of service and age

In accordance with the traditional theory of human capital, another determinant of wages – next to formal education, is work experience. This is so because on-the-job-training plays an important role in gaining qualifications that are indispensable to practice most professions.

In our model, the impact of work experience on gross wage levels has been approximated using third-degree polynomials. Parameter estimations with variables characterising length of service indicate that work experience affects wages in a significant way. One additional year of work for a given employer at the outset of the career translates into an approx. 4 percent wage increase, although the impact of subsequent years of tenure gradually dies out to drop to the level of zero after about 20 years of service. However, it should be borne in mind that coefficients for the length of service have been estimated based on cross-sectional data which means that they do not reflect precisely the evolution of wages across the life cycle. As much as it can be expected that the wage equation correctly identifies wage growth rates with one additional year of work experience in the initial phase of professional career development, problems in the interpretation of estimations emerge when more senior workers are taken into account. An extra bonus for seniority is awarded to workers with long service (more than 35 years) which may result from the fact that wage systems include various jubilee allowances and a progressive seniority bonus. According to SES, the share of seniority allowances as well as premiums and bonuses in gross wages goes up from 9 percent for people with work experience of less than 2 years to 16-17 percent for people with more than 30 years of service (in the public sector – from 6 percent to 20 percent). Nevertheless, the "slope" of the wage curve which is due to experience in the final phase of professional career development is most probably a derivative of low-qualified workers' withdrawal from labour force. This is so because it is mostly workers whose wages are much higher than income from (early) retirement schemes that stay in employment relatively longer, whereas other people are most likely to finish their professional careers at retirement age or much earlier (see Part I). Consequently, average wages grow with seniority as a result of low-paid workers being excluded from the

<sup>27</sup> The above estimates do not take into account the problem of selection to particular levels of education which lowers the respective rates of return. Colleges and universities mostly assemble people with outstanding abilities and skills and therefore the value of the parameter with the variable characterising higher education also includes a premium for that, which inflates the estimate of the impact of formal education on wages. Moreover, getting a university degree is associated with costs in the form of earnings lost when in education and often also with immediate financial costs (fees, books, etc.). Hence, the above-mentioned premium values cannot be equated with rates of return on investment in human capital.

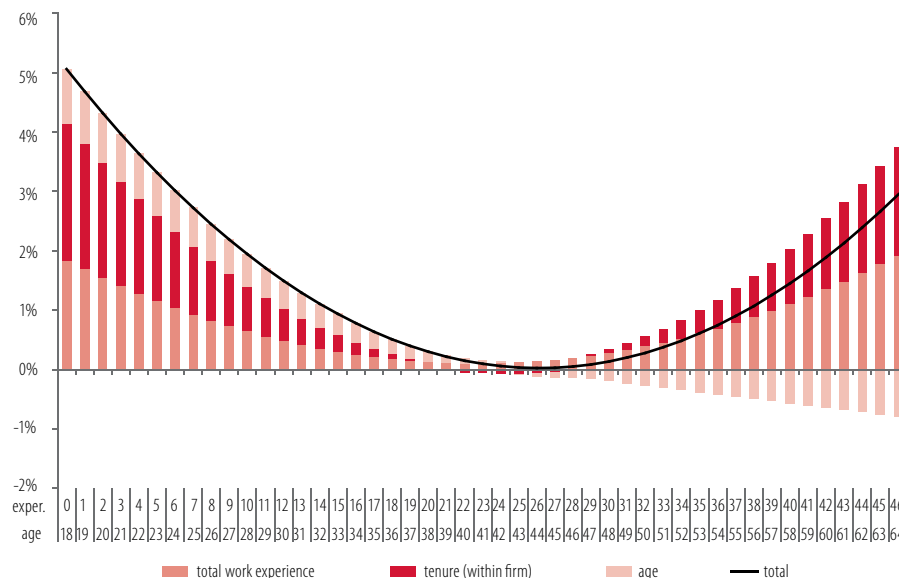
<sup>28</sup> However, it could be of importance when it comes to chances of finding a job. In accordance with LFS, in IV quarter of 2006, the unemployment rate for people with general secondary education qualifications amounted to 16.1 percent compared with 10.9 percent for people with vocational secondary education qualifications.<sup>29</sup> Powyższe wyniki nie uległy istotnej zmianie po wyłączeniu z sektora publicznego górnictwa.

<sup>29</sup> The above results have not changed significantly after mining has been excluded from the public sector.

sample even if individual wages do not change.<sup>30</sup> Moreover, due to the cross-sectional nature of data, the above-mentioned estimates do not take into account the annual increase in real wages. The actual increase in wages for continuing work for another year is higher by approx. 3 percentage points<sup>31</sup>.

**Chart III.24.**

**Approximated marginal wage growth rates for an additional year of work experience**



Remarks: It is assumed that people start working at the age of 18 and continue working for the same employer until the age of 64.

Source: Own calculations based on SES CSO.

It is both the total seniority as well as the tenure with a given employer that is of importance. People with similar total experience but having one year more of tenure with the same employer get wages that are on average 2 percent higher. Differences in wages resulting from work experience gained with one employer grow smaller over time worked for him. Consequently, premiums for the tenure in one company practically fade out after approx. 10 years. Similarly to total experience, positive returns on extra service with one employer (with the same total work experience) emerge in the case of people whose professional careers are tied with one company for a long period (more than 35 years). In other words, average wages of people with the same total work experience but having lower tenures with a given employer are only lower during the first ten years of work for this employer and for people with a very long length of service.

Moreover, it is not only the total work experience that matters but also the age of employees. Lower wages (with the same seniority and other characteristics) are paid to young people and to over-50-year-olds. It is hard to indicate factors that explain this wage pattern. Firstly, it may suggest that some employee groups are discriminated against age or that different wage thresholds apply across the life cycle (prime-age workers may demand higher wages because they have higher expenses related to bringing up children). Secondly, estimates of age coefficients may point to a strong impact of differences in the characteristics (not included among the explanatory variables) of particular cohorts. For instance, a low coefficient for older people may be a result of relatively lower-quality training systems under which they have acquired their qualifications. Thirdly, especially in professions which involve physical labour, productivity is adversely affected by physical fitness and health deteriorating with age.

### Firm's sector, section and size

Workers with the same qualifications are paid less on average in the private sector than in the public one (which includes companies in which the state holds majority ownership, see footnote 11). Nevertheless, the difference amounts to only approx. 0.5 percent<sup>32</sup> and therefore average wage levels which are higher by 15-20 percent in the public sector (see Sub-chapter 3.2) may be above all due to different sectoral, occupational and educational structures of these two sectors as well as to different wage policies. As indicated before, in the public sector the share of people with higher education qualifications is greater. Moreover, wage distribution in the public sector is more compressed – people with high qualifications earn less whereas people working in low-paid occupations earn more than in the private sector. This claim is confirmed by estimation results of the wage equation in case of people in managerial and specialist positions<sup>33</sup>, for whom employment in the private sector translates into wages that are on average higher by 7.6 percent. This conclu-

<sup>30</sup> This probably translates into an increase in the observed premium for seniority as well as into an understatement of the absolute age coefficient towards the end of professional career.

<sup>31</sup> Average labour productivity dynamics in Poland in 1995-2006.

<sup>32</sup> Upon the exclusion of mining, this difference goes up to 0.9 percent.

<sup>33</sup> Occupational groups labelled with "1" and "2" in the Classification of Occupations.

sion remains valid, if we exclude from the estimation those sections which are clearly part of the public sector (public administration, education, healthcare, social services, mining) or which were closely tied to it in the past (energy and gas industry, etc.). On the other hand, seniority is rewarded more in the public sector than in the private one – mainly due to rigid wage schemes applicable in the former which are based above all on length of service and not on individual productivity.

In view of the fact that employee's occupation has been introduced as one of explanatory variables, it is difficult to interpret the estimates of coefficients with dummy variables for particular (NACE) sections. Positive (negative) parameter values mean that people working in companies belonging to a given section and practicing universal occupations, i.e. those which can also be found in other sections (e.g. directors and managers, cleaners, porters, security personnel), earn higher (lower) wages than in industry. Hence, estimated coefficients let rank particular sections by wage attractiveness within a given occupation. Coefficient estimates for variables characterising NACE sections indicate that it is mining and financial intermediation companies<sup>34</sup> that pay their employees best. Employees working in agriculture, water, energy and gas production and supply, transport and communications as well as in public administration, national defence and social security are also paid more than those in industry. The lowest estimated coefficient is for healthcare and social services, where wages earned by people working in occupations that can also be found in other sections are on average lower by 11.3 percent than in industry.

Estimation results indicate that firm size also matters when it comes to wages levels. Smaller companies pay their workers less and differences in wages are considerable – companies that employ more than 1,000 people on average pay their workers 17 percent more than companies employing 50-100 people and more than 34 percent more than companies employing 10-20 workers. A negative relationship between company size and wage levels has also been observed in other countries (see, among others, Loveman, Sengenberger (1991)). Numerous explanations of this phenomenon can be found in the literature on the subject (see Oi, Idson (1999)). Firstly, employment in large companies is often connected with higher requirements (resulting, among others, from more effective work organisation) and different characteristics of work performed which are implicitly included in work contracts. Hence, in order to attract workers with appropriate qualifications it is necessary to offer them sufficiently high wages to compensate for differences in requirements. On the other hand, large companies – due to easier and better access to capital and modern technologies (e.g. IT equipment), make it possible for their workers to attain greater productivity. Also, the size of company operations *per se* may constitute a source of greater efficiency. For example, in retail trade and services, employees in large companies must attend to more clients within a certain period than in smaller shops and service points. Secondly, because of high cost of employee performance monitoring large companies are more inclined to resort to efficiency wage systems. Thirdly, as company operations expand, the cost of acquiring other production factors drops because the cost of getting a loan also falls and possibilities emerge of benefiting from quantity discounts and of negotiating better prices. Moreover, large companies often have market power as well as enjoy easier access to modern production technologies. All this makes it possible for them to generate higher income in relation to labour costs than in smaller companies. Consequently, it is also the surplus to be divided between workers and capital owners that is higher, which encourages workers to organise themselves and thus attempt to take over a share of this surplus. The fact of including in the above wage equation a variable indicating whether wages have been determined under collective agreements lets control to some extent higher levels of unionisation in large companies and therefore it can be assumed that it does not explain the negative correlation between wage levels and company size. However, higher surplus does not only encourage workers to push for pay rises but it also opens up greater possibilities of applying efficiency wage systems to employers. Fourthly, large companies survive longer on average than small companies and they are less likely to go bankrupt. Hence, they have more motivation to invest in employee training because the anticipated return on human capital is higher (i.e. the anticipated period of exploiting newly-acquired skills is longer and the probability of making profit on investment is greater; also thanks to low employee turnover resulting from applying efficiency wage systems and providing more opportunities for learning and professional development within companies). In addition, large companies are usually based in big cities, where unemployment is low and wages are high and, what comes with it, where recruiting employees with desired qualifications requires high wage offers. Although the regression does account for the unemployment rate, it does so at a rather high level of aggregation (voivodeships) which does not fully reflect the different realities of local labour markets.

<sup>34</sup> Due to occupation being included as one of explanatory variables it is difficult to assess whether the model can distinguish high wages for people involved in occupations typical for mining from high premiums for work in the mining sector, i.e. whether it is possible to rightly identify the coefficient describing the attractiveness of employment in mining and the parameter describing premiums for practicing a mining profession. Nevertheless, the results obtained clearly indicate that employment in mining is very attractive in terms of available wages. High coefficients have been obtained for both mining professions as well as for mining as a section.



### Box III. 7. Wages in micro-businesses

As indicated above, SES by CSO does not cover small companies (employing less than 10 people). However, some knowledge about wage levels in micro businesses can be derived from the records of the Social Insurance Institution (ZUS). Although they only provide information about individual funding base levels for social insurance contributions which do not always correspond with gross wage levels, if only because of there being a ceiling on the amount of social insurance contributions, they still provide some approximation of relative wage levels in particular groups of companies (they might slightly understate wages in large companies due to the above-mentioned limitations). In addition, information on wage levels in small companies compared with other businesses can be derived from LFS (with all the reservations concerning the quality of data presented in Box 3).

**Table III.6.**

**Average wages of full-time workers in micro businesses in 2006 (companies employing 51-100 people = 100)**

	total		industry		construction		simple services		business support services		non-market services	
	ZUS	LFS	ZUS	LFS	ZUS	LFS	ZUS	LFS	ZUS	LFS	ZUS	LFS
5 and less	53.1	73.7	60.7	83.7	57.4	70.4	50.3	67.9	53.1	77.6	51.3	79.5
6-20	66.1	87.0	68.9	91.2	64.1	79.8	62.9	84.7	70.5	93.8	73.5	85.0
21-50	85.3	94.2	81.8	97.5	81.1	86.3	83.5	92.9	93.7	92.8	91.2	91.6
51-100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
101 and more	126.9	114.5	141.2	123.1	128.7	106.7	145.5	120.7	97.6	123.8	114.7	111.6

Remarks: Indicators presented in the first columns have been calculated based on ZUS data on average amounts of pension insurance contributions in IX 2006 corrected for differences in the number of people working part-time due to company size (LFS data). LFS indicators apply to all of the year 2006. Simple services – sections G-I; business support services – sections J-K; non-market services – sections L-O.

Source: Own calculations based on ZUS and LFS data.

The hypothesis which ties lower wage levels in small companies with lower productivity is confirmed for both data sources. As indicated above, this relationship should be particularly striking in retail trade and other services, where labour productivity is closely linked with the intensity of client flow. As demonstrated in Table III.6, it is exactly in simple services that average wages in micro businesses are relatively lowest and they reach half the level of wages in companies employing 51-100 people (in retail trade this relationship is 49.4 percent), whereas in industry the difference between average funding base levels for social insurance in these two groups of companies amounts to 39.3 percent.

Table III.6 shows considerable disparities between (corrected) ZUS and LFS data, if relative wage levels in companies employing up to five people are taken into account. Data derived from ZUS indicate that average wages in micro businesses are almost twice lower than in medium-size companies (51-100 workers), whereas survey data suggest that this gap is approx. 25 percent. The above differences may be due to low quality of LFS data, resulting above all from the fact that high earners, who usually work in large companies, either fail to indicate or understate their wages. On the other hand, the lack of exact data on the share of part-timers in the population of people insured in ZUS makes it impossible to calculate the appropriate indicators in an accurate way. Moreover, in LFS, respondents provide their actual net wages and not registered gross wages – which is the case with ZUS data, and therefore differences in indicators calculated on the basis of these two sources may result from small-company employees concealing their earnings and then from progressive taxation of labour income.



## Occupations

In order to identify the wage attractiveness of particular occupations the above model has been re-calibrated to omit variables characterising the NACE section in which a given company operates. Hence, the results reflect the wage attractiveness of particular occupations for people with the same characteristics but they do not differentiate between types of company operations. We have looked at 112 groups of occupations<sup>35</sup> which are covered in the wage structure survey by CSO. The results together with average working times for particular occupations derived from LFS CSO are presented in Appendix VII. Additionally, we have presented values of coefficients corrected for differences in the number of hours worked<sup>36</sup>, which constitute an approximation of an hourly premium for working in a given occupation.

At the top of the list of the highest-paid occupations there are senior-level executives in large companies and then public authorities' representatives and senior officials. The value of the estimated coefficient for the latter group indicates that although on average the public sector pays highly qualified workers less, there are some groups within it whose earnings are relatively attractive compared with the private sector. The highest-paid professions include above all those which involve managerial duties. People working in such positions usually either possess exceptional qualifications and skills or professional achievements which cannot be included in the model (except for seniority). Moreover, in most cases the actual working time in such jobs exceeds 40 hours and therefore their attractiveness in terms of hourly wages is lower than in terms of monthly wages. In addition, it is specialists in different professions that are offered highest wages but in this group still – compared with people with the same qualifications and working in similar companies, it is lawyers, IT specialists, economists and management specialists (economists, financiers, HR and real estate specialists) that earn most money. Also doctors, art and culture specialists, engineers, public administration specialists as well as college and university teachers are high up in the ranking, although the last group stands out due to clearly shorter average weekly working time. Public administration specialists – compared with other specialist groups, also have relatively short working time which makes work in this occupation more attractive.

It is curious that the premium for working as a special school teacher is so high and that it is higher than the coefficient for college and university teachers. This is partly due to extra benefits for work in special conditions that are paid out to people teaching in special schools. The amount of such benefits may amount to 50 percent of the basic pay, although usually it is somewhere in the region of 15-30 percent of regular pay. Hence, high parameter values for this group probably result from relatively high basic pay (which is connected, among others, with work in difficult working conditions and longer weekly working time which exceeds by approx. 1-2 hours that of other teachers).

The top twenty highest-paid occupations also include seamen, navy and air force pilots and officers which is due to the special character of this type of occupations including among others exceptional qualifications and long actual working time (defined as time when workers are at the employer's disposal). It is also worthwhile mentioning miners who earn almost 44 percent more than machine tool operators with the same qualifications (seniority, contracts, etc.), as well as mining machinery and equipment operators whose wages are 26 percent higher compared with the reference category. For the sake of comparison, work of smelting machinery and equipment operators or of people who belong to the group of such professions as "casting specialists, welders, metal smiths, metal construction assemblers and other related professionals"<sup>37</sup>, which involve safety and health risks that are similar in mining-related occupations<sup>38</sup>, earns wages that are higher, *ceteris paribus*, than those of machine tool operators by 13.1 percent and 9.8 percent. The wage attractiveness of mining-related jobs is further enhanced by advantageous retirement plans. High premiums in mining-related occupations should be attributed above all to the exceptionally strong position of trade unions in the mining sector which push for high pay rises. Moreover, it is also important that mining companies have been subsidised from the central budget which impairs the motivation to control labour costs as well as to maximise profits.

At the bottom of the ranking there are mostly occupations which do not require specialist qualifications as well as occupations which involve work in low-productivity sectors such as agriculture, forestry and fishery. Moreover, among the bottom twenty occupations there are employees in textile and textile-related industries as companies operating in this sector are unable to offer attractive wages due to the competition from low labour cost countries (e.g. China).

<sup>35</sup> Clergy have been excluded. Managerial professions have been divided into separate categories according to company size. We have used the following taxonomy of companies: small companies – 10-19 employees, medium-size companies – 20-249 employees, large companies – 250 and more employees.

<sup>36</sup> From the value of estimated parameter we have deducted the difference between the logarithm of average weekly working time for a given occupation and the reference category (blacksmith, locksmith and similar).

<sup>37</sup> In this group, welders account for 2/3 of all employed people, metal construction fitters and assemblers for 14 percent and casting specialist for 10 percent.

<sup>38</sup> According to CSO data on the number of workers injured at work in 2006, the share of the injured among miners and mining machinery operators amounted to 2 and 0.6 percent respectively, whereas for welders and similar professions and for smelting machinery operators this share amounted to 4 and 1.2 percent. Even if we take the incidence of occupational diseases in mining into consideration (according to CIOP data, in 2005, there were 532 cases of occupational diseases in mining), it should be stated that the level of accident and health risks is similar for the above-mentioned professions.

### Box III. 8. Teachers' hourly wages

It is difficult to compare wages earned by teachers with other professionals due to special working time arrangements applicable to this occupational group. In accordance with the Teacher's Charter, the obligatory weekly teaching time for most primary, lower-secondary and secondary school teachers is 18 hours. It does not include, however, time devoted to pre-class preparation, homework assignment review, parents' evenings, etc. This time is not usually monitored by employers and hence there is no administrative data on teachers' actual working time. Some information on this can be derived from LFS where survey participants provide the actual number of hours worked in the week preceding the survey (including, among others, unpaid overtime).

**Table III.7.**  
**Teachers' average working time and hourly wages**

	2006	2006 (excl. holidays)	III, VI, IX, X, XI 2006	hourly wage (PLN)
College and university teachers	35.6 (278)	36 (263)	34.6 (143)	30.4
Lower-secondary and secondary school teachers	26.9 (939)	27 (918)	26.6 (518)	25.6
Primary and nursery school teachers	25.9 (1217)	25.9 (1191)	25.9 (652)	25.0
Special school teachers	28.5 (51)	28.8 (49)	27.4 (28)	28.5
Other education specialists and tutors	33.6 (281)	33.8 (271)	33.8 (131)	19.2

Remarks: All data have been freed from observations for which the average weekly working time does not exceed 18 hours. In brackets we have provided sample sizes. Hourly wages have been calculated based on average monthly gross wages in X 2006 as well as on the average number of hours worked in selected months of 2006 (fourth column).

Source: Own calculations based on LFS and SES by CSO.

In accordance with LFS, in 2006, the actual average weekly working time of primary, lower-secondary and secondary teachers exceeded the obligatory teaching time by approx. 8-9 hours. In view of the fact that teachers enjoy a greater number of days off around holidays than other professionals, their yearly average may lower the weekly average number of working hours. Weekly working time estimates have thus been corrected in two ways. In the first case, we have excluded from the sample those who declared in LFS that they had worked less than usual due to holidays, and in the second case – we have limited the sample to months which, in 2006, did not involve any days off work due to church or public holidays, school breaks or any other extra time off work for teachers (e.g. secondary school-leaving exam period). In both cases the results were close to the original estimations. Using data on working time derived from LFS as well as data on average monthly wages derived from SES, we have estimated hourly wages earned by teachers. The results indicate that primary, lower-secondary and secondary school teachers are paid as well as IT specialists or some of the managers and better than, for instance, doctors, whereas college and university teachers only earn less than senior managers, senior officials, lawyers and sea transport and shipping company workers. This high position of teachers in the ranking of professions with highest hourly wages is also further confirmed by corrected wage regression estimates presented in Appendix VII. Compared with other occupations, wages earned by young primary, lower-secondary and secondary school teachers (with length of service shorter than 1 year; this group – due to qualification requirements, is probably dominated by trainee teachers) are slightly lower. Their hourly wages<sup>39</sup> are much lower than those of inexperienced IT specialists, lawyers or economists but similar to young social science and public administration specialists and higher than doctors' hourly wages. Similarly to the entire population, inexperienced college and university teachers as well as special school teachers are offered relatively attractive wages.

It should be borne in mind that LFS data are exclusively based on declarations made by survey participants and as such they are generally burdened with an error resulting from inexact replies. The fact that almost every third teacher indicated the actual number of hours worked somewhere in the region of 18-20 hours may suggest that some respondents from this group referred to the number of teaching hours or the number of hours spent at school rather than the actual number of hours worked. Therefore, the above estimates should be treated with some caution. It would take more research on the actual working time of teachers to determine their wages more precisely.<sup>40</sup> On the other hand, favourable holiday arrangements that apply to teachers make the above average hourly wages – as calculated based on the average weekly number of hours worked, understate actual wages in this group.

<sup>39</sup> We have assumed that the average working time is the same as for all teachers in a given group.

<sup>40</sup> *Ad hoc* estimations – upon the exclusion of teachers working less than 21 hours, indicate that, when it comes to weekly wages, primary, lower-secondary, secondary and technical school teachers earn wages similar to those of doctors, economists, small business managers and public administration specialists.

## Type of contract, collective bargaining and working time

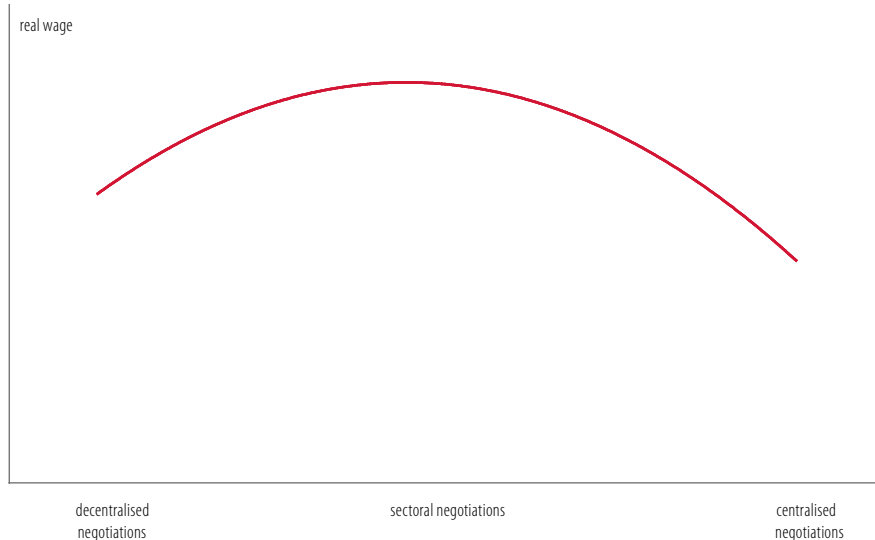
People working under fixed-term contracts generally have lower wages than those working under permanent work contracts. Fixed-term contracts are most common among workers whose work experience and documented qualifications do not suffice to fully assess their usefulness for the job involved and to employ them permanently (see Part II). It can also be expected that this group is relatively more likely to include people with lower qualifications levels which have not been described by variables in the model (education level, seniority, occupation, etc.). Consequently, these people have lower wages than better-qualified workers employed under permanent contracts.

### Box III.9. Calmfors-Driffill hypothesis

In accordance with the hypothesis of Calmfors and Driffill (1988), different degrees of centralisation of wage negotiations may be responsible for different real wage levels and what comes with it for different unemployment levels, where totally de-centralised systems (wage bargaining at company level) as well as strongly centralised systems (wage bargaining at national level) generate lower wage levels and lower unemployment than any in-between variants (e.g. wage negotiations at sectoral level). The traditional argument refers to the degree of internalisation of external effects connected with wage increases. In the case of highly decentralised negotiation models competition between companies does not permit too much pressure for high wage rises because they would cause the company to lose its competitive edge and reduce employment. Similarly, in centralised negotiations trade unions take into consideration the impact of their decisions on the entire economy, including falling employment as a result of excessive wage pressure, which stops them forcing wages too high up.

#### Chart III.25.

#### Relationship between the level of coordination of wage bargaining and wage levels



Source: Calmfors (1993).

The above argument has been slightly modified by Calmfors (1993). Firstly, monopolistic competition in the commodity market (as opposed to perfect competition assumed above) increases the space for wage growth under decentralised systems. Secondly, one consequence of opening up the economy is that wage increases do not translate fully into price levels due to commodity imports which, under centralised systems, grants some space for wage pressure by trade unions without corresponding inflation increase. On the other hand, competition from foreign producers leads to the reduction of wage demands in negotiations at sectoral level. Fourthly, the analysis of the impact of additional external effects not included in the traditional argument (see Calmfors (1993)) as well as of conclusions of the insider-outsider theory weighs in favour of centralised rather than decentralised negotiation systems. To sum up, Calmfors suggests that the actual relationship between the extent of centralisation of wage negotiations and wage and unemployment levels is similar to that presented in the above chart.

Interestingly enough, compared with traditional work contracts, average wages are higher when they are determined under supra-firm level agreements and lower when such agreements are concluded at company level which is, on the one hand, in line with the hypothesis of Calmfors and Driffill (1988). This hypothesis states that collective work agreements concluded at sectoral level (most supra-firm level agreements are of this type) are associated with higher wages than agreements concluded at company (firm-level agreements) or supra-industry level. On the other hand, compared with individual work contracts, lower wage levels determined under firm-level work agreements indicate that within groups of decentralised systems lower centralisation levels do not necessarily

entail lower wage levels. At the same time, the obtained result does not have to be seen as a disruption of the relationship put forward by Calmfors and Drifill but may in fact be nothing but a derivative of a slower reaction of wages determined under collective work agreements to the upturn in the labour market in 2006 which does not affect the long-term positive difference between wage levels provided for in collective and individual work agreements.

Parameter estimations with variables describing working time show a negative correlation between working time and wage levels. People working less than quarter-time – calculated as a full-time equivalent, earn on average 5.4 percent less than full-time workers, whereas half-time employment<sup>41</sup> earns wages that are 2.8 percent lower than full-time employment. This is partly due to tax progression applicable in Poland. For example, at the beginning of 2007, the difference between gross and net wage levels of a full-timer earning 2,000 PLN amounted to 32 percent of gross wage, whereas if this person was employed full-time for half the salary, the tax burden would go down to 24 percent. Consequently, the reduction of working time for the same net wage calculated as a full-time equivalent entails a more than proportional reduction of gross wage. Going back to the above example, a person working half-time would get the same net wage calculated as a full-time equivalent if their gross wage went down to 950 PLN, or 1900 PLN if calculated as a full-time equivalent, which translates into a 5 percent decrease in gross wage. In such situation, the above estimations would suggest the existence of a premium for reduced working time, if we take net wages into account. However, it should be borne in mind that in Poland considerable tax progression only applies to wages not exceeding approx. 2,000 PLN. It is difficult to assess whether the impact of tax progression is of dominant importance when it comes to the relationship between working time and wage levels. In view of the fact that 60 percent of part-timers earned wages which, calculated as a full-time equivalent, did not exceed 2,000 PLN in 2006, it can be assumed that this factor largely understates the parameter estimations with variables describing working time.

<sup>41</sup> In the group of people working between quarter- and half-time, 80 percent are people who worked exactly half-time in October 2006.

## Summary

Real wage flexibility constitutes one of the key conditions for rapid absorption of macroeconomic supply shocks as it reduces their cost in the form of a fierce slump in employment and an increase in unemployment. However, our analysis of real wage patterns in the Polish economy at the time of the Russian crisis indicates that real rigidities were an important element of the wage-setting process at that time. Regardless of unemployment growing rapidly after 1998, the wage dynamics has not diminished, which probably contributed to the sluggishness of the Polish labour market which lasted several years. What is more, wage growth pressure was further intensified by decreasing labour supply resulting from easy access to social transfers. This decrease in employment and increase in unemployment hit low-qualified workers hardest. Therefore, larger risk of job loss among people whose standing in the labour market is worst anyway constituted the price for insufficient wage flexibility. The labour market in Poland turned out to be inflexible and thus hardly secure. It was only the strong downturn in the labour market – together with institutional changes that levelled out the interests of the employed and unemployed, that weakened the real wage dynamics during the downturn period. For the sake of comparison, in the Baltic states, where the real wage dynamics dropped significantly in reaction to the Russian crisis, the consequences of the economic downturn for employment and unemployment lasted much shorter and were much less severe than in Poland.

The significant wage growth observable in the recent period can be seen as a natural consequence of the upturning situation in the labour market and of the resulting change in the relative bargaining power between employees and employers. Consequently, in the last two or three years, we have been catching up in terms of the gap which emerged in 2001-2005 between labour productivity and real wage levels. It can be expected that in the near future the gap between these two values will be fully bridged. In this situation, continuing wage pressure could lead to the Polish economy losing its competitive edge.

The processes of economic transition and economic convergence between Poland and other EU countries together with the accompanying economic fluctuations translated differently into the income situation of particular occupational groups. As a result, wage inequalities have grown considerably in the last years for both higher- and lower-paid workers. These developments have been mainly due to increasing returns on education, growing premiums for managerial jobs and other professions requiring high qualifications (specialists, technicians) and professional experience. Individual employee characteristics – only partly connected with the nominal level of education, have been increasingly important with emphasis shifting towards quality of education, foreign language skills, self-reliance and interpersonal skills. What is more, wage dispersion in Poland has been comparable to that in other countries in the region, which shows that the processes underway in Poland are similar to those in other post-communist countries.

Upon a closer look at wage distribution in the Polish economy, it must be stated that wage systems applicable in the public sector are largely ineffective, especially those in state-owned production and service companies and public administration. Compared with the private sector, companies in which the state holds a controlling stake (including offices) offer relatively higher wages to workers with lower and medium qualifications and cut down on wages of workers with higher education qualifications. This is due both to the limitations imposed by the so-called “salary cap act” as well as the fact that employers automatically base wages on seniority without accounting for differences resulting from actual labour productivity. Consequently, this hardly flexible wage system in the public sector, on the one hand, increases wage costs and on the other hand – offers few possibilities of attracting highly-qualified personnel. Moreover, wages in the public sector are less prone to cyclical fluctuations which leads to swings in wage attractiveness of this sector in relation to private companies. Downturning economy produces wage growth in public companies compared with private ones, whereas upturning economy increases the attractiveness of private employers.

In international comparison, the gender gap in Poland is relatively small. Nevertheless, even if differences in individual characteristics (including level of education and labour market experience) as well as workplace characteristics (such as sector, occupation, company size) and working time are taken into account, women earn up to 20 percent less than men. It is difficult, however, to assess to what extent this gap is a result of wage discrimination and to what extent it is due to differences in work performed which cannot be observed based on available data (e.g. scope of responsibility, qualifications, availability, etc.). The fact that wage differences between men and women are clearly greater among people with high wages suggests that a large part of this wage gap should be attributed to the fact that women are less likely to work in high, well-paid positions rather than to wage discrimination *sensu stricto*. However, whether this phenomenon is due to existing barriers stopping the advancement of women within company hierarchy (so-called glass ceiling) or whether it results from different preferences of men and women when it comes to professional career models requires further study.

The comparison of wage attractiveness of particular occupations clearly demonstrated that people working in mining – compared with other occupations that require similar qualifications, enjoy exceptionally high premiums for their work. Contrary to popular opinion, it seems also that teachers' earnings are also high. Young teachers earn slightly less, although their position in the wage structure of workers without professional experience is still relatively high. Hence, the problem in this occupational group is not low wages but short working time which does not permit teachers earn decent monthly wages.

To sum up, the wage structure in Poland has recently undergone a profound transformation which brought rising wage disparities and increased the share of workers with relatively lowest earnings in total employment. It can be assumed that in the face of the structural maladjustments apparent in the Polish labour market, the growing demand for high qualifications which can be observed in the world economy and which is due to the nature of technological progress of the last decades, may lead to further growth of wage dispersion. This mounts a number of major challenges in terms of social and labour market policies pertaining above all to improving professional qualifications and granting equal opportunities to different social groups. The issue of employing and rewarding lowest-qualified workers will surely be one of the most important elements of said policies.



## Part **IV.** Active policies in a flexible labour market

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## Introduction

Active labour market policies (ALMP) are an important element of contemporary socio-economic policies in developed countries. Since 1970s, employment policies have gone all the way from widespread use of passive policies through their moderation and expansion of active policies to today's paradigm of complex and multidimensional social and economic policy, as required by the Lisbon Strategy of the European Union as well as by the OECD Jobs Strategy. Under this policy, ALMP play a crucial role – it is thanks to them that two apparently contradictory objectives, namely (i) high adaptability and flexibility of the economy and of the labour market and (ii) social security and stability to all citizens, including those at risk of job loss due to changing economic circumstances, can be reconciled.

The increasing importance of ALMP during the last couple of decades as well as growing scientific interest result from the belief that by applying them we can help people whose situation in the labour market is difficult and, at the same time, avoid the negative effects of passive policies, substituting for income from work. Nevertheless, although international experience shows examples of countries with extended active labour market programmes as well as persistently low unemployment, assessments of ALMP effectiveness are by no means unambiguous. This is so because as much as there is no doubt at the conceptual level that assistance offered to the unemployed (or to employers) through active labour market policies should yield better and longer-lasting results than passive policies, empirical research do not provide an unequivocal picture of ALMP effectiveness – particularly when it comes to their effect on aggregate employment levels. Nevertheless, it is beyond any doubt that well-designed and implemented programmes can be effective, whereas unplanned or badly planned assistance may be ineffective or even harmful for its beneficiaries and for the economy as a whole.

In view of the above, the effectiveness of all ALMP programmes, both general and with respect to particular groups of beneficiaries, must be investigated. As much as in Western European countries such evaluation studies are carried out on a regular basis and the knowledge of ALMP effectiveness is reasonably well-grounded, the situation in Poland is much worse in these respects. At the same time, however, thanks to Poland's accession to the EU and falling unemployment levels, the recent years have seen a considerable increase in public spending on ALMP. That is why there is a pressing need for a thorough assessment of actions undertaken by Polish Public Employment Services to assist the unemployed.

This Part of the Report is devoted entirely to the above issues. The first Chapter outlines the background to ALMP - it describes different types of active policies, classifies them, presents their evolution in OECD countries and provides a brief review of the evaluation studies. In the second Chapter we describe the ALMP system in Poland and the recent changes to it. Last but not least, in the third Chapter, we present the results of the micro-econometric evaluation of Polish ALMP. This analysis constitutes the first attempt in many years in Poland to address the problem of ALMP effectiveness in a comprehensive way.

## 1. Active labour market policies in the light of international experience

### 1.1. Types of active labour market policies

Active labour market policies (ALMP) cover various forms of public intervention which aim primarily at increasing employment opportunities of jobseekers, preventing their withdrawal from the labour force as well as at bringing the economically inactive back to the labour market. The term was coined to mark a departure from passive policies, such as unemployment benefits or social assistance, designed to ease the financial hardships of the unemployed. Although the scope and types of active labour market programmes differ significantly among OECD countries, they can be grouped into the following categories (see Box IV.1., Kluve et al. 2007):

- Job search assistance – LMP1: covers, among others, job broking and counselling, i.e. measures intended to lower the cost of job search. Assistance may be provided by public services as well as private work agencies. In 2005, in OECD, an average of 0.06 percent of GDP<sup>1</sup> was spent on job search assistance
- Labour market training – LMP2: is one of the most commonly used active measures. In 2005, OECD countries allocated an average of approx. 0.18 percent of GDP (from public funds) on its financing (see Chart IV.1.). Training programmes include classroom as well as on-the-job training. They may serve to develop general skills (e.g. language courses, IT courses) or help obtain specific vocational qualifications.
- Private sector incentive programmes – LMP4 and LMP7: comprise above all subsidies to employers hiring the unemployed (e.g. wage subsidies and/or reimbursement of social security costs) and financial incentives for the unemployed undertaking work (activation allowances). Employment subsidies consume a considerable part of ALMP resources – in 2005, in OECD, an average of 0.1 percent of GDP, which amounts to approx. 20 percent of all expenditure in this area, was allocated to this purpose (see Chart IV.1.). Another form of private sector incentive programmes are self-employment grants or loans for the unemployed as well as advisory services relating to business management, though the scale of such assistance is marginal (in OECD, in 2005, on average 0.02 percent of GDP).
- Measures for the disabled – LMP5: include special programmes for the physically and mentally disabled – e.g. rehabilitation, sheltered employment, trainings and job-search assistance.
- Direct job creation – LMP6: covers temporary job creation in the public sector or in non-governmental organisations. In 2005, OECD countries allocated on average of 0.06 percent of GDP to this purpose.
- Youth measures: may include training programmes, employment subsidies and job-search assistance. Generally, these measures target low-qualified youth at risk of long-term unemployment and social exclusion.

<sup>1</sup> Data do not include administrative costs of running public employment services (e.g. costs related to benefit administration).

### Box IV.1. Classification of labour market interventions applied by Eurostat and OECD

The Eurostat and OECD classification of active and passive labour market interventions has been designed for the purposes of the labour market policy database which collects data on public intervention in the labour market. Labour market interventions include the following:

#### LMP services

##### 1. Labour market services

- Client services (information services, individual case-management services)
- Other activities of the PES (administration of LMP measures, administration of LMP supports, other services/activities)

#### LMP measures

2. Training (institutional training, workplace training, alternate training, special support for apprenticeship)
3. Job rotation and job sharing (job rotation, job sharing)
4. Employment incentives (permanent and temporary recruitment incentives, employment maintenance incentives)
5. Supported employment and rehabilitation
6. Direct job creation
7. Start-up incentives

#### LMP supports

##### 8. Out-of-work income maintenance and support

- Full unemployment benefits (unemployment insurance, unemployment assistance)
- Partial unemployment benefits
- Part-time unemployment benefits
- Redundancy compensation
- Bankruptcy compensation

##### 9. Early retirement

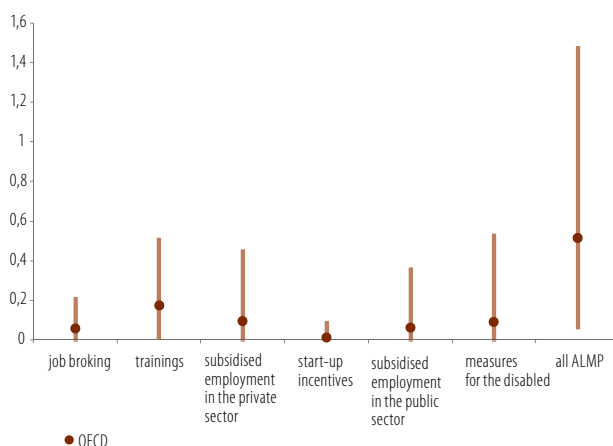
- Conditional (full, partial)
- Unconditional (full, partial)

Source: Labour Market Policy Database, Methodology Revision of June 2006, European Communities, 2006.

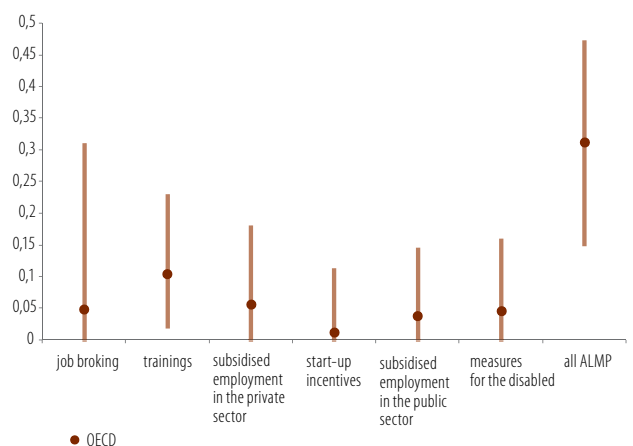
**Chart IV.1.**

### Expenditure on active labour market policies in OECD countries in 2005

#### ALMP expenditure (as a percentage of GDP) – OECD average\*, minimum and maximum



#### ALMP expenditure as a percentage of total labour market policy expenditure – OECD average\*, minimum and maximum



\* non-weighted average for OECD countries excluding Luxembourg, Switzerland and Mexico

Source: OECD, <http://stats.oecd.org/wbos/default.aspx>.

The above classification is of course somewhat arbitrary. Special measures target the young and the disabled because it is believed that members of these groups tend to experience difficulties finding a job more frequently than the average.<sup>2</sup> It is worth bearing in mind that they have very different chances of undertaking work. This is the reason why so-called “profiling” of the unemployed has been increasingly popular. In essence, the profiling system attempts to identify and direct services to the unemployed who are at the highest risk of long-term unemployment and those who need and will benefit from the assistance the most.

<sup>2</sup> This does not mean, of course, that programmes directed to other “high-risk” labour market groups cannot be distinguished (e.g. elderly people, long-term unemployed).

Although the above classification covers all types of interventions included in ALMP, it is also worthwhile mentioning activation strategies, verging on active and passive policies. Activation strategies include various measures which are to encourage benefit-takers (primarily those benefiting from unemployment benefits and - more and more frequently - also social assistance, early retirees and pensioners) to embark on a serious job search. They include, among others (see Tergeist, Grubb 2006):

- monitoring job search of the unemployed;
- compelling benefit-takers to contact employment services on a regular basis and reconfirm their labour market status;
- constructing individual action plans or schedules intended to bring benefit-takers back to work;
- referring benefit-takers to ALMP that best suit their needs (trainings, internships, supported employment, etc.);
- sanctioning the benefit-takers who fail to comply with eligibility requirements (e.g. who give up active job search or refuse to participate in ALMP) by reducing the amount of benefit paid for a specified time period.

Activation strategies are discussed in greater detail in Section 1.4.3.

## 1.2. Active labour market policies in the light of economic theory

In every economy, at each instant in time there is a certain number of people who are out of work, even though they want and strive to find a job. On the other hand, there are also employers who have difficulties in filling job vacancies. In other words, labour market does not clear - there are both workers without jobs and jobs without workers. There are many potential reasons for this phenomenon.<sup>3</sup> In this Chapter we focus on explanations provided by search models (see Box IV.2.).

### Box IV.2. Where does unemployment come from according to the search models?

Search models present the labour market as a heterogeneous structure within which employers create vacancies and search for suitable workers, whereas the unemployed seek to find jobs that best match their skills and expectations. Search models attribute the existence of unemployment to frictions arising from the fact that labour is not homogenous. – both workers and jobs characteristics differ from each other, which turns filling vacancies and finding a job into a lengthy and costly process. Formation of new jobs is most commonly described using matching functions, which relate the number of jobs created to the number of vacancies and job searchers as well as matching technology or – search “effectiveness”. This effectiveness depends, among others, on the effort made to find a job and on the scale of information asymmetry in the labour market (e.g. job-seekers may not be aware of the existence of vacancies, employers may find it difficult to assess the productivity of potential employees).

The matching function reflects the process of entering into contracts in the labour market, whereas, at the same time, jobs are also being destroyed. The greater the scale of job destruction, the higher the level of unemployment.

Unemployment levels are also affected by wage levels determined in negotiations between employers and employees. Wage negotiations involve bargaining over the partition of a surplus, which emerges because – if a contract is concluded – both parties no longer incur the costs of further searching. How exactly the surplus is split depends on the relative bargaining power of employers and unemployed workers, which is, in turn, shaped by the general situation in the labour market, competition, role of trade unions, etc.

ALMP may influence the labour market essentially via two channels (see Boone and Van Ours, 2004): by increasing search effectiveness, that is the speed with which the unemployed flow into employment as well as productivity and durability of jobs created. For instance, work agency is supposed to lower the cost of job search, whereas activation strategies aim at increasing the effort made by the unemployed in their job search. Trainings facilitate labour market adjustments by adapting the skills of the unemployed to the changing needs of employers. They also increase the productivity of their participants thus making it possible for them to get higher wages, which in turn makes transfers as well as household work less attractive. ALMP may also affect labour supply by activating the economically inactive or by preventing flows from unemployment to inactivity. In this way competition for available jobs is boosted which reduces upward pressure on wages and therefore lowers the level of unemployment (see Table IV.1.).

It is worthwhile emphasising that ALMP exert impact not only on their immediate beneficiaries but also on the remaining labour market participants – employers, employees, unemployed workers and economically inactive. In other words, ALMP may have external effects. Such effects are usually negative and their occurrence may cause certain programmes to be ineffective in affecting the general situation in the labour market (aggregate unemployment and employment levels), even if their impact on microeconomic level (employment probabilities or earnings of participants) is positive (see Box IV.3.).

<sup>3</sup> If the labour market was perfectly competitive, in the face of unemployment, jobless workers would immediately start competing with each other – they would lower their wages up to the point where labour supply would equal the demand. This would lead to the eradication of unemployment. In reality, labour markets differ considerably from perfectly competitive ones – particularly so when it comes to the wage-setting mechanism, labour supply curve and labour heterogeneity. These phenomena are explained, among others, based on efficiency wage, union bargaining as well as search models.

### Box IV.3. Indirect effects of ALMP

The most important external effects accompanying the implementation of ALMP include (see Cahuc, Zylberberg, 2004):

- crowding-out effect – occurs when jobs created under ALMP lead to the destruction of existing, regular ones, e.g. when a subsidized company increase production and market share, which leads to a loss of market share for the remaining companies and consequently to a reduction of regular employment in these companies;
- substitution effect – occurs if ALMP participants find employment at the expense of non-participants, it can either mean that firms replace their employees with government-aided unemployed or that they prefer ALMP participants to non-participants when hiring new labour. If the substitution effect is strong, ALMP cannot influence the scale of flows from unemployment to employment, however, they can affect their structure, which in itself may be seen as desirable from the point of view of labour market policy;
- fiscal distortion effect – ALMP are financed from taxes and tax systems may affect decisions made by labour market participants, e.g. taxing labour may lower its supply and reduce employment levels.

Another potential problem to be aware of is a so-called deadweight loss. It occurs when an ALMP participant would have reached the same result without participating in a measure (e.g. when a company hires a subsidised employee but would also do so, if there was no subsidy).

The risk of the above effects actually emerging is varied. Fiscal distortion effect can be expected to operate in the case of all active labour market policies, if they are carried out on a large scale and require considerable financial resources. Similarly, all activation policies involve the risk of deadweight loss, especially if such programmes are directed to broadly defined and internally heterogeneous target groups. Crowding-out effect is most likely to occur in the case of subsidized employment and direct job creation and substitution effect in the case of supported employment and – though to a lesser degree – training programmes and job search assistance. The above is the case especially in the short term when the number of vacancies is limited.

On the basis of literature on the subject (see Cahuc, Zylberberg 2004; Boone and van Ours 2004, Calmfors et al. 2002), it can be stated that as much as economic theory provides some justification for public intervention in the labour market, at the same time, some of the currently applied ALMP measures tend to worsen rather than improve the general situation in the labour market. Evidence indicates that:

- djob broking has a considerable effect on general employment levels, however, for it to really improve the pace and quality of matching in the labour market it is necessary to build an extensive network of work agencies;
- improvement in labour market conditions may also be achieved through public financing of job search assistance, counselling and training programmes – both general and occupation-specific. Such measures may increase the employability of the unemployed as well as durability and productivity of newly-created jobs because the unemployed are hired to fill vacancies that match their qualifications and abilities better;
- subsidized job creation in the private sector is generally accompanied by substitution and crowding - out effects as well as upward pressure on wages thus reducing the effectiveness of this policy in increasing the general level of employment. Nevertheless, subsidies may be effective if targeted to people, whose labour supply is elastic (e.g. elderly, disabled). It should also be borne in mind that support programmes – especially if targeting the youth – might discourage from investing in human capital;
- temporary job creation in the public sector displaces jobs created in the private sector and, due to the fact that jobs created under ALMP are usually characterised by low productivity, its financing – especially on a large scale, usually means wasting public money;
- ALMP may prevent withdrawal from the labour force and therefore it is justifiable that special programmes be implemented targeting those groups of the unemployed for whom the risk of withdrawal is highest. ALMP, particularly trainings and job search assistance, may also stimulate flows from economic inactivity to activity – by, among others, lowering the cost of job search and increasing the attractiveness of work (through higher expected wages) compared to household work or welfare;
- implementing ALMP carries the risk of so-called lock-in effect – in the course of a given programme, its participants may be putting less effort into job searching than non-participants (e.g. because they have less free time or unemployment is no longer such a burden);
- ALMP beneficiaries may become stigmatised – participation in ALMP could be perceived by potential employers as a signal of low productivity, especially if employers realise that ALMP are directed exclusively to high-risk groups in the labour market or to the long – term unemployed.



**Table IV.1. Effects of ALMP on the labour market – at individual and aggregate levels**

Rodzaj ALMP	Effects at micro-level – effects of participation			Indirect effects
	Job search effectiveness (chances of transition from unemployment to employment)	Durability of jobs created	Labour supply	
Job broking	(+) facilitates access to information on job offers as well as on qualifications of the unemployed – lowers the cost of job searching in the labour market	-	(+) lowers the cost of job searching which induces the economically inactive to engage in the labour market	fiscal distortion effect
Counselling	(+) thanks to ALMP unemployed workers search for work more actively and/or effectively  (+) ALMP help adjust skills of the unemployed to employers needs  (-) lock-in effect	(+) unemployed people find jobs that are better-suited to their qualifications or abilities which increases the stability of jobs created	(+) ALMP increase their participants' productivity and their expected wages which reduces the relative attractiveness of transfers and household work  (+) ALMP prevent the unemployed from withdrawing from the labour force	substitution effect – low risk  fiscal distortion effect  deadweight loss effect
Private sector incentive programmes	(+/-) may boost labour demand; however, if – as suggested by empirical research – labour supply is highly inelastic, subsidies will above all bring wage and not employment growth  (-) lock-in effect  (-) risk of stigmatisation	-	(+) ALMP may prevent the unemployed from withdrawing from the labour force, they help maintain their ties with the labour market	substitution effect, crowding-out effect – high risk  fiscal distortion effect  deadweight loss effect
Direct job creation in the public sector	(+/-) may stimulate labour demand which might translate into employment growth but also to upward pressure on wages  (-) lock-in effect  (-) risk of stigmatisation	-	(+) ALMP may prevent the unemployed from withdrawing from the labour force	crowding-out effect – high risk  fiscal distortion effect  deadweight loss effect

Source: Own elaboration, e.g. Cahuc, Zylberberg (2004), Calmfors (1994), Boone and van Ours (2004).

### 1.3. Active labour market policies in the light of international experience

The surge in unemployment rates, which took place in developed countries after the oil crisis of the 1970s, brought a lasting increase in expenditure on passive labour market policies in most European countries. Greater expenditure in the above area resulted not only from soaring unemployment but also from growing generosity of social security systems – the “replacement rate”, i.e. the proportion of expected income from work which is replaced by unemployment benefits, went up by more than 70 percent (see Table IV.2.).

**Table IV.2. Gross unemployment benefit replacement rates in 1965-2005.**

	1965	1975	1985	1995	2003	2005
EU14* average	18	24	30	33	34	32

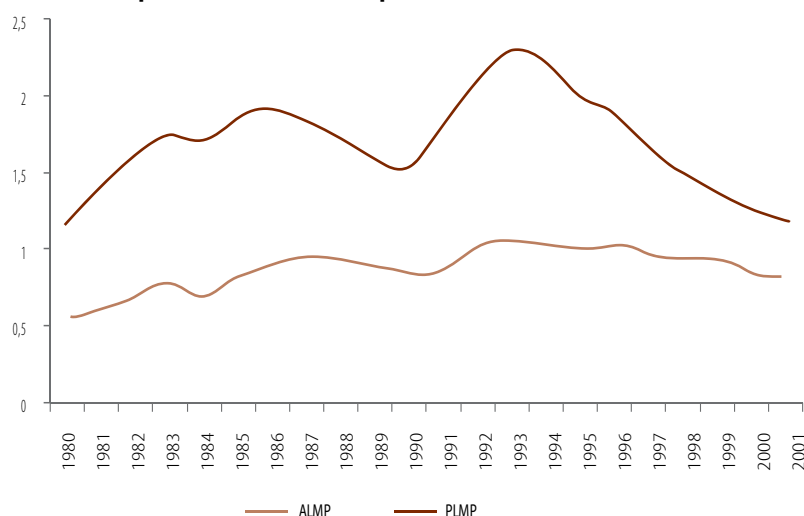
\* excluding Luxembourg. Gross replacement rates – average replacement rate for two different levels of previous earnings in work, three family situations, three different durations of an unemployment spell (see Martin, 1996).

Source: OECD.

High and growing expenditure on unemployment and related welfare benefits, which did not even bring any improvement in the labour market conditions, clearly demonstrated that it was necessary to reform social security systems. Suggested changes included extending active labour market programmes, reducing the level and period of unemployment benefits as well as tightening the eligibility criteria. Moreover, towards the end of the 1980s, many European countries saw attempts at limiting other transfers which had an adverse effect on labour market participation, including pre-retirement benefits (e.g. in Denmark, Germany, Sweden, Great Britain) and disability allowances (Netherlands, Italy) (see MGIP 2005).

**Chart IV.2.**

**Expenditure on active and passive labour market policies as a share of GDP in EU15 in 1980–2001**



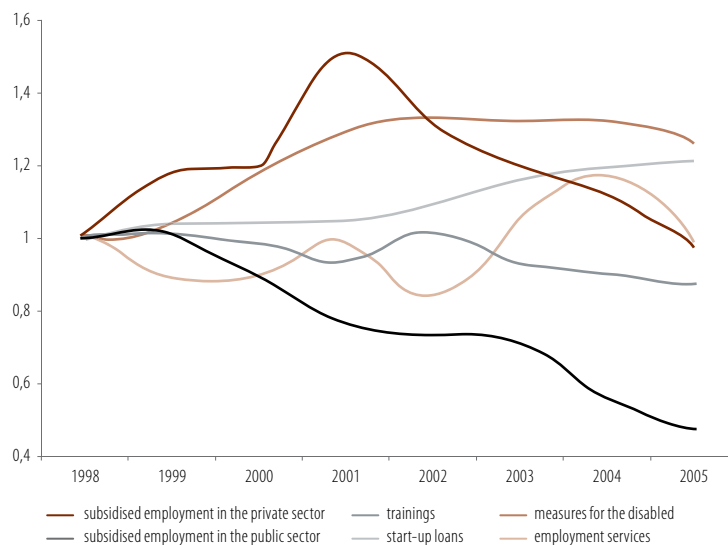
Source: OECD.

However, the undertaken reforms did not result in a persistent drop in the share of expenditure on passive labour market policies in GDP, which reached its maximum value during the recession of the early 1990s (see Chart IV.2.). High unemployment and growing share of people living off various sorts of transfers (see OECD 2003, Chapter 4)<sup>4</sup> reactivated interest in active labour market policies. Reallocating funds from passive to active programmes became priorities of economic policies in all developed countries, which was reflected in the OECD Jobs Strategy (1994) and in the European Employment Strategy (1997).<sup>5</sup> Benefit systems were more and more often tied in with monitoring and sanctioning systems – benefit payments were conditioned on the fulfilment by the unemployed of a number of requirements relating to job searching and contacts with employment services.

Nevertheless, opinions advocated during the early 1990s on the general effectiveness of ALMP in solving labour market problems turned out to be overly optimistic. It soon became clear that although ALMP may to some extent lower the level of structural unemployment and facilitate the absorption of negative shocks in the economy, their effect is limited and their success depends less on expenditure levels and more on types of measures involved and the way they are implemented. For this reason many EU countries have modified the structure of applied activation measures (see Chart IV.3.). The tendency is to give up expensive and marginally effective policies, such as temporary job creation in the public sector and private sector incentive programmes, in favour of cheaper and more effective interventions, e.g. job search assistance, counselling and monitoring.

<sup>4</sup> The share of people receiving social transfers (disability benefits, family allowances, unemployment benefits and allowances, early retirement pensions, etc.) in the population aged 15-64 went up in the EU from the level of 15 percent in 1980 to 19.1 percent in 1990 and 20.2 percent in 1999

<sup>5</sup> The European Employment Strategy provides that all member states are to cover at least 20 percent of the unemployed with active labour market programmes.

**Chart IV.3.****Average changes in ALMP expenditure levels (as a percentage of GDP) in EU15\* in 1998-2005 (1998 = 1)**

\* exact number of countries depending on data availability

Source: Own calculations based on Eurostat

The result of the above mentioned changes was that although the share of ALMP expenditure in GDP was on the rise throughout the 1980s, it has been stable as from 1990 and in some countries it has actually been falling. At the same time, expenditure on active labour market policies differ considerably among EU countries (for more detailed information see Appendix). In 2005, their share in GDP oscillated between 0.1 and 1.7 percent. Highest ALMP expenditure was reported in Scandinavian countries (Denmark – 1.7 percent, Sweden – 1.3 percent) and in the Netherlands (1.3 percent), whereas it was clearly lower in Central and Eastern Europe (Estonia – 0.1; Lithuania and Latvia – 0.2; Slovakia – 0.18; Czech Republic – 0.25).

To sum up, it seems that irrespective of the unimpressive achievements of ALMP when it comes to reducing unemployment (see Chapter 1.4.), there is a continuing interest in active programmes. It is worth emphasising that during the last years they have been discussed in the context of both labour market and social policies. It is more and more common that active policies cover not only people registered as unemployed but also other non-workers, such as social and family allowance beneficiaries and disability benefit recipients. Moreover, the issue of ALMP impact on the supply of labour is often raised and so is their preventive role – including countering withdrawals from the labour force and hindering flows to inactivity, which is particularly important in the context of current demographic trends in the society and population ageing. This approach found its reflection in the Lisbon Strategy of 2000 as well as in the EU Integrated Guidelines for Growth and Jobs 2005-2008 (European Council, 2005), which emphasise, among others, the need to:

- promote a life-cycle approach to work (Guideline 18), by applying measures which encourage elderly people to engage in work and which discourage them from opting for early retirement;
- ensure inclusive labour markets, enhance work attractiveness and make work pay for job-seekers, including disadvantaged people and the inactive (Guideline 19) through, among others, active labour market measures including early identification of needs, job search assistance, guidance and training as part of personalised action plans, provision of necessary social services to support the inclusion of those furthest away from the labour market and contribute to the eradication of poverty;
- promote flexibility combined with employment security and reduce labour market segmentation, having due regard to the role of the social partners (Guideline 21);
- expand and improve investment in human capital (Guideline 23).

#### 1.4. ALMP effectiveness – what programmes work and for whom?

ALMP effectiveness can be empirically assessed using micro- and macroeconometric methods. Microeconometric evaluations assess the impact of ALMP on the situation of participants (duration of unemployment, earnings in new jobs, etc.). Studies of this type make it possible to evaluate and compare the effectiveness of various active measures as well as indicate which programmes prove most effective, under what conditions and for whom. Microeconometric studies are carried out based on experimental or non-experimental methods (see Box IV.4).

##### **Box IV.4. Microeconometric studies of ALMP effectiveness – experimental and non-experimental methods**

Experiments are essentially intended to guarantee a randomized selection of participants for an analysed ALMP programme. It can then be assumed that the distribution of observable and non-observable characteristics among participants is the same as that among non-participants. Therefore, the impact of ALMP intervention can be assessed by comparing the average outcomes (e.g. wage levels, employment) of individuals participating in ALMP (so-called treatment group) versus non-participants (so-called “control group”). Experimental methods are considered the “gold standard”, however, due to financial, ethical and logistic reasons they have not been commonly used.

When it is not possible to secure the randomness of the sample selected for a programme under evaluation, the problem of selection bias is highly probable to emerge (e.g. participants apply to the program because they expect that it will bring them above-average benefits). Bias may result from the selection on the basis of characteristics which are observable (e.g. education, age) and/or non-observable (e.g. motivation) for the evaluator. Because of selection bias, it is not possible to correctly estimate the impact of evaluated intervention, simply by direct comparison of the average outcomes (e.g. wage levels) of participants versus non-participants. This is so because it is probable that participants and non-participants differ not only in terms of programme participation but also in terms of other characteristics (e.g. age, education, work experience, duration of unemployment) which affect the probability of successful return to employment from a spell of unemployment. When it comes to non-experimental studies, control groups must be chosen in a way that guarantees that they are identical to the group of ALMP participants. Statistics and econometrics literature points to various estimation strategies that produce unbiased estimates of the impact of ALMP participation on the outcome of their beneficiaries. However, the fact whether and under what conditions they are effective remains disputable (see, for instance, LaLonde (1986), Dehejia and Wahba (1999), Smith and Todd (2005)).

Nevertheless, microeconometric analyses cannot be the sole basis for assessing the effectiveness of ALMP because they fail to take into account the indirect effects (i.e. displacement, substitution and tax distortion effects) that are intrinsic to the implementation of active labour market policies. As much as in the case of programmes run on a small scale the impact of the above effects may essentially be omitted, the assessment of large-scale interventions should account for the possibility of their emergence. The impact of external effects is verified empirically, among others, using survey studies among employers and programme participants (see, for instance, OECD 1993); labour demand studies at company level (see Kangasharju 2007) and matching function estimation (see Puhani 1999). Notwithstanding the above, macroeconometric analyses are most commonly used to capture the impact of such effects on labour market aggregates.

In this Section we present an overview of the most important studies on ALMP effectiveness both in micro- and macroeconomic perspective as well as of interactions between active and passive labour market policies (for microeconometric study results see also Appendix).

#### ALMP effectiveness – microeconometric analyses

##### **Job-search assistance**

Empirical analyses suggest that job search assistance (job broking, counselling) is a cheap and effective ALMP measure. Best results are achieved when agency and advisory services are addressed to people who have been out of employment for a relatively short period of time (see Weber, Hofer 2005), whereas for the long-term unemployed, more complex programmes that combine guidance with other forms of assistance seem to be more effective. Job search assistance and career guidance may lower the level of unemployment not only by reducing the time needed to find a job but also by improving the fit between employees and jobs and thus increasing the durability of jobs created (see Crepon et al. 2005).

##### **Labour market training**

Training programmes are the most popular and at the same time one of the most costly ALMP measures. Considerable diversity of training programmes (in terms of content, duration, method, etc.) makes the assessment of their effectiveness unequivocal. Some empirical analyses suggest that they are highly effective in shortening unemployment spells (this applies in particular to short pro-

grammes as well as those with well-defined target-groups), whereas other suggest exactly the opposite thing, namely that the impact of training programmes on the chances of their beneficiaries to find a job is close to zero or even negative (see Appendix).

This low effectiveness of training programmes may result from the deadweight loss effect, especially if training programmes are run on a large scale and participants are selected in a way to maximise the share of people brought back to employment after completing a given programme.

Moreover, research suggests (see Fitzenberger, Speckesser 2005) that positive effects of trainings usually show after a couple of years. Due to the fact that most microeconomic analyses focus on short-term effects (usually 1-2 years after the programme), it is impossible for them to fully capture the positive impact of trainings on the situation of participants and their results reflect above all the negative lock-in effect (see Calmfors et al. 2002).

It is also worth emphasising that even if trainings do not increase the chances of their participants to find a job, they may be increasing the stability of jobs created (i.e. lowering the scale of repeated flows to unemployment) because they improve the fit of worker qualifications to employer requirements (see Boone i Van Ours, 2004).

At the same time, imposing on the unemployed the obligation to participate in training programmes after a certain period in unemployment may serve as a test of the availability for and willingness to work. What is more, the threat of programme participation may provide a stimulus for some of the unemployed to increase their job search activity and/or lower reservation wages in order to find a job before the programme starts. A series of empirical analyses (see Rosholm, Svarer 2004, Geerdsen 2006) stress the significance of this "threat effect" for shortening the average spells of unemployment.

To sum up, microeconomic research indicates that training programmes can exert positive impact if they:

- are addressed to a narrow groups of recipients (women re-entering the labour market, long-term unemployed, qualified immigrants) to reduce the deadweight loss and substitution effects;
- are short- rather than long-term;
- are designed in cooperation with employers and involve elements of on-the-job training, and thus provide participants with skills that are sought after by local employers;
- produce a certificate recognised by employers;
- do not re-qualify participants for unemployment benefits, which prevents the so-called "carousel effect" (see Calmfors et al. 2002), cycling between unemployment and programme participation;
- compel participants to contact employment services on a regular basis throughout the programme duration and re-affirm their availability for and willingness to work in order to minimise the lock-in effect.

### Private sector incentive programmes

Subsidised employment is directed primarily to individuals from "high-risk" groups in the labour market, for instance, the long-term unemployed or the unskilled. Participation in such programmes helps them maintain ties with the labour market and thus prevents their qualifications from becoming obsolete and minimize the risk they will become economically inactive. Employment subsidies are often also addressed to people re-entering the labour market, i.e. women returning from maternity leave (see Martin, Grubb, 2001).

Most microeconomic analyses suggest that participation in supported employment programmes has positive effects on the probability of finding unsubsidised employment in the future (see Appendix). When assessing the effects of this policy from the macroeconomic perspective, it should be borne in mind, however, that it may be accompanied by strong indirect effects (substitution and displacement effects)<sup>6</sup> and upward pressure on wages.<sup>7</sup> This is particularly the case for large-scale programmes and this is why employment subsidies should only be directed to selected groups of beneficiaries, who can benefit the most from them.

Supported employment also includes self-employment grants (or loans) as well as advice on business management (business plan preparation, financial and accounting guidance). Hitherto research suggests that start up grants are an effective form of assistance for a relatively small group of unemployed individuals, above all for qualified men. Carling and Gustafson (1999) proved however that although micro-loans help a relatively limited group of the unemployed, businesses set up thanks to such assistance provide more stable employment than jobs created under traditional wage subsidy schemes. Nevertheless, it should be borne in mind that this policy carries a high risk of deadweight loss because many companies would be set up even without assistance under ALMP.<sup>8</sup>

<sup>6</sup> Martin and Grubb (2001) indicate that in the Netherlands, Belgium and Ireland these effects amount to approx. 90 percent. This means that out of 100 employed (and subsidized) workers only 10 would not have been employed if there had been no subsidy.

<sup>7</sup> Pressure on wage growth may be particularly strong in case of subsidising employment of individuals, whose labour supply is inelastic (see Cahuc Zylberberg, 2004). In such a case, growing labour demand resulting from a subsidy will primarily translate into higher wages and not employment. The above argument may serve as an explanation for the ineffectiveness of subsidies targeting prime-age male workers and as a justification for granting subsidies to groups characterised by relatively more elastic labour supply (young and elderly people, low-skilled workers, women, etc.).

<sup>8</sup> Auer et al. (2005) indicate that 56 percent of the unemployed who obtained grants under start-up incentive programmes in Canada would also start up companies without public support.

## Direct job creation in the public sector

Temporary employment programmes in the public sector and in non-governmental organisations are usually addressed to people whose situation in the labour market is the most difficult. Nevertheless, as indicated by relevant research (see Appendix), participation in such programmes does not increase the employability and sometimes even exert an adverse impact on employment prospects, among others, as a result of stigmatisation of programme participants in the eyes of potential employers.

Therefore, application of this policy measure may only be justified in the case of short programmes targeting individuals who are the most vulnerable to social exclusion. This is so because temporary work in the public sector let programme participants maintain social ties as well as constitutes a crucial source of income – it thus counters poverty. Moreover, the obligation to take part in a programmes may be a test of availability to undertake employment.

## Youth measures

In the light of existing microeconomic empirical research, the effects of ALMP measures targeted to the youth are by no means unambiguous. Both training programmes and supported employment do not improve considerably the situation of the youth in the labour market (see Appendix).

In order to increase the effectiveness of ALMP measures targeting the youth, the programmes should:

- be directed exclusively to disadvantaged youth, who experience severe difficulties with social integration and finding a suitable job;
- influence – frequently negative – attitudes of the youth towards education and work (e.g. through mentoring programmes);
- cover not only young people but also their families and social environment;
- open up further education opportunities;
- combine general education with professional training and work experience;
- be designed in cooperation with employers and dedicated to professions securing relatively high wages.

Nevertheless, international experience shows (see Grubb 1999, Heckman 2006) that ALMP are a much less effective tool in countering unemployment and social exclusion of the youth than measures in the area of education, including above all securing equal education opportunities to children from disadvantaged families, developing pre-school education, adjusting education syllabuses to labour market needs and preventing early drop-out from education. Heckman (2006) proves that assistance to children of preschool or primary school age may bring returns of 15-17 percent, which means that it greatly exceeds profits from traditional ALMP programmes.

## ALMP effectiveness – macroeconomic analyses

The implementation of ALMP carries the risk of indirect, external effects so it is very important to evaluate active programmes from the macroeconomic perspective, that is estimate their impact on aggregate unemployment and employment levels.<sup>9</sup>

<sup>9</sup> Macroeconomic analyses usually consist in estimating the following equation (see Boone van Ours, 2004):

$u_t = \beta_0 + \beta_1 x_t + \beta_2 y_t + \beta_3 \Delta^2 p_t + \varepsilon_t$  where:  $u_t$  – unemployment (employment) rate in country  $i$  in time  $t$ ;  $x_t$  – vector of labour market institutions;  $y_t$  – ALMP expenditure;  $\Delta^2 p_t$  – change in inflation rate;  $\varepsilon_t$  – error term.

The estimation of the above equation permits to assess the direction and strength of impact of ALMP expenditure on employment and unemployment rates, controlling for the operation of other factors, e.g. structure of labour market institutions and economic cycle phase (approximated by inflation). Unfortunately, estimations of the above equation give rise to the problem of endogeneity. ALMP may affect the unemployment rate but the causation may be reverse – rising unemployment levels may induce greater ALMP expenditure. This is the reason why this variable is usually used in its normalised form (ALMP expenditure per unemployed as a share of GDP per working-age person). However, normalisation is not a remedy for the endogeneity problem if growing unemployment leads to a disproportionate increase in resources devoted to ALMP (i.e. when unemployment growth is accompanied by falling ALMP expenses per unemployed). Ignoring this problem leads to inaccurate estimates of the impact of ALMP on unemployment (employment) levels.

**Table IV.3.**  
**Macroeconometric studies on ALMP effectiveness**

Study	Sample	Impact of ALMP on unemployment	Impact of ALMP on employment
Scarpetta (1996)	15/17 OECD countries in 1983-1993	(-)	(+)
Nickell i Layard (1999)	20 OECD countries in 1983-1994	(-)	(0)
Estevao (2003)	15 OECD countries in 1985-2000		(+) subsidies, measures for the disabled (0) trainings (-) job-search assistance, youth measures
Boone i Van Ours (2004)	20 OECD countries in 1985-1999	(-) labour market training, job-search assistance (0) other	(+) labour market training (0) other
Bassanini i Duval (2006)	20 OECD countries in 1985-2002	(-) labour market training (0) other	(+) labour market training (0) other

(+) – positive impact, (-) – negative impact, (0) – no impact

Source: Own elaboration

Scarpetta (1996) demonstrates that increase of the expenditure on ALMP decreases significantly the unemployment rate.<sup>10</sup> However, he also suggests that ALMP are associated with strong substitution and displacement effects. At the same time, due to the fact that active policies bolster labour supply, their impact on aggregate employment is positive though relatively marginal. Research carried out by Nickell and Layard (1999) confirms the conclusion that although increased expenditure on active labour market policies is a mighty factor when it comes to unemployment reduction (especially long-term unemployment), it does not exert significant influence on employment levels.

Estevao (2003) claims that the implementation of ALMP may favour employment rate – in 1993-2000, an increase of 1 percentage point in ALMP expenditure brought employment growth of 1.9 percentage points. Estevao studies the effectiveness of various types of ALMP and concludes that the supported employment and measures for the disabled have a positive effect on employment: whereas – surprisingly enough – greater expenditure on employment service and youth measures would bring the employment rate down.

Boone and Van Ours (2004), in turn, showed that it is only expenditure on labour market training that significantly and considerably reduce unemployment and bolster employment – especially among women. They also looked at interactions between ALMP and unemployment benefits which led them to the conclusion that the positive (negative) impact of trainings on employment (unemployment) is stronger in countries with more generous benefit systems.

Results of Bassanini and Duval (2006) also suggests that higher expenditure on ALMP does not automatically lead to employment growth and that a lot depends on the structure of implemented policies. Similarly to Boone and van Ours (2004), Bassanini and Duval point to the positive effects of training programmes. They estimate that if an average OECD country increased its expenditure on trainings (calculated per unemployed person as a percentage of GDP per capita) by 1 percentage point, it would be able to lower the general unemployment level by at least 0.05 percentage points. As for other ALMP categories, their impact is insignificant or even adverse.

The scope and structure of ALMP – together with a wide range of other institutions – may also influence the speed of adjustment of the unemployment rate to a new equilibrium in reaction to shocks emerging in the economy (e.g. falling productivity growth, deteriorating terms of trade, growing real interest rates). Blanchard and Wolfers (2000) look at interactions between macroeconomic shocks and ALMP expenditure based on a sample of 20 OECD countries in 1960-1995. They conclude that higher ALMP expenditure reduces the rise and persistence of unemployment following the negative shock. Similar conclusions were put forward by Bassanini and Duval (2006). Hence, although it seems that ALMP do not lead to significant employment growth, they render the labour market more flexible – they facilitate the absorption of negative shocks in the economy and limit the extent of their adverse impact. This is so because ALMP:

<sup>10</sup> He suggests at the same time that the impact of ALMP on employment levels is a better indicator of their effectiveness. Since ALMP participants are often not classified in the statistics as unemployed, increasing the expenditure on active policies and number of their participants leads automatically to the fall in registered unemployment levels. However, this does not necessarily mean improvement in the labour market conditions.

- strengthen the bargaining position of “outsiders” (e.g. long-term unemployed, youth) in wage negotiations, which facilitates wage adjustments after occurrence of a shock;
- help to adapt the skills the unemployed to the changing requirements of employers (e.g. trainings) and lower the cost of job-search (e.g. job broking);
- prevent those who lose jobs following the negative shock from withdrawal from the labour force.

To sum up, macroeconometric analyses support the thesis that ALMP do not constitute a panacea for labour market problems but to some extent they can contribute to aggregate employment growth. What is more, it can be concluded that microeconometric studies overestimate the effectiveness of policies which bring adverse indirect effects (e.g. subsidized employment) and underestimate those which produce positive results only in a longer period of time (e.g. trainings).

Available analyses indicate that trainings and job search assistance have the potential to speed up the return of the unemployed to work and to increase employment levels, whereas other active measures seem to be ineffective. International experience also suggests that ALMP should not be directed to broadly defined target groups (e.g. to all young or elderly people) because employment prospects of members of such groups are usually largely heterogeneous. It seems that the best solution would be to profile the unemployed – to early identify individuals at high risk of long-term unemployment and social exclusion and to offer them personalised assistance.

It can also be concluded that although the impact of ALMP on aggregate employment rate is rather modest, it is beyond doubt that active policies increase flexibility of the labour market – they facilitate adjustments in the economy, prevent discouragement and inactivity and reduce the level of long-term unemployment.

### Activation strategies – interactions between passive and active labour market support

Theoretical and empirical findings (see Nickell 1998; Elmeskov et al. 1998; Krueger and Meyer 2002; Grubb 2005) indicate that generous benefits for the unemployed lower their motivation to look for a job and increase their reservation wage, which, in turn, exert negative influence on employment rate.<sup>11</sup> Hence, one method of stimulating employment is by limiting the availability of social assistance. However, unemployment benefits work as an insurance, they smooth out fluctuations in income and thus provide the safety net for the unemployed during the job search process. As emphasised by Acemoglu and Shimer (2000), unemployment benefits prevent the situation where unemployed individuals accept every job offer they receive, even if it does not match their abilities and skills and therefore it does not maximise their productivity.

The role of social assistance has recently become a subject of an extensive public debate. At times of rapid economic changes and increasing global competition, more and more employers postulate the need for flexible labour code (rules on hiring and firing workers) and promoting atypical forms of employment. On the other hand, employees demand extended safety net and social support. It is in this context that the concept of so-called flexicurity – combining flexibility and security of both employees and employers, came into being (see Lang 2006, Andersen 2005). Activation strategies, together with flexible labour code, ALMP and promotion of life-long learning, play a central role in the flexicurity model. They are based on the principle of mutual obligations – the unemployed can receive generous support but only on condition that they undertake real actions intended to bring them back to work.<sup>12</sup> Well-designed activation programmes may mitigate the de-activating impact of generous benefits and at the same time help to achieve certain social objectives.

One important element of activation strategies is compelling benefit recipients to reconfirm, on a regular basis, their ability and willingness to undertake employment and monitoring their job-search activity. Currently, in approx. half of all OECD countries (see Table IV.4.) the unemployed are required to report back regularly – usually every two or four weeks – on all actions intended to bring them back to work. Empirical literature indicates that imposing on the unemployed the obligation to stay in regular contact with employment services may significantly lower the unemployment levels. Dolton and O'Neill (1997) point out that personalised job search assistance and monitoring may constitute an effective method of diminishing long-term unemployment among the youth.<sup>13</sup>

<sup>11</sup> As suggested by Cahuc and Zylberberg (2004), the strength of the deactivating impact of benefits depends on the coverage rate. Growth in replacement rate lowers the intensity of job search activity among the unemployed entitled to the benefit but the effect on those who are ineligible is the opposite – they maximise job-seeking efforts in order to find employment and gain the right to (more generous) unemployment benefits in the future. The direction of influence exerted by the replacement rate growth on the aggregate unemployment level is not unequivocal and remains an empirical issue.

<sup>12</sup> Activation strategies are targeted towards unemployment benefit-recipients but more and more often towards a broader group of benefit-takers (recipients of social and family allowances, early retirement pensions, etc.). Hence, a coherent activation strategy requires that labour market and social policies be integrated into one system.

<sup>13</sup> But favourable effects are only visible for males (unemployment decrease of 6 percentage points after 5 years).



**Table IV.4. Job search monitoring – verification frequency**

Country	Job search reporting frequency	Minimum number of job seeking actions per month
Australia	every 2 weeks	from 8 to 20
Austria	every month	not set
Belgium	varying requirements	not set
Canada	varying requirements	not set
Czech Republic	every 2 weeks	not set
Denmark	every 3 months	varying requirements
Finland	between 1 week to 1 month	varying requirements
France	every month	varying requirements
Greece	no reporting requirement	no reporting requirement
Germany	varying requirements: 6 times a year on average	not set
Hungary	every month	varying requirements
Ireland	varying requirements	not set
Italy	varying requirements, in practice rarely	not set
Japan	every 4 weeks	2
Korea	varying requirements: from 1 to 4 weeks	2
Luxembourg	varying requirements	not set
Netherlands	every 4 weeks	4
New Zealand	every 6 weeks	varying requirements
Norway	every 3 months	not set
Poland	no reporting requirement	no reporting requirement
Portugal	varying requirements	varying requirements
Slovakia	varying requirements: from 1 to 4 weeks	varying requirements (1 action per contact with public employment services)
Spain	every 2 months	not set
Sweden	every 6 weeks on average	not set
Switzerland	every month	from 4 to 10
Turkey	no reporting requirement	no reporting requirement
Great Britain	every 2 weeks	10
USA	every 2 weeks	10

Source: OECD 2007.

Those unemployed who fail to fulfil the obligations imposed on them must bear in mind that they could be subject to sanctions such as reducing the amount of benefit, withholding it or even losing the right to it. As demonstrated by Abbring et al. (1998), in the Netherlands, for instance, punishment inflicted upon the unemployed who fail to fulfil the said obligations almost doubles transitions from unemployment to employment and it is not so much the range of sanction that matters but the mere fact of it being imposed. Also in Switzerland (see Lalive et al. 2002) only warnings about potential sanctions increase the intensity of such transitions by 28 percent.

Another element of activation strategies is steering benefit-takers to ALMP programmes that match their needs. From the activation strategies perspective, active labour market policies are not only aimed to increase participants' chances of finding a job – ALMP should also serve as a test of their actual readiness to take up work. Some unemployed, i.e. those whose motivation to engage in employment

is not actually very strong, when faced with the obligation to participate in a training programme or internship, choose to give up their right to benefit rather than give their time to active forms of support. Moreover, the obligation to participate in ALMP after a certain period of being unemployed motivates them to set on a job search early and eventually to find a job. This is so because a large share of them want to avoid the obligatory and time-consuming dealings with public employment services. Numerous empirical studies indicate that this “threat effect” contributes significantly to the reduction of unemployment. Based on data for the USA, Black et al. (1999) prove that the obligation to participate in ALMP shortens the length of unemployment even more than the programmes themselves. Rosholm and Svarer (2004), in turn, estimate that in Denmark, as a result of the “threat effect” the period of unemployment is shorter by an average of approx. 8 percent (3 weeks).

To sum up, applying a combination of passive and active policies boosts their effectiveness in terms of their impact on the labour market situation as well as of wise use of public funds devoted to these purposes. There is no doubt that OECD countries give more and more attention to designing consistent activation strategies, although the tools used in a bid to activate the unemployed (such as ways of verifying their actual labour market status, job searching methods, personalised action plans, profiling, sanctions, etc.) vary significantly across countries. International experience suggests that effective activation strategies should include:

- sciscle thorough monitoring of the unemployed, their frequent contacts with public employment services (job search controls, work readiness re-assessments) and imposing sanctions against non-fulfilment of imposed obligations (where the fact of imposing sanctions seems to matter more than their actual amount). It ought to be emphasized that having the unemployed either search a job very intensively or accept the first job offer might lower the quality of matching in the labour market, which subsequently reduces the productivity and stability of created jobs;
- short job-searching courses which are aimed especially at people with relatively good chances of finding a job. It is a cheap and effective form of motivating the unemployed to take up independent job-searching attempts;
- unemployed profiling and designing individual action plans – selection of people who are at high risk of lasting unemployment and social exclusion from the group of all people registered in labour offices and offering them personalised assistance matching their actual needs (to reduce the dead-weight loss effect);
- obligatory participation in ALMP after a certain period of unemployment – using active labour market policies also in order to verify the readiness of the unemployed to undertake employment and achieve positive external effects (e.g. “threat” effect);
- imposing upon the unemployed the obligation to look for jobs even when participating in ALMP (in order to minimise the negative lock-in effect);
- insisting on the evaluation of actions taken and improving the organisation and management of public employment services.

### 1.5. Active labour market policies in selected OECD countries – case studies

The diversity of conclusions drawn from the analysis of AMLP effectiveness in selected countries reveal on one hand a multitude of actions taken as well as a series of methodological problems and lack of appropriate data making their evaluation difficult, but on the other hand they also prove that there is no universal programme which would always boost employment levels. International experience shows that ALMP effectiveness depends on the design of the entire institutional system – social security system, tax system and law stringency. Furthermore, the way of implementing active labour market policies seems to have been of utter importance. Hence, this Chapter touches on several problems in the area of designing and implementing ALMP. We focus on the experiences of Great Britain, Denmark and the Netherlands in the aforementioned field. The example of Great Britain indicates that even relatively inexpensive youth measures may prove effective if they are well designed and implemented (see point 1.5.1.). Danish experience shows that ALMP effectiveness may be augmented through their accurate targeting, particularly when supported by systems allowing for early identification of people at highest risk of lasting unemployment (see point 1.5.2.). The example of the Netherlands demonstrates, in turn, that the effectiveness of employment services could be amplified by deregulation of their market (see point 1.5.3.).

#### Great Britain – how to design an effective and inexpensive youth activation programme?

The New Deal programme plays a key role in the British ALMP system. New Deal for Young People (NDYP)<sup>14</sup> targets the age group of 18-24. Both in terms of participation and financing levels, it is the most extensive active labour market policy in Great Britain. The programme was launched in April 1998 and more than a million people participated in it within the period of 1998-2005 (Riley et al. 2007). The main aim of the programme is to help young people who have been out of employment for more than 6 months to re-enter the labour market. Moreover, those who want to receive unemployment benefits are obliged to participate in NDYP.

<sup>14</sup> Also, New Deal includes programmes directed to the following groups of recipients: New Deal 25+ (ND25+) – for people aged 25-49, New Deal 50+ (ND50+) – for over-50-year-olds, New Deal for Disabled People (NDDP) – for the disabled, and New Deal for Lone Parents (NDLP).

The NDYP programme consists of three stages:

- Stage one – Gateway – it lasts at most 4 months. It primarily involves employment agency and short trainings. Moreover, all participants are assisted in their job-searching attempts by personal advisers who build up a positive attitude towards education and work. The unemployed have to meet their personal advisers at least once every two weeks.
- Stage two – Option – it usually lasts between 6 and 12 months and offers the following options:
  - subsidised jobs;
  - return to full-time education or training (participants receive an allowance in the amount at least equal to the unemployment benefit);
  - work in the voluntary sector (participants receive an allowance in the amount at least equal to the unemployment benefit);
  - work in the public sector, i.e. the Environment Task Force (participants receive an allowance in the amount at least equal to the unemployment benefit).
  - Additionally, there is an option of a short training covering job-searching methods (CV and covering letter writing, job interview preparation).
- Stage three – Follow through – it is offered to unemployed workers who have not been successful in finding a job during the first two stages of the programme. This stage is similar to the Gateway but it lasts at most of 13 weeks.

Attempts to evaluate ALMP in terms of their effectiveness indicate that the effects of implemented programmes are positive. Effectiveness evaluations of the New Deal for the Young reveal that the probability of finding a job by men following the programme increases by 20 percent (see Blundell et al. 2002, van Rennen 2001).<sup>15</sup> What has been emphasised though is the effectiveness of the first and least costly stage of the programme, i.e. job searching assistance and career guidance. Such a result has been confirmed by Dorsett (2006), who claims that the Gateway stage is most effective. Next, irrespective of its relatively high cost the subsidised employment seems to be effective as well (see Dorsett 2006) – for men it increases the chances of engaging in employment by approx. 6-7 percent. Although there is no evidence whatsoever that substitution or displacement effects occur in this case, such an outcome might be biased due to a narrow use of this policy in Great Britain. McVicar and Podivinsky (2003) too suggest that the NDYP programme contributes to the growing number of transitions from unemployment and positive effects are most evident between the sixth and twelfth month of unemployment. Nevertheless the authors emphasise that NDYP reduces unemployment by shifting large groups of young people from unemployment mainly to education and trainings, whereas their transition to employment is significantly rarer.

Available analyses lead to the conclusion that the New Deal programme is relatively inexpensive and effective (even though a part of young people are moved from unemployment to education). It seems crucial for the success of the programme that assistance should be personalised – job seekers keep in touch with their personal advisors who offer them assistance matching their individual needs. It is also important that the unemployed are being motivated to seek employment and encouraged to do it independently and actively.

## Denmark – how important is profiling of the unemployed?

International experience reveals that addressing ALMP programmes to precisely determined groups of recipients increases their effectiveness. In a bid to identify job-seekers' needs and personalise assistance, a number of OECD countries have designed tools to "profile" the unemployed. The main objective of the profiling system, which was introduced in Denmark on a large scale at the end of 2004, is to appoint among the people registered in employment offices those who are at highest risk of lasting unemployment. Early identification of people facing long-lasting unemployment and social exclusion makes it possible to act preventively and to avoid a situation where assistance is directed to unemployed people who could easily find jobs unassisted. Therefore, profiling the unemployed minimises the risk of deadweight loss and is advisable from the point of view of effectiveness of public money spending.

The Danish profiling system essentially consists of two components (see Rosholm et al. 2004):

- Econometric model – the currently used model has been estimated for 120 subsamples<sup>16</sup> on data covering the period of 1999-2003. Predicted length of unemployment is estimated on the basis of such variables as: age, marital status, local unemployment rate, education, district of residence, participation in ALMP and individual labour market record of a given unemployed worker. The prediction power of the model – amounting to 66 percent – is high compared with that of models used in other OECD countries. This model makes it possible to estimate the probability that a person who registers in a labour office remains jobless six months later. Then, information about this risk is transferred in a graphic form (so-called "job barometer") to the right labour office employee.

<sup>15</sup> Due to the fact that 75 percent of NDYP participants are men, the assessment of effects for women is not clear.

<sup>16</sup> Isolated for gender, age (2 groups), benefit system (2 groups) and region of residence (15 groups)

- Detailed individual interviews – based on the econometric model results as well as on the interview guidelines; labour office employees carry out interviews with those unemployed who have been assigned to the group of high risk of lasting unemployment. These interviews are intent on identifying strengths and weaknesses of the unemployed, their motivation and professional predispositions.

As a result of the two aforementioned stages of unemployed profiling, individuals are placed in one of five categories: from least to highest risk of lasting unemployment.

Systems that enable early identification of people at risk of lasting unemployment are currently being applied or tested in several other OECD countries, including Australia, Finland, France, Ireland, South Korea, Germany, New Zealand, United States and Sweden (Frölich et al., 2003). Although perception over the use of profiling systems is mixed, Denmark plans to extend its system to encompass an optimal, personalised activation programme (ALMP types plus schedule) to be designed on its basis for each person facing the risk of lasting unemployment.

### The Netherlands – threats and opportunities posed by the deregulation of the market for employment services

The Netherlands (together with Australia) are countries where the market for employment services is completely privatised. Although this country has experienced some problems when setting up the system of private employment services, the general outcome of the process is definitely positive.

At present, the following institutions operate in the Netherlands in the area of social insurance and labour market policy<sup>17</sup>:

- Employee Insurance Agency (UWV) – it collects insurance contributions as well as grants and pays out unemployment benefits. UWV is responsible for activation policies. Starting from 2000 it no longer implements ALMP programmes independently but outsources them to private entities and non-governmental organisations;
- local self-governments – they are responsible for social benefits and assistance to people ineligible for benefits. As from 2002, the organisation of reintegration programmes targeting this social group has also been largely outsourced to private entities;
- Centre for Work and Income (CWI) – it is an equivalent of a labour office – and institution which registers and classifies the unemployed, assigns them to one of four groups depending on the level of risk of lasting unemployment. CWI only helps unemployed with the highest chances of finding a job and offers them basic forms of support – above all work agency.

The choice of a company is made through tendering organised for the six regions in the country, three times a year. Offer choices are usually based on the following criteria:

- company experience in running ALMP in a given region;
- price;
- expected effectiveness of action taken (share of people who find work);
- adaptability of activation methods to the needs of a targeted group.

Additionally, approx. 10 percent of services are contracted under open procedure, in which creativity and innovativeness of assistance offered are regarded as top selection criteria, whereas price and experience are of lesser importance. Thanks to this approach new and emerging companies could also stand a chance to win tenders.

In the Netherlands there are two methods of remunerating private providers for their services:

- No-cure-no-pay method, which is more and more commonly used;
- No-cure-less-pay method, which involves a fixed price for the design of an individual action plan as well as its implementation. The rest of pay (50 percent) depends on results.

The privatisation of employment services in the Netherlands intends to increase the effectiveness of actions taken, improve their quality and lower the prices.<sup>18</sup> Although the outcome of this privatisation reform seems positive, certain problems have been identified, as presented in Table IV.5. (Szymańska 2005, Struyven and Steurs, 2005).

<sup>17</sup> This Report focuses on the system of contracting activation services by UWV.

<sup>18</sup> Privatisation has increased the effectiveness of ALMP programmes – the chances of the unemployed have grown from 56 percent to 73 percent (Szymańska 2005).

**Table IV.5.**  
**Pros and cons of contracting employment services by UWV in the Netherlands**

Pros	Cons
possibility of cooperation between employment service providers with subcontractors – opportunity for small companies	complicated procedures and high administrative cost due to tendering – barrier for small companies
open procedure provide an opportunity for small companies as well as non-governmental organizations and promote innovative solutions (potentially more effective than existing ones)	open procedure is used on a small scale (10%) which means that most companies do not attempt to design new activation programmes
increase in the effectiveness and decrease in prices of offered services	insufficient focus on monitoring and evaluation of actions taken
only one tender organiser (UWV) in the country which increases flexibility and facilitates modifications and improvements to the system	offer selection criteria are not always clear and straightforward; sometimes actual selection criteria do not coincide with declared criteria
.	so-called “creaming” – in a bid to maximise the share of people returning to the labour force after completing the programme, companies primarily help people with better chances of finding a job; more problematic beneficiaries are usually directed to UWV as wrongly classified.

## 2. Active labour market policies in Poland in 2007

### 2.1. Labour market policy organisation in Poland

In Poland, assistance to the unemployed and to job-seekers is provided by labour market institutions, such as public employment services, Voluntary Labour Corps and other public and non-public entities, including employment agencies and training organisations.<sup>19</sup>

Public employment services play a crucial role in the Polish system of labour market institutions. Most tasks related to handling the unemployed are carried out by local employment offices (PUPs). The fundamental aim of all employment services is to secure full and productive employment, human resources development, achieving high-quality jobs and strengthening social integration and solidarity.<sup>20</sup> Labour market activities are also performed by non-public employment entities. The current structure of labour market institutions and policy management is largely an effect of evolutionary changes that came along after 1989. At the same time, however, two turning points can be distinguished during this period, namely years 1999 and 2004.

The year 1999 saw the process of decentralising public employment services being initiated by way of transferring responsibility for implementing labour market policies to governments at regional and local levels. Existing district labour offices were transformed into PUPs – organisational units at the local level which are part of local joint administration and accountable to local government authorities.<sup>21</sup> Regional labour offices (WUPs), in turn, became executive authority of marshals in new regions.<sup>22</sup> The System of Labour Offices, which had been in making as from 1993 and which had had separate special administration status with units subordinate to the National Labour Office (definitively closed in early 2002), was thus liquidated.

Above mentioned changes led to the transfer of competences related to the unemployed as well as job-seekers however without the possibility of shaping local employment policies by the local governments. At the same time, the independence between the central state administration and the local government, as guaranteed by the Constitution, resulted in a competence chaos and seriously hindered the implementation of effective employment policies. On the one hand, it was the Minister for Labour who was made responsible for the shaping of the labour market policy, on the other hand, however, the only way for central administration to influence local and regional labour offices was by allocating funds from the Labour Fund – by appropriately designed algorithm for dividing these funds between regions.

<sup>19</sup> The catalogue of labour market institutions is set forth in the Act on promotion of employment and labour market institutions of 20 April 2004.

<sup>20</sup> These objectives are in line with those set in the European Employment Strategy as well as with employment guidelines adopted by the European Council on 22 July 2003 (2003/578/EC): achieving full employment, improving quality and productivity at work, and strengthening social and territorial cohesion.

<sup>21</sup> Local government authorities are entitled to make any administrative decisions including those that directly affect the unemployed and job-seekers (e.g. awarding unemployment benefits, directing to activating programmes as indicated by PUPs). Therefore, the role of PUPs boils down to carrying out all activities that precede the issue of decisions. Nevertheless, in practice, local government authorities and mayors authorise heads of PUPs to make administrative decisions in the above scope. The fact of making local government authorities competent employment organs has a justification in that this organ is responsible for public finance management at the level of local governments. Technically it is exactly local government authorities that decide about the use of public funds at the local level and as such enjoys the statutory authority to make decisions which involve using funds from local government budgets at the local level.

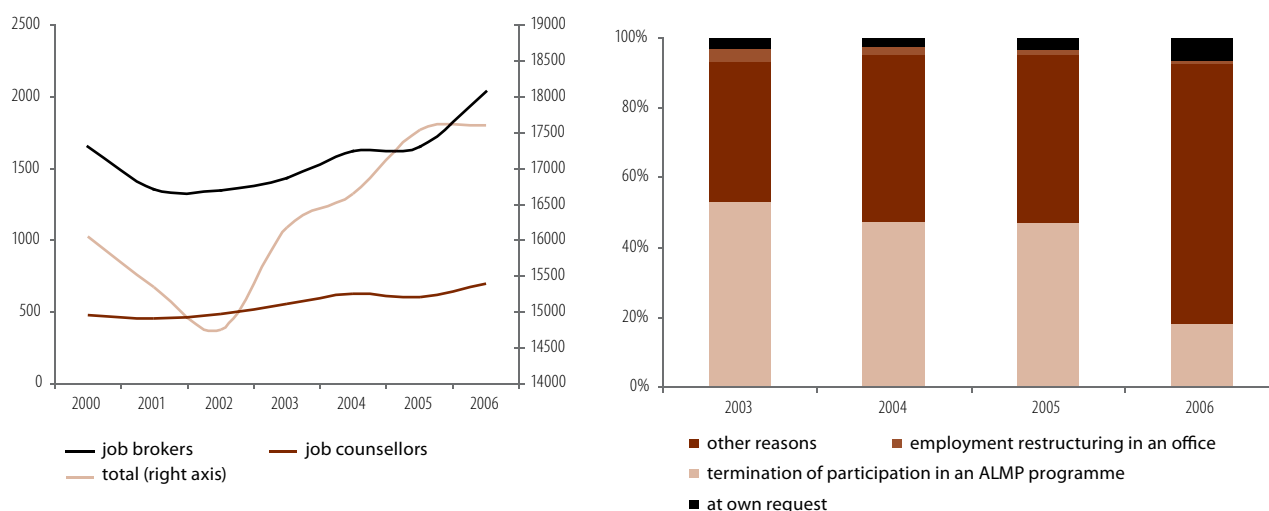
<sup>22</sup> These changes resulted from the public administration and territorial reforms implemented in 1999.

This situation changed upon the enforcement of the Act on employment promotion and labour market institutions<sup>23</sup> in 2004, which defined the duties of the Minister for Labour as well as of regional and local governments related to designing coherent employment policies. The Minister for Labour coordinates system of Public Employment Services. His statutory duties include creating state policies for employment promotion, easing the labour market effects of unemployment and supporting economic activation, selecting instruments, distributing funds from the Labour Fund between regions and determining instruments to stimulate continuing learning of the unemployed, job seekers as well as employers and employees. The Minister for Labour is also responsible for developing and implementing standards for labour market services – above all job job-broking and counselling. At the same time, new regulations imposed on local government supervising labour offices the obligation of active engagement in the labour market policy-making at the regional and local level by the preparation of employment action plans which should coincide with employment policy objectives as set by the government as well as take into consideration the specific nature of local labour markets. Additionally, local governments providing for active labour market policies should also use resources other than Labour Found - they may apply for EU structural funds, including the European Social Fund. Nevertheless, a substantial part of financial assistance from this source can be used by PUPs under the same rules as the Labour Fund, which limits the freedom of granting additional support to the unemployed and job seekers.

One of the aims of the systemic changes carried out in mid-2004 was to improve the functioning of PES which had been experiencing difficulties with fulfilling their duties following the 1999 reform. Their key problem was the insufficient number of job brokers and counsellors. This understaffing arose in 2000-2002 when employment in PUPs was considerably reduced. In 2002, there were approx. 14,700 employees, of which only 1,350 (i.e. less than 10 percent) were job brokers and 482 – counsellors. Compared to 2000 the number of PUP staff reduced by more than 8 percent and that of job brokers – by more than 18 percent.<sup>24</sup> These negative trends were also accompanied by increase in the number of registered unemployed (by 640,000) which reached the average of more than 3 million in 2002. This leads to the increase of the ratio of the number of unemployed per counsellor or job broker to 1,185 and 1,727 people respectively. It is difficult to assess the immediate reasons for the above changes. However, it can be noted that they coincided with the decentralisation of public employment services and the transfer of responsibility for financing PUP basic activities, including staff wages, to local governments.<sup>25</sup> Due to a lack of funds for professional job brokers and counsellors, labour offices started addressing staff deficiencies by employing ALMP participants (especially those participating in public works).

**Chart IV.4.**

**Number of all PUP staff and of job brokers and counsellors in 2000-2006 and outflow structure from employment in PUPs in 2003-2006**



Other causes include: violation of basic employee duties, insufficient qualifications, health reasons, retirement or pension.

Source: Report MPIPS-06

Chart IV.4. indicates that it was only in 2006 that outflows from employment in PUPs resulting from completion of ALMP decreased, which was a direct consequence of limitations imposed on local governments in 2005 concerning public works.<sup>26</sup> The relevant data for 2006 probably refer to people who had entered ALMP programmes in 2005 and completed them a year later.

<sup>23</sup> This Act constitutes a basis for state intervention in the labour market and sets out a framework for action for non-public entities. Its implementation was an expression of shifting approaches to labour market policy issues: it changed the way of running labour market policies and defined some general rules of addressing assistance to the unemployed and job seekers.

<sup>24</sup> During this period the number of job counsellors was practically constant.

<sup>25</sup> However, it was only in 2004 that this task became the competence of local governments thus giving them the complete freedom in determining their tasks as well as methods of their financing. In 2000-2003 this task was commissioned to the local government and financed from annual grants from the state budget.

<sup>26</sup> Upon the enforcement of the Act on employment promotion and labour market institutions, only selected groups of unemployed could participate in public works. Nevertheless, this provision did not apply to local governments which could extend this type of assistance to anyone.

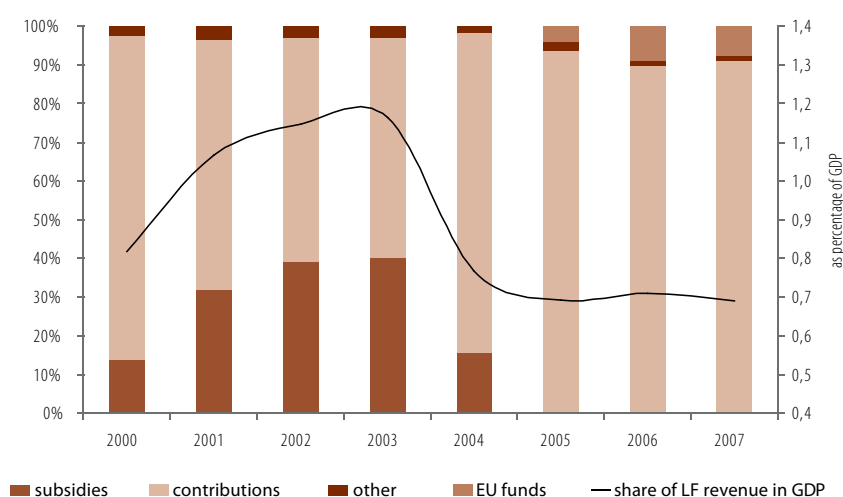
## 2.2. Labour market policy financing

Activities intended to assist jobless people in Poland may be financed from different sources: ear-marked funds, local government budgets, structural funds. However, the key instrument that secures financing of active labour market policies for the unemployed as well as job seekers registered with PUPs is the Labour Fund.

The Labour Fund is a state ear-marked fund which derives its income from obligatory contributions paid by the employers<sup>27</sup> but also from, among others, EU budget funds for co-financing of projects essentially funded by the European Social Fund. Prior to 2004 the Labour Fund had also been receiving funds from the state budget as well as bank loans. These funds had been earmarked to meet obligations of the payment of the unemployment benefits as well as the pre-retirement benefits and the pre-retirement allowances because these items had been underestimated in the Fund's budget.<sup>28</sup> In 2000-2004 expenditure on passive policies were higher in relation to the Fund's income from contributions and state budget funds. In 2000 the Fund expenditure on transfers amounted to PLN 5.8 billion and reached its highest ever value in 2002 – PLN 8.7 billion. In real terms this means an increase of approx. 44 percent. Altogether the total amount of loans taken out in 2000-2004 exceeded PLN 7.5 billion.

**Chart IV.5.**

**Income structure of the Labour Fund (left axis) and its income as a percentage of GDP (right axis) in 2000-2007**



Source: Calculations by DAE MPiPS based on reports on state budget execution in 2000-2006 as well as on the Act on the state budget for 2008

The transfer of responsibility for handling and payments of the pre-retirement benefits and the pre-retirement allowances to Social Insurance Institution (ZUS) in 2004 largely improved both the income and the expenditure structure of the Labour Fund. This positive trend was further enhanced by the improving situation on the Polish labour market and above all by the increasing numbers of employed for whom social insurance contributions, including contributions for the Labour Fund, were being paid. These changes could be observed as early as 2005 when income and expenditure ended up in a balance and the statutory tasks did not require an additional sources of financing.

In 2005-2007 the sources of Labour Fund's income were also EU funds earmarked for co-financing projects implemented under the Sectoral Operation Programme Human Resources Development. These funds, although they did not constitute a substantial share of the Fund's income, made it possible to extend the scope of active labour market policies (as determined in SOP HRD).

The Labour Fund resources can only be used for purposes provided for in the Act on employment promotion (Article 108). The list of permissible expenses is closed and it includes, among others, costs of active labour market policies targeting the unemployed and job seekers (including relevant benefits and allowances), activities directed to young workers, registration costs of the unemployed and job seekers, unemployment benefit payments, producing and distributing information on job opportunities as well as on services provided by labour market institutions, costs of running jobclubs and job counselling. It is worth bearing in mind that, as a rule, it is not the Labour Fund that covers operational costs of running local or regional labour offices or of their staff wages as these are paid for from individual budgets of relevant government. One exception from the above rule are wages – together with obligatory social insurance contributions, of regional labour offices staff who carry out tasks that are part of projects co-financed by the European Social Fund and implemented at the regional level (in such cases a certain share of costs incurred is reimbursed) as well as wage bonuses for PUP and WUP staff.

<sup>27</sup> Contributions are paid for each employee whose wage equals at least the minimum wage and they amount to 2.45 percent of the retirement and pension insurance base.

<sup>28</sup> Expenditure on passive labour market policies are incurred on a need-basis and therefore their volume depends directly on the number of people who – at a given time – are liable for a certain benefit and decide to take it. These spending cannot be restricted or reduced. Although the state budget was supposed to cover expenses on pre-retirement benefits and pre-retirement allowances through the Labour Fund, in practice, funds earmarked for that purpose were insufficient.



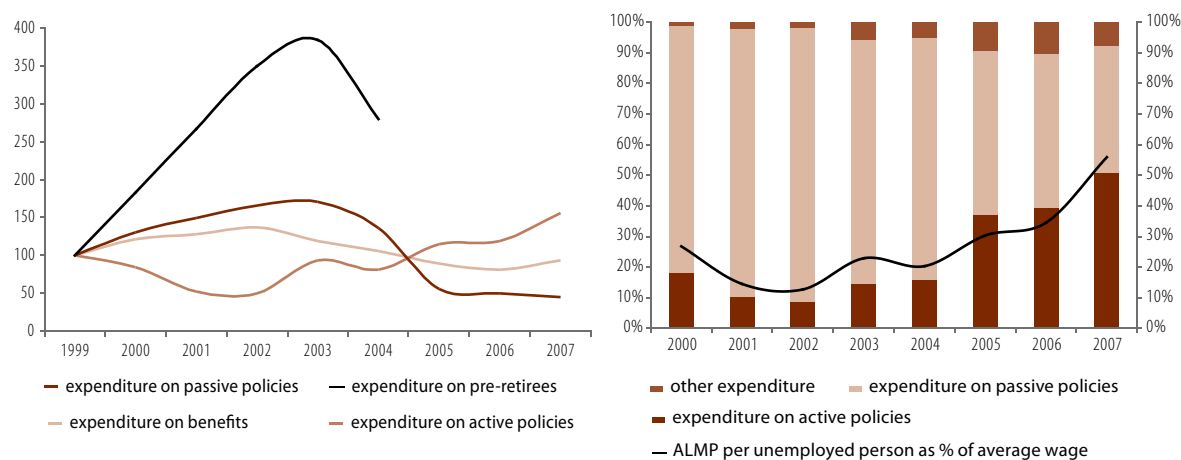
### Box IV.5. Labour Fund

The Labour Fund is a source of financing of active and passive labour market policies. Expenditure on ALMP include labour market services and instruments, whereas PLMP includes unemployment benefits (and prior to 2004 also pre-retirement benefits and pre-retirement allowances). As for operation costs of public employment services (PUPs, WUPs and other related units – jobclubs and CliPKZ), they are covered from the local government budgets.

The scope of active labour market policies implemented in Poland depends above all on the number of people entitled to unemployment benefit and prior to 2004 to pre-retirement benefits and pre-retirement allowances. These benefits are awarded to all eligible persons and they cannot be limited in any way. The key drawback of this method of financing is that spending on ALMP is overtaken by spending on passive forms. This process was particularly apparent in 2002-2003, when a very rapid growth in the number of people eligible for pre-retirement benefits and pre-retirement allowances led to a situation where spending on this type of transfer accounted for 80-90 percent of all of the Fund's income derived from employer contributions. Unemployment benefits had less impact than pre-retirement transfers on impeding the implementation of ALMP.

#### Chart IV.6.

**Expenditure on active and passive labour market policies (left graph 1999=100) and structure of the Labour Fund expenditure in 2000 – 2007 (right graph)**



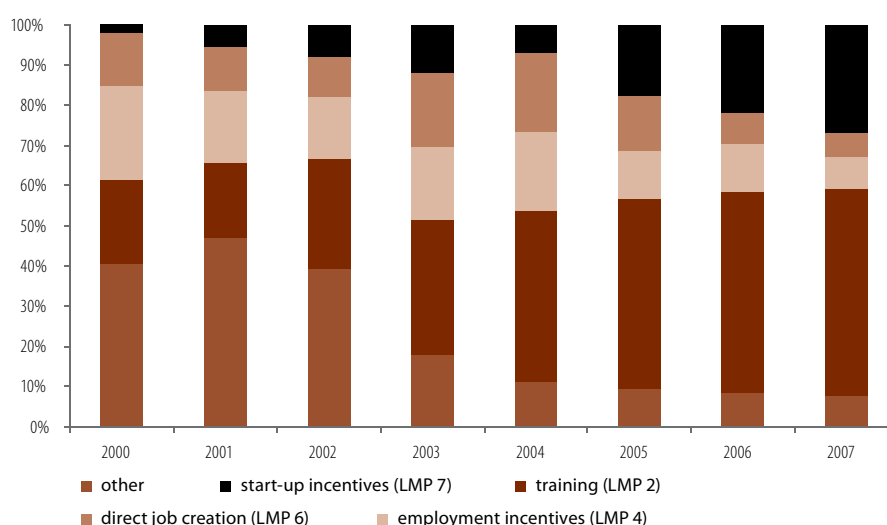
Source: Own calculations based on data derived from reports on state budget execution in 2000-2007

Remark: (right graph) data for 2007 is preliminary

Apart from the expenditure on passive labour market policies, the scale of ALMP implemented in 2000-2004 was also affected by the number of individuals receiving pre-retirement benefits and pre-retirement allowances. These individuals were not formally classified as unemployed, even though they still figured in registers. This means that PUP employees had to do extra work handling benefit payments to approx. 300,000-500,000 people per year. In the last three years, i.e. after the responsibility for financing pre-retirement benefits and allowances was shifted away from the budget of the Labour Fund, its expenditure structure has been subject to significant change. In 2006, the share of ALMP spending went up to over 39 percent (from 18 percent in 2000). Preliminary data for 2007 suggest that this indicator has grown further to reach the level of 51 percent.

Among all ALMP expenditure, the largest proportion is spent on trainings, apprenticeships and vocational training at the workplace (LMP 2 according to the Eurostat classification). What is more, the share of this type of spending has been growing every year and reached more than 53 percent in 2007. As from 2004, these expenditure include above all apprenticeships and vocational training. At the same time, in the last three years, the importance of spending on direct job creation – especially in the area of public works, has largely diminished.



**Chart IV.7.****The structure of the Labour Fund expenditure by LMP categories in 2000-2007**

Remarks: The item "other" refers to other expenditure such as spending on the activation of the youth, special programmes, loan remission, other loans, and after 2004 also childcare costs as well as costs of travel, accommodation and food.

Data for 2007 are preliminary.

Source: Own calculations based on reports on the execution of the state budget in 2000-2006 as well as on the Act on state budget for 2008.

### 2.3. ALMP evolution – developments by instruments

The key classification of labour market policies implemented in Poland is the one used by Public Employment Services, namely: services, instruments and transfers for the unemployed.

The statutory rules of classifying particular active policies, as stipulated in the Act on employment promotion and labour market institutions, are based on beneficiary groups rather than types of action. Consequently, attributing policies to particular categories (labour market services, labour market support, labour market measures and transfers) may be ambiguous and not always accurate. For this reason, in the subsequent parts of this Sub-chapter, we use the Eurostat classification (see Chapter 1).

#### Box IV.6. Groups in specific situation in the labour market

The Act on employment promotion and labour market institutions detailed groups of unemployed, so-called persons whose situation in the labour market is specific, which include:

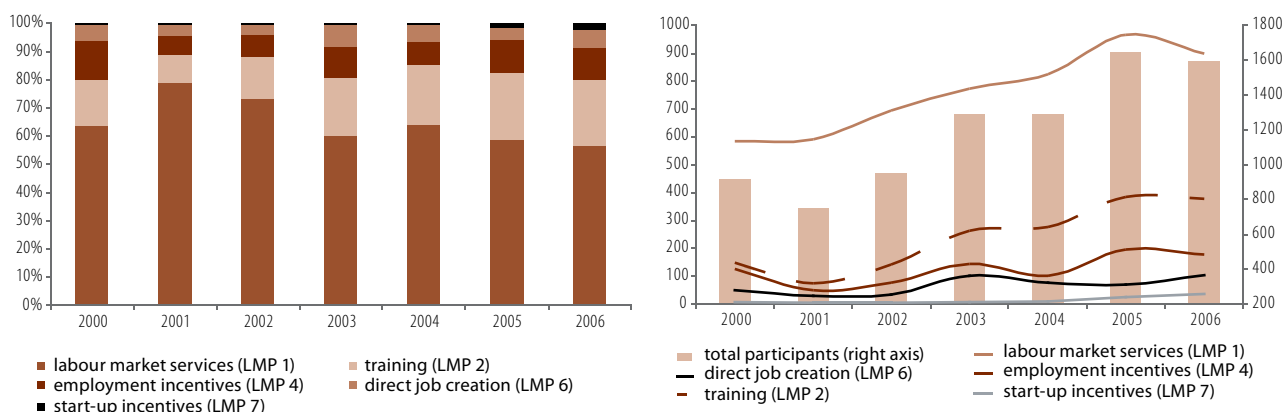
- under-25-year-olds;
- long-term unemployed (i.e. in unemployment for a total of 12 months over the period of two consecutive years);
- over-50-year-olds;
- people without professional qualifications;
- unemployed lone parents raising children of up to 7 years;
- unemployed people with disabilities.

According to the legislator, these people experience greater difficulties in finding and keeping jobs and attempts at providing them with assistance in terms of job counselling, job-broking, or trainings do not necessarily lead to their shifting to employment. PUPs can apply additional measures with respect to these groups of people including: apprenticeship, vocational trainings at workplace, intervention works, public works, education grants and childcare cost reimbursement. As for **young people and over-50-year-olds**, PUPs are obliged to present them with a job offer or ALMP offer (such as internships, vocational training at workplace, intervention jobs or public works) within 6 months from registration date. This regulation is intended to induce PUPs to give assistance to these two groups at the earliest possible stage of unemployment in order to counteract swift loss of skills or knowledge and to minimise the discouragement effect. In the case of **older people** immediate action is supposed to work against their early transitions from labour force to inactivity.

Another group of people whose situation in the labour market is vulnerable are the **disabled**. The currently applicable regulations only permit the registration with PUPs of people with a certain degree of disability but who have no right to disability pension. All other disabled may only be registered as job seekers. However, if they are also out of employment, PUPs may offer them assistance similar to that offered to the unemployed, if the cost of such activities is covered from the budget of the National Disabled Persons Rehabilitation Fund.

In the recent years we have seen a steady increase in the number of people benefiting from active labour market policies.<sup>29</sup> In 2006, almost 1.6 million unemployed people and jobseekers participated in ALMP programmes (including job counselling – 316,000 people and vocational information – 508,000 people). This number is greater by 74 percent in relation to 2000. Irrespective of a rapid increase in the number of ALMP participants<sup>30</sup> their structure remained relatively stable. Most often people registering with PUPs participated in labour market services (i.e. according to the Eurostat classification, the first category of measures including, among others, job broking and counselling, job information services). However, in the case of this group, it ought to be borne in mind that it also includes persons not registered with a PUP and that in the course of a year participants could have benefited from more than one form of assistance both under labour market services and other ALMP. In 2006, there were approx. 764,000-1,000,000 ALMP participants (excluding job information services) that is approx. 30-42 percent of all unemployed.

**Chart IV.8.**  
**ALMP participants in Poland in 2000-2006**



Source: Own calculations based on data from the MPIPS-01 report with appendices

If we exclude labour market services, in 2006, the number of participants benefiting from active labour market policies available to the unemployed (LMP categories 2-7) was lower than 700,000 people, whereas in 2007 it grew by 9 percent. In total, in 2000-2007, there was a 180 percent increase in the number of people covered by LMP measures. Most frequently the unemployed were referred to trainings, apprenticeships and other programmes intended to increase their vocational qualifications or retrain them. In 2006, participants of these measures accounted for more than 56 percent of all unemployed people benefiting from the assistance.

## Labour market services

Labour market services are all services and activities undertaken to assist unemployed people in job search as well as employers in recruiting staff. These services include above all job broking<sup>31</sup>, job counselling and job information services as well as assistance in active job-search.

In Poland, determining the scope and scale of assistance provided through labour market services is problematic. Labour offices are not under the obligation to gather detailed information about people who have been granted such assistance. At the same time, one person can benefit from more than one service which results in overstating the number of beneficiaries. Neither is it possible to determine the cost of such activities because they are usually financed from local government's funds to finance their day-to-day operations and therefore they are not indicated as a separate item in financial reports.

In 2006, approx. 883,000 people benefited from labour market services financed from the Labour Fund, where approx. 316,000 people benefited from individual job counselling and approx. 508,000 people from job information services (individual or collective).<sup>32</sup> Moreover, as a part of individual job counselling, advisers may refer individuals to tests, group counselling, job-search trainings at jobclubs or activation sessions.

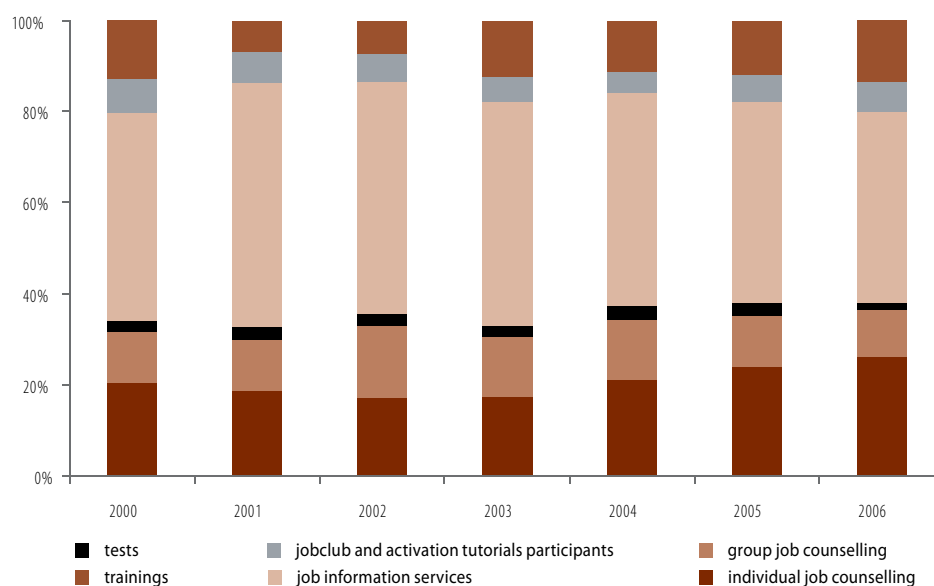
<sup>29</sup> The decrease in the number of participants in 2004 did not result from the actual smaller number of persons receiving assistance that year but was of purely technical nature. In mid-2004 the Act on employment promotion and labour market institutions came into effect and provided different definitions of some active policies in relation to the previous act. The changes concerned the policies themselves – some of them were ceased and replaced by others. However, these changes were not accompanied by statistical adjustments in this area. Therefore, data for 2004 represent only beneficiaries of ALMP provided for in the Act which was repealed at that time, including activities which were ceased. At the same time, they do not cover participants of new activities (e.g. people who received start-up grants, who underwent vocational training at workplace, etc.).

<sup>30</sup> The term "participant", as used in the subsequent parts of this Chapter, actually refers to people who enrolled and entered a given measure. For the sake of simplicity, we assume that this number is tantamount with the average number of people participating in a measure.

<sup>31</sup> In the subsequent parts of this Chapter, job broking has been excluded from analysis due to the lack of relevant statistical data.

<sup>32</sup> However, this value is overestimated as available statistics provide only a number of visits and not the number of persons.

**Chart IV.9.**  
**People benefiting from labour market services in 2000-2006**



Source: Own calculations based on data derived from the MPIPS-01 report plus appendices

In Poland, labour market services are available above all to unemployed people. In 2006, they accounted for approx. 90 percent of all participants of the above-mentioned forms.<sup>33</sup> Nevertheless, this group (irrespective of it being highly probable that its size has been overstated) accounted for as little as 19-20 percent of all registered unemployed people. There are a number of reasons for such a narrow spread of labour market services, including the already mentioned staff shortage at local labour offices, especially in the case of job counsellors, job brokers and jobclub leaders. At the same time, benefiting from labour market services usually requires own initiative on the part of jobseekers and therefore job counsellors mostly deal with those unemployed whose situation is relatively good or who are most determined to find a job. Moreover, labour offices rarely present a full assistance offer to individuals registering with them (Grabowski et al., 2007). It is also rare for a jobless person to be sent to a job counsellor or job broker at the time of registration. Although there are labour offices that offer assistance from a job broker or job counsellor to all registering individuals (or to selected groups of people), they are in a minority. Moreover, in many offices information concerning the possibility of getting assistance is scattered and comes from different places and people. This state of things should gradually improve thanks to the obligation imposed in 2007 on local labour offices to send all unemployed people to job brokers within the first 30 days of unemployment. In the face of no matching job offers, job brokers are then obliged to present the unemployed with other forms of assistance, including job counselling.

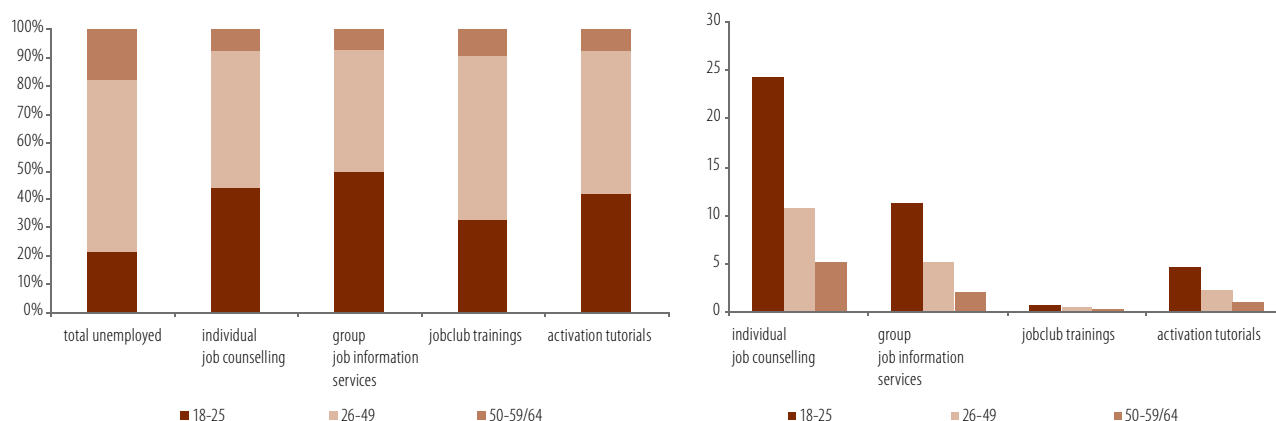
The relatively largest group of participants of labour market services in 2006 (in relation to the number of the unemployed in a given group) was that of young people. One negative consequence of this is the marginalisation of older people as participants of labour market services. This is probably so because this type of assistance is voluntary, i.e. based above all on own initiative of a beneficiary. Unemployed people, even if they are offered to participate in group counselling or activation tutorials, are not obliged, under threat of losing right to the unemployment benefit or of having their unemployed status suspended, to participate in any programme. Older people are probably less motivated to benefit from such offer. For many of them the period of unemployment is also a waiting period to become eligible for pre-retirement benefits.

Young people not only tend to benefit from job counselling relatively more frequently but they are also more often directed to further activation under labour market services and they benefit more often from additional assistance options. This tendency may be evidenced by a higher – by almost 12 percentage points – participation share of under-25-year-olds who benefited from group job counselling compared with those who were provided with individual counsel. Moreover, in 2006, it was mostly persons with vocational education – post-secondary, secondary vocational and basic vocational – that benefited from job counselling services. In 2006, they accounted for more than a half of all unemployed people who participated in services of this type.

<sup>33</sup> At this point as well as in our further analysis, we take under consideration persons who have benefited from individual or group counselling and participated in activation sessions. We do not consider persons who individually sought job information because we lack information about basic social and economic characteristics of such persons.

**Chart IV.10.**

**Structure of unemployed benefiting from job-search assistance by age and in relation to the unemployment structure by age in 2006**



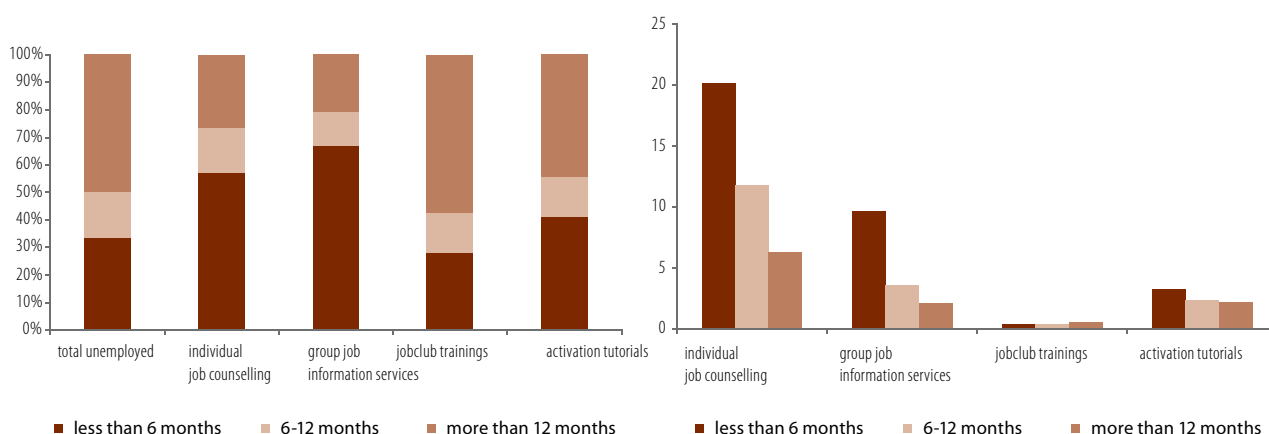
Source: Own calculations based on data derived from the MPiPS-01 report plus appendices

Labour market services are instruments which should be applied at the earliest possible stage of unemployment because it is then (as shown in Chapter I) that they are most effective. Moreover, if reasons for difficulties in finding a job as well as expectations of unemployed people are not identified correctly, it is impossible to apply appropriate activation measures or – in the case of people seeking employment or facing its loss – to minimise the risk of unemployment.

Labour market services and above all job counselling and job information services are mostly used by people who have been in unemployment for a relatively short period of time – shorter than 6 months. These people account for approx. 60 percent of all participants of these two measures. This is a positive phenomenon, although the number of unemployed who were given assistance under the above two measures accounted for less than 30 percent of all unemployed for less than 6 months. At the same time, among all registered unemployed for a period of 6-12 months, only 15 percent benefited from this type of assistance and in the case of the long-term unemployed – only 8 percent.

**Chart IV.11.**

**Structure of unemployed persons benefiting from job-search assistance by length of unemployment spell and in relation to the share of unemployed people within groups in 2006**



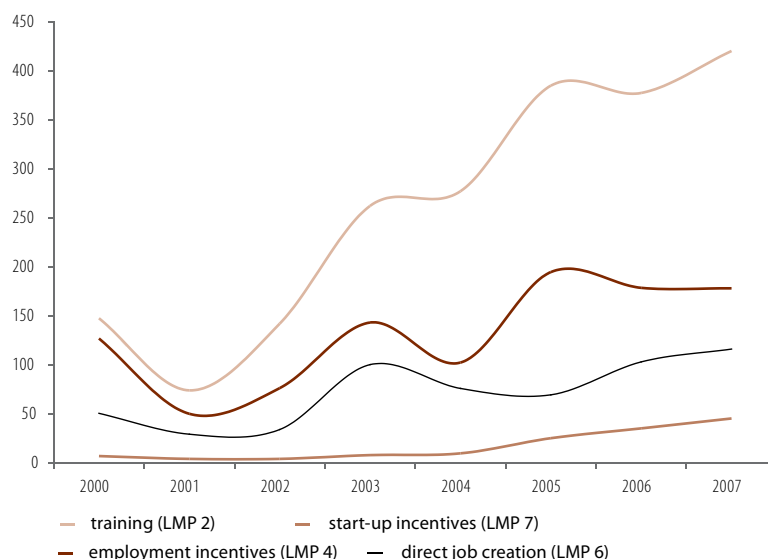
Source: Own calculations based on data derived from the MPiPS-01 plus appendices

The nature of jobclub trainings and activation sessions is slightly different than that of job counselling and job information services. Job-search trainings are designed to serve above all those who have no experience in job search, who have not been able to find jobs irrespective of attempts made as well as those who re-enter the labour market after a long period of inactivity. Activation sessions are short, 1-3-day trainings which cover selected topics connected with job-search (e.g. job-search methods, preparing application documents, job interviews). Consequently, in this case the participant structure is different compared with job counselling and job information services. This type of services is used more often by people who have been unemployed for longer than 6 months. Moreover, these measures are addressed to a narrow group of beneficiaries – in 2006, they covered only 3 percent of all unemployed.

## Labour market measures

Other types of support for the unemployed (except for unemployment benefits) may be classified as labour market measures. They have been grouped in accordance with the classification used by OECD and Eurostat (see Box IV.I.).

**Chart IV.12.**  
**Participants of labour market measures in 2000-2007**



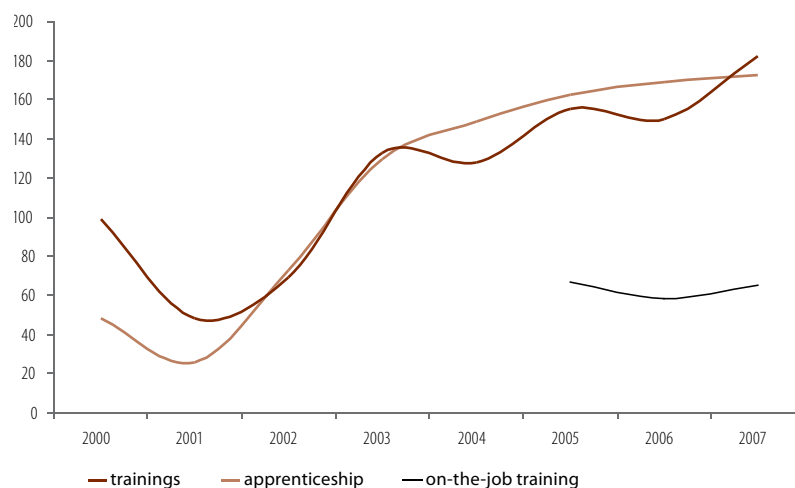
Source: Own calculations based on data derived from the MPiPS-01 report plus appendices

### Trainings and apprenticeship

In accordance with the LMP classification, the item labelled “trainings” covers measures that aim to improve the employability of the unemployed through classroom teaching and on-the-job training. This category includes: trainings organised or co-financed by local employment offices, scholarships for continuing education, vocational training at the workplace and cost reimbursement for specialist training of employees at risk of involuntary job loss.

In the last couple of years the number of participants in particular measures from this category has gone up considerably. In 2007 the number of participants in trainings was higher by almost 84 percent than in 2000 and participation in apprenticeships increased by two and a half times. In 2004 a new instrument was introduced, namely vocational training at the workplace, which is an equivalent of apprenticeship but for over-25-year-olds. The last three years have seen an average of approx. 64,000 people participate in this measure every year.

**Chart IV.13.**  
**Participants of trainings organised by PUP, apprenticeships and vocational at work-place in 2000-2007**  
**(right panel in thousand persons)**



Source: Own calculations based on data derived from the MPiPS-01 report plus appendices

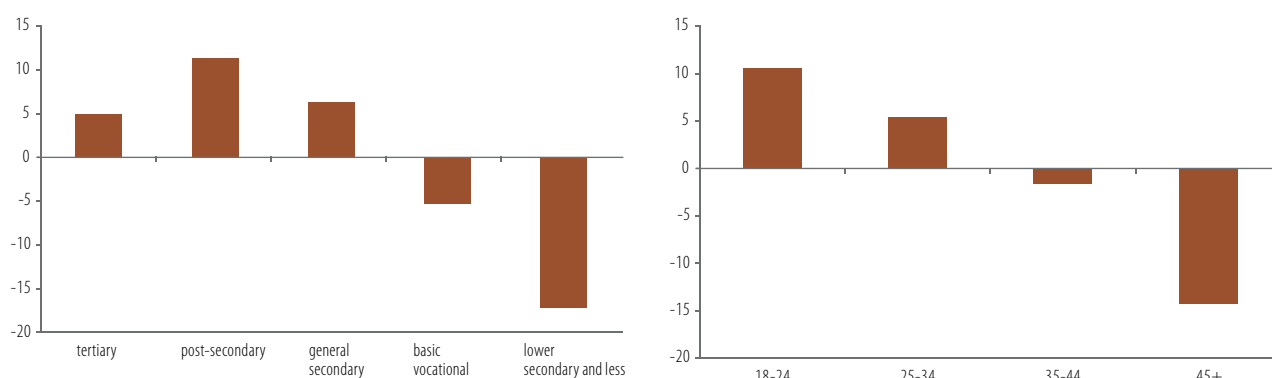
In Poland, trainings organised or co-financed by local labour offices addressed to the unemployed<sup>34</sup> may take different forms. In most cases they are financed by the Labour Fund or the European Social Fund, or – in the case of disabled job-seekers – by the National Disabled Persons Rehabilitation Fund. Nevertheless, unemployed people may apply to the office to have the cost of an individually selected course reimbursed,<sup>35</sup> to obtain a low-interest loan to pay for a training programme or to have their postgraduate studies co-financed.

Considering the age of training participants, it can be noted that it was above all young people who took part in them – in 2006, under-34-year-olds accounted for more than 65 percent of all beneficiaries. At the same time, those aged 45+, rarely benefit from this measure (in 2006, they accounted for as little as 16 percent of all beneficiaries and only 3 percent of all unemployed people in this age group).

Training participants are mostly people with post-secondary (33.3 percent) and basic vocational (26.2 proc.) education. However, when looking at the unemployed population from the perspective of group sizes by education levels, it can be noted that persons with at most basic vocational education were underrepresented in the population of training participants.

**Chart IV.14.**

**Structure of participants structure for training programmes by age and education in relation to the share of particular groups in total unemployment (in percentage points)**



Remark: values above/below zero indicate how much greater/smaller was the share of a given group in the group of participants compared with their shares in total unemployment

### Apprenticeship and vocational training at the workplace

Apprenticeships and vocational training at the workplace are measures addressed to particular unemployed groups. Apprenticeships are available to young people under the age of 25 or under the age of 27, within one year from the completion of tertiary education. As for the latter one, it is designed for all groups whose situation in the labour market is vulnerable, excluding under-25-year-olds.

In 2006, 227,000 people enrolled for the above two forms of assistance, of which 58,300 participated in vocational training at the workplace. Among apprentices, it was the group of under-25-year-olds that was the largest (93.3 proc.), whereas vocational training at the workplace was most popular among participants aged 26-49, who accounted for almost 90 percent of all participants. The vast majority of participants of both forms of assistance were people with secondary or post-secondary education (in 2006, approx. 60 percent), and to a much smaller extent tertiary education graduates (approx. 17 percent).

### Job rotation and job sharing

This form covers measures that facilitate the employment of an unemployed by substituting hours worked by an existing employee. In Poland, only temporary employment of an unemployed is possible in case of replacing an existing employee who has been sent – by the employer – on a paid training leave for at least 22 working days. Employers may then receive a reimbursement of a part of the costs incurred by them for the training of the employee (up to 80 percent of average wage) and of a part of wage costs – together with social insurance contributions, for employing a jobless person (not more than 40 percent of average wage). However this form of assistance is only possible for employers who have established a training fund. Due to all the formalities required and the necessity to block by employer some funds for the training fund<sup>36</sup> as well as due to little financial support from PUPs this measure is not popular. In 2005-2006, only a couple of people benefited from this form of assistance.

<sup>34</sup> Apart from the unemployed, PUP trainings are also addressed to army reserve soldiers as well as people receiving training pensions. There are also selected groups of jobseekers that may be covered by trainings: workers during notice period – in the case of involuntary job loss or termination of employment, workers employed with an employer who is in bankruptcy or liquidation, persons receiving welfare benefits reserved for those on miner's leave or miners' welfare benefits as well as persons participating in individual integration programmes.

<sup>35</sup> PUPs may finance training programmes chosen by the unemployed applicants themselves. In such cases, the referral to such trainings must be preceded, among others, with a statement that the chosen training programmes will guarantee that applicants find jobs or start up businesses.

<sup>36</sup> Employers are obliged to make regular payments for the fund amounting to at least 0.25 percent of the wage fund.

## Employment incentives

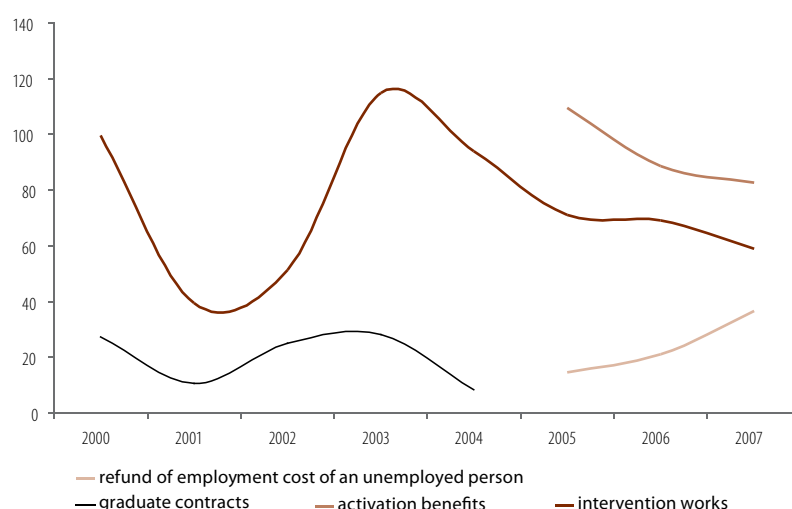
Employment incentives cover measures that facilitate the recruitment of unemployed persons (or other target groups) and help to ensure the continued employment of persons at risk of involuntary job loss. This category includes above all subsidies for jobs, especially those which will be sustained after the end of the subsidy period. It is assumed that public money should represent a contribution to the labour costs of the person employed.<sup>37</sup>

In Poland, measures falling into the category of employment incentives include intervention works, reimbursement of costs of equipping and upgrading workplaces for referred unemployed, reimbursement of social insurance contributions, activation allowances and reimbursement of child or dependent care expenses. Out of the above measures, intervention works are addressed to all groups in the specific situation in the labour market, child or dependent care expenses are reimbursed only to single parents raising children below the age of 7 and to people taking care of dependents, whereas activation allowances are directed to people eligible for the unemployment benefit who have taken up employment – whether on their own initiative or referred by PUPs (but only in the case of part-time work). Other forms of assistance are available to all unemployed people.<sup>38</sup>

Since 2005, the number of people benefiting from this type of assistance decreased from 195,000 to 178,000 in 2007. This was primarily due to the reduction in the scale of intervention works carried out by PUPs, most probably as a result of the target group being narrowed down in 2004. At the same time, a considerable drop in activation allowances granted in 2006 – compared with 2005, was a consequence of changes restricting the basis for this type of financial support. Interestingly enough, the number of activation allowances granted in 2007 was similar to that in 2006, irrespective of a considerable decrease in the number of people eligible for the unemployment benefit. This could be due to the relatively good labour market situation in Poland at that time, and above all to positive employment prospects – also for people receiving unemployment benefits.

**Chart IV.15.**

**Employment incentives participants in 2000-2007 (right panel in thousand persons)**



Source: Own calculation based on data derived from the MPiPS-01 report plus appendices

In 2006, PUPs reimbursed employers for costs of equipping and upgrading jobs for more than 20,800 unemployed people (33.5 percent were youth and 6.7 percent – older people). Moreover, in 2006, PUPs awarded activation benefits to almost 88,600 unemployed people, where nearly all such benefits were paid for participation in work on own initiative.

In 2006, participants of interventional jobs included above all relatively young people – up to 49 years of age (more than 81 percent), of whom approx. 43 percent were under-25-year-olds. They were mainly people with vocational education (i.e. post-secondary, secondary vocational and basic vocational) but also people without any professional qualifications (lower secondary at most). They accounted for almost 80 percent of all people referred to this measure.

<sup>37</sup> This category of measures may in certain cases include subsidies fully covered from public money throughout a pre-specified time period.

<sup>38</sup> In November 2007 the Amendment to the Act on employment promotion and labour market institutions was adopted thus extending the catalogue of persons whose situation in the labour market is vulnerable and thus extending the group of potential beneficiaries of particular measures.

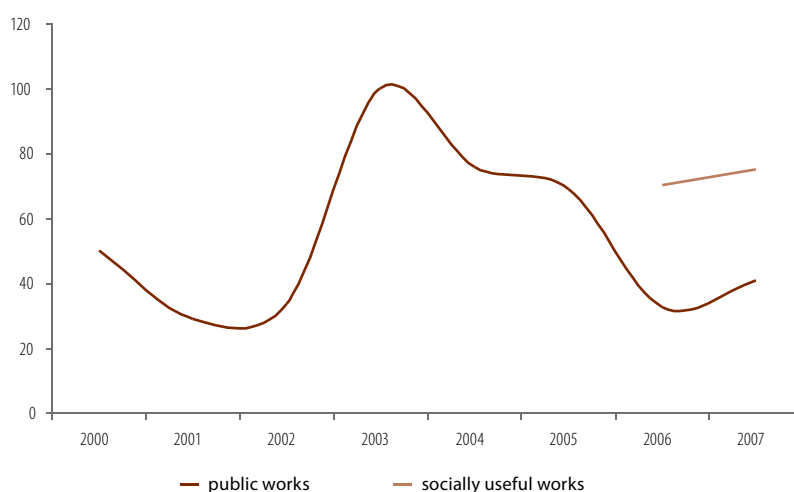
## Direct job creation

Direct job creation covers measures that set up additional jobs, usually of local government benefit or socially useful. They are designed to secure employment for the long-term unemployed or other persons that face specific difficulties in finding a job. It involves direct subsidies for (temporary) jobs – usually non-market jobs which would not be created without the public intervention. As opposed to the employment incentives, in this case public money covers the majority of the labour costs of the employers but jobs created thanks to public subsidies usually are not sustained after the financing ends. In Poland, this category of measures includes public works and socially useful works.

Since 2003 the number of people referred by PUPs to public works decreased by almost 60 percent due to – similarly to interventional works – changes in the Act on employment promotion. At present, the participation in this form of assistance may be offered to long-term unemployed, people with no vocational qualifications and people aged 50–59/64.<sup>39</sup>

**Chart IV.16.**

**Programme participants in category LMP 6 in 2000-2007 (right panel in thousand persons)**



Source: Own calculations based on data derived from the MPIPS-01 report plus appendices

In 2006, approx. 71,000 people started participation in socially useful works and another 32,600 people in public works.<sup>40</sup> In both cases the largest group of beneficiaries was people aged 26-49 as well as people aged 50-59/64. If summed up, these two groups accounted for 93 percent of all beneficiaries of these two forms of assistance. Measures of this type are essentially available for people whose situation in the labour market is particularly vulnerable and hence more than 86 percent of people assigned to public works or socially useful works had been in unemployment for a total period of at least 12 months within two preceding years.<sup>41</sup>

## Start-up incentives

Start-up incentives cover measures that encourage the unemployed to start their own business or to become self-employed. The above assistance takes the form of cash transfers or loans, business advice, etc.

A considerable increase in the number of people who received grants to start their own business or establish a social cooperative after 2005<sup>42</sup> results directly from the changes in the procedure of awarding such benefits. Until mid-2004, they took the form of loans which had to be repaid to PUPs irrespective of whether established businesses were in operation or not. In 2004, these loans were replaced with non-repayable grants (on condition that businesses would continue to operate a year after start-up). Moreover, before granting such benefits, PUPs provide the unemployed with business start-up and management advice.

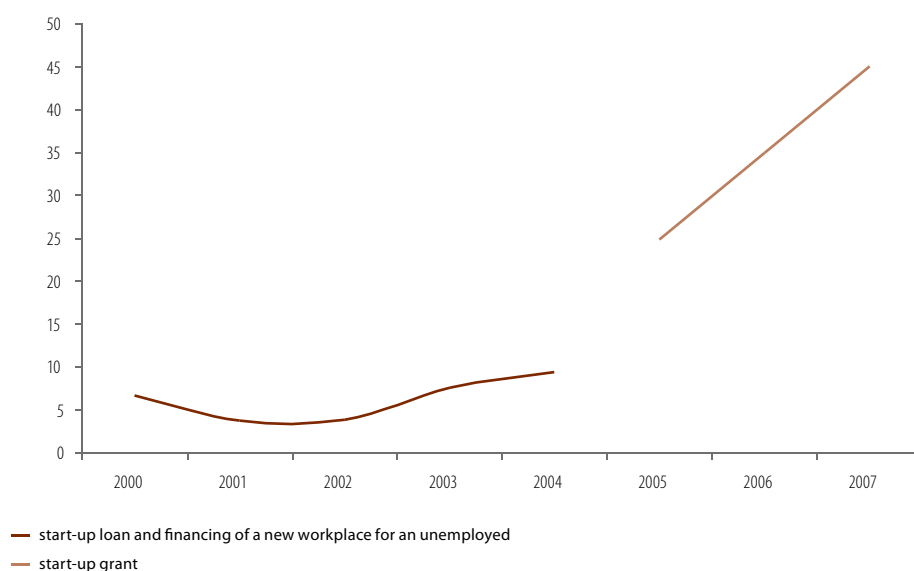
<sup>39</sup> In November 2007 the Amendment to the Act on employment promotion and labour market institutions was passed thus extending the catalogue of groups entitled to obtain this type of assistance (Box IV.5.).

<sup>40</sup> In 2007 participation in these two measures went up to 75,000 and 40,900 people respectively.

<sup>41</sup> Excluding periods of apprenticeship and vocational training at the workplace.

<sup>42</sup> Most probably this tendency started as early as 2004 but due to the imperfect nature of relevant public statistics we only have information about loans.



**Chart IV.17.****People who were granted loans or start-up grants (in thousands of people)**

Source: Own calculations based on data derived from the MPiPS-01 report plus appendices

In 2006, start-up cash benefits were paid to almost 35,000 people, of whom the majority were people aged 26-49. At the same time, approx. 40 percent of those granted with money for starting-up a business were people who had been unemployed for at least 12 months during the period of two preceding years.<sup>43</sup> This is due to the fact that this form of assistance also covers cash benefits for starting up new social cooperatives and adding new member to existing ones. Start-up benefits were usually (approx. 60 percent) awarded to people with vocational education qualifications and much more rarely to tertiary education graduates (approx. 17 percent).

## 2.4. Summary

The above analysis of ALMP in Poland indicates that there has been a significant increase in the number of participants in such forms as from 2003. However, this process has not been accompanied by activities securing the desired quality of the services and instruments – including monitoring the effectiveness of particular policies with respect to particular target groups as well as verifying the validity of financing of particular forms of assistance. It seems that the ALMP structure is not a result of a consistent policies of state or local authorities but it is rather a sum of various factors, including institutional factors such as the Act on employment promotion, financial plans of the Labour Fund and PUP involvement in the implementation of activation measures, where the latter is also determined by the structure and level of employment. On the other hand, the scope of ALMP depends also, on the number of entities committed to organising subsidised works and training institutions ready to organise trainings for the unemployed as well as on the number of unemployed people who can and want to participate in particular forms of assistance. It is also of importance that employment policy goals in Poland are very loosely formulated, which – in the face of no coherent system of monitoring the effects of implemented policies, may lead to the extension of ALMP also to the measures which hardly secure long-term employment.

<sup>43</sup> Excluding periods of apprenticeship or vocational training at the workplace.

### 3. Evaluating ALMP effectiveness in Poland

Active labour market policies implemented in Poland cover above all trainings, apprenticeship, on-the-job training, public works, intervention works and business incentives (see Chapter 2). In the light of international comparison, Polish public spending on ALMP cannot be considered high. Nonetheless, in recent years expenditure on this purpose have rapidly increased, among others, thanks to funding obtained by Poland from the European Social Fund, which – together with decreasing numbers of registered unemployed, made it possible to intensify activities in this area. This increase in outlays on ALMP has given rise to a debate on the current and desired scope of state intervention in the labour market (see, for example, Tokarz et al. 2007, Boni 2007, MGIP 2005, UNDP 2004). Generally, nobody questions the necessity to extend assistance under ALMP but at the same time it is suggested that too little importance is given in Poland to monitoring the unemployed and to motivating them to make more effort in searching employment on their own. Some also propagate views that the structure of activities implemented in the last years, with job counselling and trainings, especially in the area of job searching methods (i.e. forms of assistance widely considered highly effective), playing a limited role, causes some of ALMP financing in Poland to be a waste of public money. It is also often emphasised that activation programmes in Poland do not address the right people. In accordance with the Act on promotion of employment and labour market institutions, ALMP instruments should be directed to people from groups whose situation in the labour market is particularly vulnerable. At the same time, groups indicated therein do not always cover those unemployed people who are in greatest need of assistance from the point of view of local labour market conditions and the Act does not allow to address ALMP (apart from trainings and job counselling) to other people. Consequently, assistance does not always get to those who need it most. Moreover, there are no comprehensive programmes for older people, who often withdraw from the labour market too early, or for the disabled.

In Poland, public debate on active labour market policies is hardly at all supported by evaluating effectiveness of the interventions conducted. As much as there has been a lot of research on the impact of ALMP on labour markets in Western Europe, Scandinavia and the United States (see Chapter 1), in the case of Central Europe and Poland, literature on the subject is essentially limited to a couple of works from the mid-1990s. The most extensive study, which covers the Czech Republic, Poland, Hungary and Turkey, was undertaken as part of a World Bank project in 1997; but the effectiveness of Polish ALMP has also been studied by Kluve, Schmidt and Lehmann (1999) as well as by Puhani (1999). Their research indicates that it was only trainings and business incentives that considerably increased the chances of the unemployed to find jobs, whereas programmes such as intervention and public works were ineffective or counter-effective.

In this sub-chapter we present the results of a research on effectiveness of Polish ALMP carried out in January 2008. We look at programmes directed to the unemployed and leave aside those addressed to people registered as job-seekers as well as those at risk of involuntary job loss. In the context of this study we identify effectiveness with ALMP impact on participants' chances of finding jobs within one year and a half from programme commencement. This definition is consistent with the primary goal of ALMP, namely increasing chances of people finding and keeping their jobs.

We assess the effectiveness of ALMP using microeconomic analysis – a logit model of transitions from unemployment to employment as well as an analytical method called propensity score matching (PSM). We address questions such as whether ALMP increase the intensity of outflows to employment, which ALMP instruments are thought to bolster employment and which to do the opposite, and what was the most probable reason for some forms of assistance being effective or ineffective.

#### 3.1. Survey design

The sampling frame for the survey study was the PULS database. Data in the PULS system are collected by Poviats Labour Offices. This database includes, among others, social and demographic profiles of registered persons as well as their labour market records.

The core study population consisted of unemployed persons who entered ALMP programmes in the second quarter of 2006 (study group) or who were registered with PUPs as unemployed but did not participate in any ALMP programme from the second quarter of 2006 until the moment of deriving data from PULS (III q. 2007) (control group).

The following groups have been excluded from the population: persons who participated in more than one ALMP programme in the period from the third quarter of 2005 until the moment of deriving data from PULS and persons who reached their retirement age and were removed from PUP records. The reason of leaving out participants of more than one ALMP programme from the population was that the authors wanted to be able to assess the impact of particular forms of assistance on the chances of finding jobs by the unemployed. Information from the PULS database have been complemented by other data (concerning in particular respondents actual, current status on labour market) obtained in computer assisted telephone interviews (CATI). Because of the study method used, respondents for whom there was no contact telephone number in the PULS database have also been excluded from the population. The questionnaire also contained questions about, among others, getting additional qualifications on one's own initiative (during the pre-

ceding two years), receiving assistance from a job counsellor or broker as well as about personal assessment of ALMP programmes. The adopted sampling design assumes a division of the population into a number of strata relevant from the point of view of the study matter. The study group has been subdivided into strata according to active labour market policy types. Five grouping categories have been adopted, namely business incentives, public works, intervention works, apprenticeship and on-the-job training and trainings. Then, every thus determined stratum has been subdivided according to basic social and demographic characteristics such as gender, age and education. This subdivision has been applied along three age categories (under-25-year-olds, persons aged 25-54 and over-55-year-olds) and three education categories (the first category includes persons without formal education, with primary or lower secondary education and persons with basic vocational education; the second category includes persons with general or technical secondary education; the third category – persons with post-baccalaureate and tertiary education). The control group has been subdivided according to social and demographic characteristics in exactly the same way as the study group (2 gender categories, 3 age categories, 3 education categories).

Due to the fact that some strata included small numbers of respondents, it has been decided to use stratified unproportional sampling design. This means that some respondents categories, coming from less numerous strata were more likely to be included in the sample than those from other strata. At the same time, this probability has remained known, which made it possible to calculate weights and consider them during data analysis.

Within thus stratified population, we have applied simple random sampling without replacement, obtaining a total sample size of 20,146 respondents. With the assumed accomplishment rate of 30 percent, 4,026 interviews were carried out in the end, including 1,493 interviews with respondents from the study group and 2,533 with respondents from the control group. The control group was intentionally much larger than the study groups because of the intended data analysis method, namely propensity score matching. This method assumes matching one person from the study group with one person from the control group having the same or similar characteristics. To make this possible, it is necessary to have a control group of a sufficiently big size. Then, respondents have been assigned weights to balance out the probability of entering into the sample. These weights have been determined as a ratio of a share of a given stratum in the population to its share in the final sample.

In the subsequent part of this Report we present the results of the survey. If not stated otherwise, all presented statistics refer to the randomly selected sample which is representative of the target population described above.

### 3.2. Participation in ALMP and labour market flows

Data obtained in the survey made it possible to establish a relationship between participation in ALMP and the current situation in the labour market. As demonstrated in Table IV.6., flows to employment were generally more frequent among ALMP participants than among all other unemployed and especially so in the group of beneficiaries of business incentives and trainings. One exception were intervention works participants – in January 2008, the share of employed workers in this group was lower by approx. 5 percentage points than in the group of non-participants in ALMP.

Moreover, clearly fewer transitions from unemployment to economic inactivity can be observed among ALMP beneficiaries.<sup>44</sup> In the case of people who participated in ALMP, in January 2008, the share of economically inactive was lower by 10-20 percentage points than in the control group. This leads to the conclusion that probably all ALMP forms prevented withdrawal from labour force, although their impact was different.

It ought to be pointed out, however, that particular unemployed groups clearly differed in terms of social and demographic characteristics (see Appendix). For instance, respondents who participated in public works were mainly men, older people, people with basic vocational education or less, inhabitants of rural areas. People who participated in apprenticeship programmes were primarily women, young people, people with relatively high qualifications but without professional experience prior to the commencement of the programme. As for participants of trainings, they were mainly men with secondary education or less, coming from cities more frequently than other ALMP participants.

In view of this considerable differentiation of social and demographic characteristics between unemployed groups, direct comparison of the scale of flows to employment does not allow any conclusion on the effectiveness of particular ALMP instruments. For instance, a large share of people engaging in work after finishing an apprenticeship programme does not necessarily mean that this ALMP increases the chances of finding a job. This is so because it can be assumed that due to, among others, relatively high education, apprentices would find jobs even without ALMP assistance. For this reason, in the next subchapter, we assess ALMP effectiveness using econometric methods.

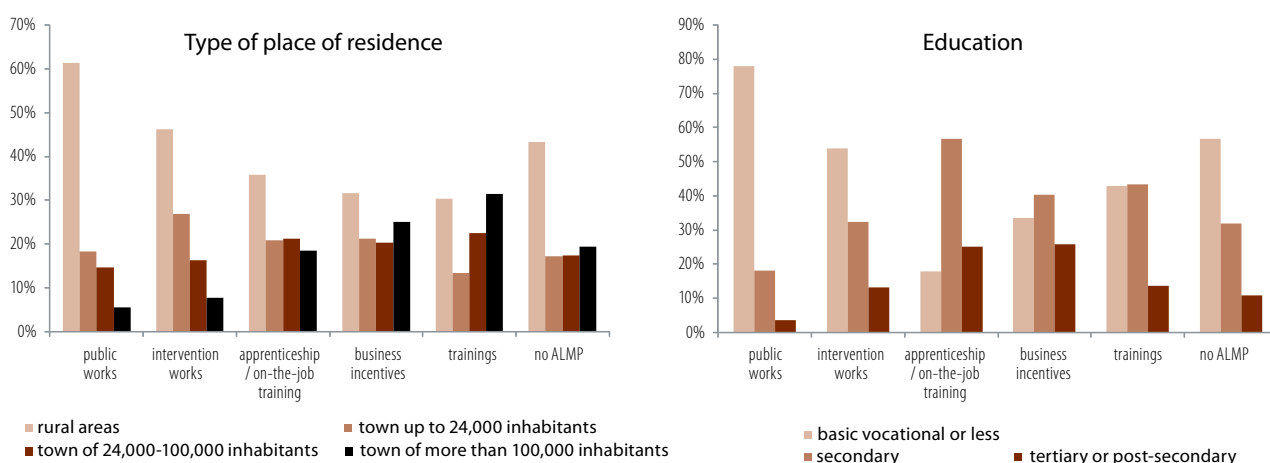
<sup>44</sup> This tendency may be observed both when applying the definition of registered unemployment and the BAEL definition, but in the case of the latter, differences are more acute. It seems that the BAEL definition is more appropriate in this context because according to its definition of unemployment include, among others, active job searching.

**Table IV.6.**  
**Participation in ALMP and labour market flows (in percent shares of particular unemployed groups)**

Active labour market policy (participation from II q. 2006)						
Situation as in January 2008	business incentives	public works	intervention works	apprenticeship / on-the-job training	trainings	non-participants in ALMP
unemployed as defined by BAEL	7.6%	38.0%	26.8%	23.0%	19.2%	26.2%
inactive	12.4%	23.1%	19.5%	19.6%	18.5%	33.9%
non-subsidised employment	78.1%	32.4%	42.3%	52.6%	59.6%	37.2%
subsidised employment <sup>8</sup>	1.9%	5.6%	11.4%	4.7%	2.4%	2.3%

Source: Own calculations based on, among others, data derived from the PLUS system and CATI survey.

**Chart IV.18.**  
**Selected social and demographic characteristics of ALMP beneficiaries (in percent shares of particular participant groups)**



Source: Own calculations based on data derived from the PLUS database and CATI survey

### 3.3. ALMP effectiveness – logit model

#### Logit model versus propensity score matching

Due to the fact that differences in the intensity of flows to employment between ALMP participant groups and the group of unemployed people who do not benefit from assistance under ALMP (gross effect of ALMP) may result, on the one hand, from the effectiveness of such programmes (net effect of ALMP) and on the other hand from different social and demographic characteristics of their members as well as from conditions in local labour markets (selection effect),<sup>45</sup> in order to identify the impact of particular effects, we refer to econometric analysis.

Both the logit model and propensity score matching (PSM) make it possible to estimate the net ALMP effect. The logit model allows to assess the direction and strength of impact that participation in ALMP has on the probability of transition from unemployment to employment, and at the same time to control the effect of other potentially significant factors such as age, education, gender, work experience or local labour market condition. The key concept of PSM, in turn, is matching every ALMP beneficiary with persons not participating in ALMP but having the same – or closest possible – characteristics and then comparing mean values for those selected characteristics which are of importance in the context of a given research (in the case of this study it is the share of people engaging in employment) between ALMP participant groups and their matching control groups. Hence, PSM allows to determine with accuracy both net effects as well as of selection effects.

One drawback of the logit model is that it assumes homogeneous effect of ALMP on the population. Empirical findings suggest,

<sup>45</sup> In the subsequent part of this Report, we refer to gross and net effect of ALMP and selection effect which are to be understood as defined above.

in turn, that the impact of participation in ALMP on the chances of transition to employment may vary. It is often emphasised, for instance, that some forms of assistance mostly help women, while others – low-qualified workers (see, for instance, Martin, Grubb 2001). As opposed to the logit model, PSM does not assume the homogeneity of ALMP impact on particular sub-populations or even individuals. Another advantage of PSM is that this method does not require function specification of the model. What is more, it shows whether the non-participant group includes persons with characteristics that are sufficiently similar to those of ALMP participants to compare their situations. The logit model does not provide such information.<sup>46</sup>

To conclude, it ought to be emphasised that this analysis is essentially microeconomic, which means that it does not account for potential external effects that accompany active labour market policies, namely the substitution, crowding out or fiscal distortion effects (see Chapter 1). Therefore, these results reflect the “upper ceiling” of ALMP impact. It should also be kept in mind that their actual impact on the general labour market situation may have been less favourable.

## ALMP effectiveness – logit model results

The chances of the unemployed to find jobs are a consequence of how employment enhancing characteristics develop over longer time periods. Therefore, our analysis of factors affecting flows from unemployment to employment started off with assessing the impact of the most basic characteristics, or attributes, such as gender, age, size of place of residence or education. In the next step we added factors accounting for unemployment duration and job experience prior to April 2006. Last but not least, we took into consideration the impact of ALMP participation, job counselling and job broking as well as obtaining additional qualifications by respondents.

We have constructed three binominal logit models with dependent variable defined as the fact of performing unsubsidised work<sup>47</sup> in January 2008. Although the actual dependent variable was discrete – it was transitions from unemployment in 2nd quarter of 2006 to unsubsidised work in January 2008, mathematical transformations generated a model which explains the probability of such transition.

Since a vast majority of variables considered as potential determinants of transitions from unemployment to employment were qualitative, binary variables were used to estimate them. For this reason, a reference group was selected for every determinant, usually the most numerous group in the sample.

The following explanatory variables have been used in the initial model specifications (reference groups in the brackets):

Model 1:

- gender (woman);
- age,  $\text{age}^2$ ;
- people with a child aged 3 or younger (childless people or people with children aged 3+);
- set of binary variables for the size of place of residence (village);
- set of binary variables for education (people with upper secondary vocational education);
- set of binary variables for the type of respondents' poviats of origin. Poviat types have been determined on the basis of such local labour market characteristics as share of registered unemployed in the population of over-15-year-olds, share of people working in agriculture in the population of over-15-year-olds, average wage, number of job offers per unemployed person, population size of a given poviat and of neighbouring territorial units, share of tertiary education graduates in the population of over-15-year-olds, districts' own income per capita. In this analysis, we have used the classification used in the previous issue of *Employment in Poland* (see Bukowski et al 2006). These poviat types have been characterised as development centres, suburbs, towns, former state farms, low-productivity agriculture, agricultural and industrial.

Model 2, additionally:

- duration of unemployment in months – as in 2nd q. 2006;
- work experience possessed – as in 2nd q. 2006 (no work experience).

Model 3, additionally:

- set of binary variables for participation in ALMP programmes (non-participation in ALMP);
- assistance from a job counsellor or broker (people getting no assistance from a job counsellor or broker);
- qualification development at own initiative (people undertaking no qualification development at own initiative).

Since the logit model is non-linear, interpreting parameters estimations is not straightforward. For this reason, we have transformed the parameters thus obtaining the so-called odds ratio. In the case of binary variables, odds ratio can be interpreted as a change in the probability of transition from unemployment to employment, if an individual has a characteristic identified by a given binary vari-

<sup>46</sup> For more information about differences between logit regression and PSM see works by Smith (2000) and Bryson et al. (2002).

<sup>47</sup> By subsidised work we understand public works, intervention works, apprenticeship or other ALMP forms.

able, and odds ratio equal to 1 means no such probability change, odds ratio greater than 1 means that it is growing, and smaller than 1 – that it is falling. For instance, if the odds ratio for a binary variable referring to training participation (where 1 is for people participating in trainings and 0 is for those not participating) equals 1.8 and is statistically significant, it means that people participating in trainings have the probability of transition from unemployment to employment greater by 80 percent than for non-participants, with all other characteristics being exactly the same for both groups.

Primary factors, which determine the characteristics attributed to respondents, are altogether “responsible” for slightly more than 6 percent of the variation of the dependent variable (see Table IV.7.). This value is small though significant. The probability of men finding jobs is higher than that of women by approx. 90 percent with all other social and demographic characteristics being held constant. Respondents living in rural areas have less chance of transition from unemployment than respondents from all other residence categories. The only fact which turned out to be statistically insignificant was that of people living in cities of more than one million inhabitants, which was probably due to a small share of respondents in the sample. Categories referring to the size of place of residence are statistically insignificant in all regression models. Moreover, most variables referring to poviats types turned out to be statistically insignificant, except one category labelled “development centres” which is significant and which increases the chance of engaging in unsubsidised work by almost 40 percent with all other characteristics held constant. When the impact of unemployment duration, work experience and ALMP participation are taken into account in models two and three, the predicting power of this variable goes down to 26 and 24 percent respectively.

One factor that favours transition from unemployment is the fact of possessing higher education; it increases the chance of finding a job by approx. 50 percent in relation to the reference category. The impact of this variable remained considerable and statistically significant (38 and 34 percent) also when respondents’ participation in ALMP and their position in the labour market were taken into account. Persons with primary education have least chance of finding a job, even if participation in ALMP, job counselling and broking as well as extra qualifications on own initiative are taken into consideration.

As it turned out unemployment duration hardly reduces the chance of finding a job with all other primary social and demographic characteristics held constant, whereas the fact of possessing work experience increased the likelihood of engaging in unsubsidised employment by 23.8 percent. The model which takes these factors into account allows us to “explain” 8.67 percent of the variation of the dependent variable. Taking ALMP participation into consideration increased this effect to 25 percent.

The obtained model results suggest (see Table IV.7.) that beneficiaries of particular ALMP forms, namely business incentives, trainings, apprenticeship or on-the-job training, had considerably greater chances of transition from unemployment to unsubsidised employment than all other unemployed groups.

Beneficiaries of start-up incentives were characterised by an approximately four times greater probability of being in employment than persons who had not benefited from any assistance under ALMP. Businesses started by unemployed people turned out to last, probably also because ALMP procedures require that the unemployed who apply for start-up funding undergo preparation in the scope of business running (assistance in business law, making business plans, accounting) and prove that their prospective businesses can be successful.

The fact of participating in trainings increased the probability of moving from unemployment to employment by almost 80 percent compared with non-participation in any ALMP programme, whereas participation in apprenticeship or on-the-job training – by 43 percent. Also, additional qualifications obtained by the unemployed on their own initiative increased their chances of finding jobs in the future (by 26 percent). When it comes to participation in intervention works and public works, it did not have any considerable impact on the likelihood of engaging in work.

This analysis has also made it possible to assess job counsellors’ or job brokers’ impact on the probability of transition from unemployment to unsubsidised work.<sup>48</sup> The results of the model suggest that people benefiting from job counselling or job broking stood approx. 33 percent less chance of engaging in employment than people not participating in this form of assistance with all other characteristics held constant. In the light of international experience (see Chapter 1), these results should not, however, be interpreted as evidence for the harmfulness of this assistance form as such but rather as evidence for the imperfection of the Polish job counselling and job broking system. This negative impact of job counselling and job broking may suggest that this form of assistance “supplants” individual job-seeking attempts as well as that job broking offered by PUPs is – on average – less effective than individual job searches in the labour market. Consequently, the fact of seeking assistance from a job broker may lower the chance of finding a job.<sup>49</sup> However, the problem of ineffectiveness of job counselling and job broking requires further in-depth analysis because data collected for the purposes of this study do not permit us to draw firm and far-reaching conclusions.

<sup>48</sup> The PULS database did not permit us to single out a group of unemployed benefiting from assistance from a job counsellor or broker. These people have been singled out on the basis of answers given by respondents in the survey. The analysis of answers to questions about receiving assistance from job counsellors or brokers indicates that respondents did not evidently identify these two forms of assistance. This is why it is unjustified to make a distinction between them in this analysis and they are therefore considered as a one category.

<sup>49</sup> This negative impact of job counselling on the chances of finding a job may imply some auto-selection of beneficiaries of this form of assistance. Maybe it was mainly “high risk” respondents, whose difficult situation in the labour market was caused by characteristics not included in the model, that resorted to job counselling.

**Table IV.7.**  
**Logit model results for transitions from unemployment to employment**

Explanatory variable	Model 1	Model 2	Model 3
man	1.93***	1.696***	1.645***
age	1.117***	1.133***	1.141***
age^2	0.998***	0.998***	0.998***
having a child aged 3 or younger	0.594***	0.591***	0.614***
town of up to 24,00 people	1.290***	1.256**	1.231**
town of 24,000-100,000 people	1.429***	1.377***	1.320***
city of 100,000-500,000 people	1.071	1.037	0.986
city of 500,000 – 1 million people	1.789***	1.746***	1.650***
city of more than one million people	0.878	0.728	0.649
development centres	1.392**	1.260*	1.244*
suburbs	1.228	1.221	1.144
former state farms	1.013	0.996	0.972
low-productivity agriculture	0.859	0.858	0.835
agricultural and industrial	0.928	0.892	0.859
no formal education or incomplete primary education	0.917	0.983	1.051
lower secondary education	0.774	0.791	0.915
primary education	0.557***	0.560***	0.623***
basic vocational education	0.902	0.925	0.988
general secondary education	1.003	0.983	0.991
post-baccalaureate / post-secondary education	0.99	0.93	0.95
tertiary education (incl. a bachelor degree)	1.506**	1.384**	1.341**
duration of unemployment		0.981***	0.982***
work experience before April 2006		1.238***	1.253**
trainings			1.792***
public works			0.722
apprenticeship or on-the-job training			1.433**
intervention works			1.044
business incentives			4.040***
additional qualifications on own initiative			1.263**
job counselling or broking			0.671***
Pseudo R-square	0.0605	0.0867	0.1015

Standard errors provided in the brackets, number of observations: 3830, 3761, 3741, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

To sum up, the first part of the microeconomic analysis indicates very high effectiveness of business incentives, trainings and apprenticeship in increasing the chance of finding a job, ineffectiveness of intervention works, public works, and – what is slightly surprising – counter-effectiveness of job counselling and broking. In the subsequent part of this Sub-chapter we further analyse these results using the PSM method.

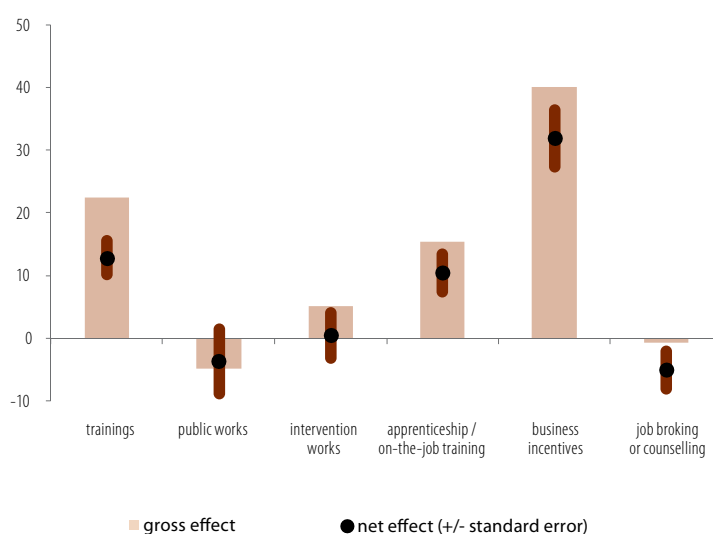
### 3.4. ALMP effectiveness – propensity score matching (PSM) results

#### Which ALMP forms enhance employment and which of them do not

In this part of the Chapter we present the results of ALMP effectiveness analysis carried out using the PSM method. The core element of this method is matching each of ALMP beneficiaries with their “closest neighbours”, or respondents with identical or similar characteristics from the group of ALMP non-participants. For a more detailed description of the algorithm of control groups see Appendix IV.

The PSM procedure provides an answer to the question to what extent the gross effect of ALMP was a result of the effectiveness of programmes (net effect of ALMP) and to what extent it was due to the fact that programme participants had different social and demographic characteristics than other unemployed people or came from different areas with different local labour market conditions (selection effect). As shown in Chart IV.19, the following ALMP proved effective when it comes to impact on employment (net effect): business incentives, trainings, apprenticeship and on-the-job training. On the other hand, intervention works and public works did not have any significant effect on the chances of taking up employment. Assistance from job counsellors or job brokers at PUPs also turned out to be insignificant in this context. Therefore, the results obtained using the PSM method essentially confirm the conclusions drawn from the logit models presented in the preceding Sub-chapter. Nevertheless, it should be emphasised that – contrary to the logit model – PSM does not indicate that job counselling and job broking are counter-effective. This may suggest that assistance from job counsellors and job brokers was sought by those who most needed it, namely unemployed people with low job searching skills. Probably, their attempts to find jobs without any assistance, would not have been more effective than those assisted by PUPs – even considering the current job counselling and job broking system. Consequently, the effect of supplanting individual job-seeking attempts by those effected through public employment services (which effect has most probably been taking place) did not affect the chances of moving to employment.

**Chart IV.19.**  
**Gross and net effects of ALMP (in percentage points)**



Gross effect of ALMP – difference between the share of employed persons in the group of ALMP beneficiaries and their share in the group of non-participants. Net effect of ALMP – difference between the group of ALMP beneficiaries and the control group selected using the kernel method. Positive values mean that the share of employed persons was higher than in the groups of ALMP beneficiaries.

Source: Own calculations based on data derived from the PLUS database and CATI research

The results of the analysis indicate (see Table IV.8) that business incentives was effective in assisting the unemployed. It can be assumed, however, that their net effect was overestimated because beneficiaries of this assistance form most probably differed from the rest of the unemployed in having such characteristics as positive attitude to risk taking and entrepreneurship, which could not be taken into consideration when selecting control groups. Hence, it seems plausible that the best way of assisting the unemployed was by developing their skills – both via traditional methods (trainings) as well as workplace training (apprenticeship and on-the-job training). Had beneficiaries of training programmes not obtained assistance under ALMP, the share of people engaging in unsubsidised work would have been lower among them by approx. 12.8 percentage points, whereas among apprentices and on-the-job trainees – by approx. 10.4 percentage points.

At the same time, ALMP programmes – excluding public works, intervention works, job counselling and job broking, were accompanied by a dead weight loss – the gross effect outweighed the net effect. In the case of trainings, selection was responsible for



40 percent of the gross effect (9.6 percentage points), while in the case of apprenticeship and on-the-job training – for 30 percent (5 percentage points). This means that beneficiaries of these ALMP included above all those unemployed people whose prospects in the labour market were relatively better (for instance, those with better qualifications, those living in higher developed poviats) and of whom many would also have found jobs without ALMP assistance. Directing active labour market policies at unemployed people with relatively high chances of finding jobs without any assistance is not in line with the practice adopted in Western European countries, where such programmes are addressed to people at high risk of withdrawal from the labour force or long-term unemployment (see Chapter 1).

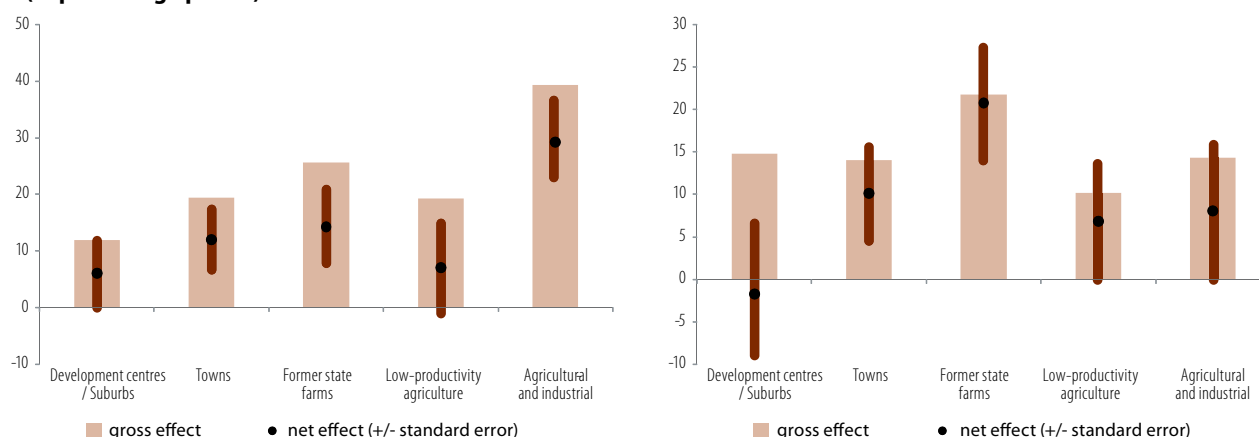
**Table IV.8.**  
**Gross and net effects of ALMP and selection scale (in percentage points)**

Type of ALMP	gross effect of ALMP	net effect of ALMP	selection (gross effect – net effect)
trainings	22.4	12.8	9.6
public works	-4.8	-3.7	-1.1
intervention works	5.1	0.4	4.7
apprenticeship / on-the-job training	15.4	10.4	5.0
business incentives	40.1	31.9	8.2
job counselling and job broking	-0.8	-5	4.2

Italics have been used for irrelevant values. Gross effect of ALMP – difference between the share of employed persons in the group of ALMP beneficiaries and their share in the group of non-participants. Net effect of ALMP – difference between the group of ALMP beneficiaries and the control group selected using the kernel method. Positive values mean that the share of employed persons was higher than in the groups of ALMP beneficiaries.

It ought to be borne in mind that the sample selection procedure did not account for stratification for the type of poviat of residence of the unemployed (defined, for example, as poviats belonging to particular clusters – see Section 3.3.2 or Bukowski et al. 2006, Part II). Therefore, the actual distribution of the unemployed by poviat type is slightly different to that in the sample (see Appendix V). For instance, in the group of participants of training and apprenticeship or on-the-job training programmes, such clusters as agricultural and industrial areas, former state farms and low-productivity agriculture are underrepresented in the sample. At the same time, the share of unemployed people who took up employment – among ALMP participants and others alike – clearly varies between clusters. Moreover, as suggested by Chart IV.20, the effectiveness of ALMP may depend on local labour market conditions.<sup>50</sup> Trainings proved effective above all in poviats classified as agricultural and industrial areas (net effect at 29 percentage points), whereas apprenticeship and on-the-job training – in former state farms. This means that on the national level the net effect of trainings was probably slightly greater than shown in Table IV.8, whereas the selection effect was actually slightly smaller. A similar – although probably weaker, relationship emerged in the case of apprenticeship and on-the-job training.

**Chart IV.20.**  
**Effectiveness of trainings (left graph) and apprenticeship or on-the-job training (right graph) by poviat type (in percentage points)**



Gross effect of ALMP – difference between the share of employed persons in the group of ALMP beneficiaries and their share in the group of non-participants. Net effect of ALMP – difference between the group of ALMP beneficiaries and the control group selected using the kernel method. Positive values mean that the share of employed persons was higher than in the groups of ALMP beneficiaries.

Source: Own calculations based on the PULS system and on CATI research

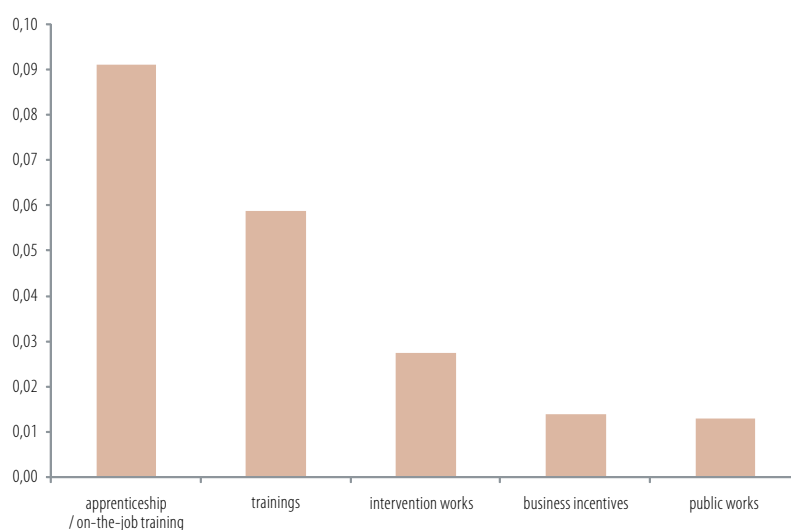
<sup>50</sup> This analysis has been carried out for training and apprenticeship or on-the-job training programmes. Other ALMP categories have been left out due to insufficient sample size.

## Active labour market policy effectiveness in Poland – effectiveness of ALMP programmes and their recipients and expenditure levels

A glimpse on the ALMP participant structure in Poland in 2006 (see Chart IV.21.) allows a statement that apprenticeship or on-the-job training and trainings were offered to the unemployed most often. Considerably less people were delegated to do public works or received assistance in the form of business incentives. It seems therefore that in the case of Poland – contrary to some other countries (see Chapter 1) – there is no relationship between the effectiveness and extent of particular ALMP programmes. Policies used on a relatively large scale, i.e. trainings and apprenticeship, as well as those directed to a small number of people, such as business incentives, turned out to foster employment. Therefore, it cannot be said that large-scale programmes are not effective. Nevertheless, it should be borne in mind that in international comparison the general impact of ALMP in Poland is not extensive – in 2006 ALMP assistance (trainings, apprenticeship/on-the-job training, intervention works, public works) was granted only to approx. 20 percent of all unemployed people (of which approx. 9 percent – through apprenticeship or on-the-job training, and slightly less than 6 percent – through trainings).

**Chart IV.21.**

**Share of unemployed people benefiting from ALMP assistance in 2006**



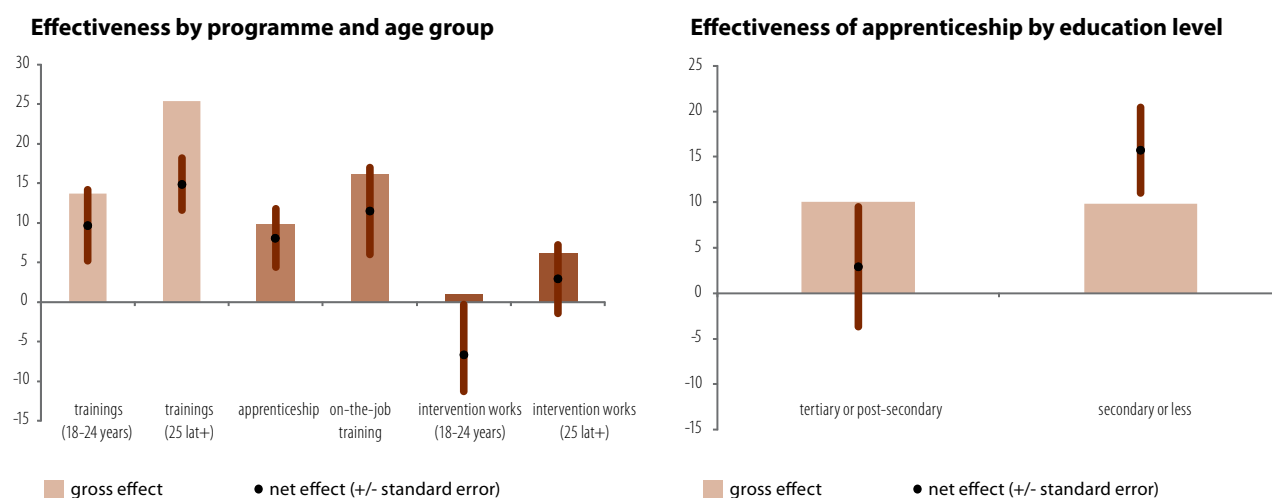
Source: Own calculations based on data derived from the Report MPiPS-01 with appendices

The Act on promotion of employment and labour market institutions provides for a definition of persons whose situation in the labour market is particularly vulnerable and who can benefit from a wider range of ALMP services and instruments than other unemployed. According to the Act, the youth constitute one of high-risk groups in the labour market. Although programmes directed explicitly to graduates<sup>51</sup> have been liquidated, under-25-year-olds (and in the case of higher education graduates – under-27-year-olds) are still offered a special ALMP forms, namely apprenticeship. It is important to assess the effectiveness of this type of assistance because in the recent years apprenticeships are the most frequent and most costly – in terms of aggregate cost – ALMP instrument in Poland.

As emphasised in Chapter 1, international experience indicates that activation programmes directed to the youth rarely increase their chances of finding and maintaining unsubsidised employment. The assessment of programmes implemented in Poland is not explicitly positive either (see Chart IV.22.).<sup>52</sup> Although in the group of participants aged 18-24 trainings increased the share of employed people by approx. 9.7 percentage points, it seems that this impact was smaller than in the age group 25+. Participation in intervention works did not largely affect the ability to find jobs of both over-25-year-olds or the youth. It is worth stressing, however, that apprenticeship proved to be an effective form of assistance to young people but only in the case of programmes for young people with relatively low qualifications, i.e. with secondary or lower education (see Chart IV.22., right graph). Participation in apprenticeship programmes increased the share of employed people in this group by 15.7 percentage points. What is more, these measures were directed to those unemployed people who really needed assistance most – this was so because the net effect of ALMP outweighed the gross effect.

<sup>51</sup> Namely programmes Absolwent (Graduate) and Pierwsza Praca (First Job).

<sup>52</sup> No analysis was conducted for public works, business incentives, job counselling and job broking due to insufficient sample size.

**Chart IV.22.****ALMP effectiveness by programme, age group and education level (in percentage points)**

Source: Own calculations based on data derived from the PULS database and CATI research

Results of the assessment of apprenticeships for young people with post-secondary or higher education qualifications were different. These programmes proved ineffective and were characterised by a strong participant selection effect – although the gross effect went up to 10 percentage points, the net effect was insignificant. At the same time, on-the-job trainings (i.e. assistance similar to apprenticeships but addressed to people in vulnerable labour market situation aged 25+) turned out to be pro-employment – participation in this form of assistance increased the share of employed people by 11.5 percentage points.

In accordance with the Act on promotion of employment and labour market institutions, the long-term unemployed also fall in the group of people whose situation in the labour market is vulnerable. Targeting these people with ALMP assistance is justified because of high risk of withdrawal from the labour force and of social exclusion as well as of difficulties in going back to employment without assistance. In some OECD countries (e.g. Denmark and Sweden), the long-term unemployed are obliged to participate in active forms of assistance, whereas in others, participation in ALMP is not obligatory but the long-term unemployed are targeted with the most extensive, personalised programmes. The active labour market policy model in Poland seems to differ from the above-mentioned trends – the scale of ALMP offered to the long-term unemployed is smaller than that offered to unemployed people in general (in 2006, 20 percent and 17 percent respectively<sup>53</sup>). Moreover, the long-term unemployed are involved above all in public works (88 percent of all participants) and much more seldom in trainings (40 percent of all participants) or apprenticeship/on-the-job training (33 percent of all participants). Therefore, the long-term unemployed are mainly targeted with ALMP programmes whose effectiveness in increasing the chances of engaging in work are doubtful.

Thanks to data derived from the survey as well as from the PULS system we were able to assess the effectiveness of ALMP programmes with respect to unemployment duration. We have distinguished two categories of unemployed people – those being out of employment for less than 12 months (from last registration) or for 12 months and longer. Although this distinction differs from the statutory definition (pursuant to the Act, a long-term unemployed person in Poland is a person who has been out of employment for a period of at least 12 months over the previous 2 years), we believe that it does not move away from it too much and it reflects the problem of long term unemployment.

The PSM analysis indicates that the impact of ALMP programmes on the chances of moving to employment (net effect) was not very varied depending of unemployment duration of their participants (see Chart IV.23).<sup>54</sup> The impact of intervention works was insignificant in the groups of long- and short-term unemployed alike. Programmes that proved effective in increasing the chances of engaging in work in the case of both these groups were trainings and apprenticeship or on-the-job training, where the impact of trainings was probably greater in the group of people staying out of employment for a period shorter than a year. Moreover, among ALMP participants being out of employment for a period longer than a year, the selection effect was more pronounced. This was the case above all for apprenticeship/on-the-job training. As much as the short-term unemployed who participated in this ALMP program on average stood less chance of finding a job than other short-term unemployed (the net effect of ALMP outweighs the gross effect), in the group of people staying out of employment for a period longer than a year the situation was opposite – it was people with better prospects in the labour market who participated in ALMP programmes (the gross effect outweighs the net effect). The strong selection effect among the long-term unemployed probably results from the fact that ALMP assistance was addressed above all to people staying out of employment for a relatively short time – i.e. for a period of 1 to 3 years, whereas in the case of the long-term unemployed who were

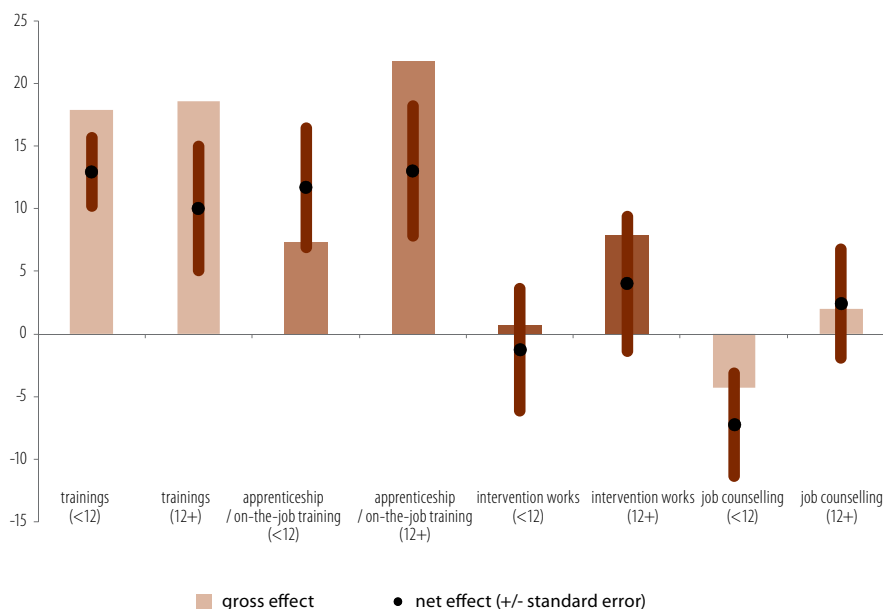
<sup>53</sup> These data refer to assistance under public works, intervention works, trainings, apprenticeship/on-the-job training. They do not cover, among others, job counselling and job broking. These data have been derived from the report MPIPS-01 with appendices.

<sup>54</sup> We have assessed the effectiveness of trainings, apprenticeship, on-the-job training, intervention works, job counselling and job broking. No such assessment has been carried out for public works and business incentives due to insufficient sample size.

not covered by any assistance this group was smaller. Therefore, it can be assumed that the share of people registered as unemployed who were actually economically inactive was greater among the long-term unemployed not participating in ALMP than among active labour market policy beneficiaries. This would explain the extensive gross effect and relatively small net effect of ALMP.

**Chart IV.23.**

**ALMP effectiveness by programme and unemployment duration (in percentage points)**



Gross effect of ALMP – difference between the share of employed persons in the group of ALMP beneficiaries and their share in the group of non-participants. Net effect of ALMP – difference between the group of ALMP beneficiaries and the control group selected using the kernel method. Positive values mean that the share of employed persons was higher than in the groups of ALMP beneficiaries.

Source: Own calculation based on data derived from the PULS database and CATI research

The PSM analysis indicates also that there are certain differences when it comes to the impact of job counselling and job broking. In the case of the short-term unemployed, this type of assistance proved counter-effective in terms of chances of moving to employment, whereas in the case of people being out of employment for a period longer than a year – insignificant. This confirms the hypothesis that job broking offered by PUPs may in fact reduce individual job-searching attempts. As much as this fact does not considerably affect the chances of moving to employment in the case of the long-term unemployed (since they would not make any individual job-searching attempts anyway or they would do so but ineffectively), the chances of short-term unemployed decrease because their individual job-searching attempts would probably be more effective than those assisted by PUPs (for instance, due to greater motivation, social contacts).

Empirical findings also suggest that the impact of participation in ALMP on employability may depend on participants' gender (see Chapter 1). Some programmes seem to be particularly effective for men, whereas others primarily help women (see, for instance, Martin Grubb 2001). In the case of Poland, analysing ALMP effectiveness across the gender divide is plausible to the extent that participant structures for particular assistance forms vary in this respect. In the case of apprenticeship, there are clearly more female participants (approx. 70 percent), whereas in the case of public works and trainings – more men. Nevertheless, the PSM analysis suggests that the impact of ALMP programmes in Poland did not essentially vary for participant gender. Notwithstanding the above, trainings appeared to have a slightly stronger effect on the employability of men rather than of women (net impact at 14.6 percentage points compared with 10.5 percentage points), whereas apprenticeship and on-the-job training – quite the opposite (impact at 11.6 and 9.1 percentage points for women and men respectively). As for participation in intervention works, it did not affect the employability of women or men.<sup>55</sup>

### ALMP effectiveness versus expenditure levels

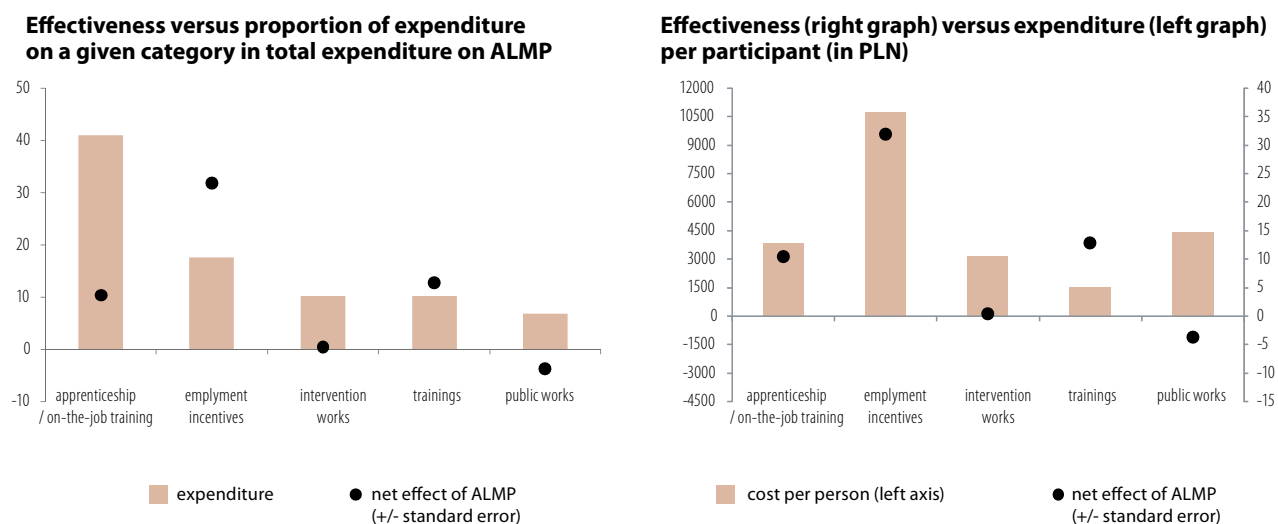
The analysis presented above suggests that the existing structure of expenditure on ALMP in Poland does not secure an effective allocation of available funds. Too little importance is given to trainings which have proven to be the most effective and the cheapest (calculated per person) form of assistance. In 2006, 10 percent of all ALMP expenditure in Poland was spent on trainings, i.e. similar amount as that spent on intervention works, which are not only ineffective in increasing the chances of the unemployed to find jobs but which are also twice as expensive as trainings (see Chart IV.24.). Moreover, training assistance to the unemployed has not been well

<sup>55</sup> No analysis has been carried out for public works and business incentives because of insufficient sample sizes.

targeted in Poland, meaning that it has been characterised by a rather strong selection effect. Some 60 percent of the gross effect (or the difference between the share of employed persons in the group of ALMP beneficiaries and their share in the group of non-participants) were due to the actual impact of trainings on participants' skills and their chances in the labour market, whereas the remaining 40 percent – to the fact that participants of training programmes are essentially unemployed people with social and demographic characteristics that on average secure better chances of engaging in work.

**Chart IV.24.**

**ALMP effectiveness – net effects versus expenditure in 2006**



Expenditure do not add up to 100 because certain ALMP forms have been left out. The analysis does not account for job counselling and career advisory services due to it being impossible to isolate expenditure on these two forms of assistance.

Source: Own calculations based on Eurostat and data derived from CATI

Business incentive grants – although they seem to effectively assist the unemployed in their attempts to return to work, are very costly. This is the reason why in 2006 relatively few unemployed people benefited from this form of assistance (34,900) even though approx. 18 percent of all ALMP expenditure was spent on it.

Most importance – both in terms of expenditure and number of participants, is currently given to apprenticeship and on-the-job training, which in 2006 consumed approx. 41 percent of all ALMP expenditure. It has to be borne in mind, however, that the effectiveness of the above forms of assistance varies significantly. On-the-job training seems to help the unemployed similarly to trainings. As for apprenticeship, as much as they increase the employability of the youth with relatively low professional qualifications (secondary education qualifications or less), in the case of university and vocational college graduates, they do not generate net profit but dead-weight loss only. Moreover, the average cost of apprenticeship / on-the-job training is relatively high – it amounts to almost three times the cost of a training programme. Whether the use of this form of assistance is sensible or not largely depends on what group it targets.

Based on the presented microeconomic analyses it can be concluded that:

- the current ALMP expenditure structure in Poland does not secure an effective allocation of funds. In particular, insufficient amounts are spent to finance trainings which have proven to be a cheap and effective way to increase the employability of the unemployed. At the same time, effective ALMP activities – such as trainings, business incentives, apprenticeship and on-the-job training, were characterised by a considerable dead-weight loss effect – beneficiaries of assistance included above all people with relatively better chances in the labour market. This was the case particularly for programmes addressed to over-25-year-olds.
- public works and intervention works do not have any considerable impact on the chances of moving to employment and therefore they can serve above all as a way to test unemployed people's readiness of take up work.
- assistance from job counsellors and job brokers at best had a marginal impact on the chance of engaging in work or it could even reduce such chance – most probably due to it suppressing individual job searching attempts.
- the effectiveness of ALMP programmes targeting the youth was varied. Apprenticeship addressed to young people with relatively low professional qualifications, i.e. secondary education or less, proved highly effective. Support to vocational colleges and university graduates did not generate any additional net effects.
- assistance offered to the long-term unemployed, who experience greatest difficulties in moving back to employment, appears ineffective. These people received assistance under ALMP slightly less often than short-term unemployed (active policies covered 17 percent of long-term unemployed compared with 20 percent of unemployed in total), moreover, they benefited above all from public works and intervention works, i.e. ineffective ALMP forms.

## Summary

In the last couple of years in Poland there has been an increase in expenditure on active labour market policies both in aggregate terms (which resulted from changes in expenditure levels by the Labour Fund on other projects as well as from its growing income and greater availability of funds from the European Social Fund) and per unemployed person (which also resulted from falling numbers of unemployed people). At the same time, however, total expenditure on ALMP in Poland is still significantly lower than the Western European average, especially if calculated per unemployed person, but close to expenditure made in other Central and Eastern European countries.

There is a lot of potential for ALMP use in Poland due to the maladjustment of worker qualifications on the labour market and the resulting continuously high rate of unemployment irrespective of the growing staff shortage. Active labour market policies may and ought to be used to reduce the scale of the above problems. In the case of Poland, their special role should include also preventing the unemployed from withdrawing from the labour force and helping them engage in productive employment – especially in the case of those with low qualifications, at risk of withdrawal and exclusion from the labour market.

The above tasks can be completed using a wide range of labour market policy instruments which resemble those used in other countries. Presently, particularly thanks to the statutory changes introduced in 2004, Poland has got the legal and institutional framework to effectively implement all key labour market programmes. At the same time, when it comes to the allocation of funds, in Poland, much more often than in Western Europe, it is policies whose effectiveness is doubtful – such as public works, which are financed at the cost of more effective instruments. The tasks in the area of job broking and job counselling have been particularly neglected. At the same time, in the last couple of years there have been some positive changes in the scope of expenses and numbers of beneficiaries – both in terms of their aggregate levels as well as beneficiary structures by programme.

The analysis of effectiveness of particular active policies in Poland confirms that a part of funds assign on active labour market policies does not transform into their beneficiaries having greater chances of finding jobs. In particular, intervention works and public works do not have any significant effect on employability and therefore they may only serve as a test of readiness to take up work or as a way to prevent social exclusion – by securing income and social contacts.

At the same time, pro-employment ALMP programmes – i.e. trainings, business incentives, apprenticeship and on-the-job training, were accompanied by a considerable deadweight loss effect. This means that assistance was granted to those unemployed people whose labour market situation was actually relatively good, whereas the most difficult cases were being neglected. At the same time, it ought to be borne in mind that ALMP, and particularly the most complex and costly forms of assistance, are intended above all to assist those at risk of long-term unemployment and social exclusion. Therefore, it seems that ALMP targeting should be more careful – we should define special labour market groups to narrow them down or move away from directing ALMP to predefined target groups and introduce “profiling”, or personalised assistance to the unemployed based on early identification of people at risk of long-term unemployment. The above solutions have been implemented in a growing number of OECD countries.

The analysis of ALMP effectiveness also leads to a conclusion that job broking and job counselling as offered by PUPs do not fulfil their fundamental role, i.e. that of streamlining the mechanisms and lowering the cost of job searching in the labour market. Assistance from a job broker or counsellor at best has a marginal effect on the chances of the unemployed to take up work and it may in fact lower them – probably because it hinders individual job-searching attempts. According to international experiences confirmed by other empirical studies, these results should not be interpreted as proof that this form of assistance per se is ineffective. They indicate rather that the Polish system of job broking and job counselling is faulty. International experiences show that job search assistance and job counselling constitute the most effective forms of assistance, especially in the case of short-term unemployed people with relatively good prospects for returning to the labour force. Hence, it appears that Poland needs not only that greater outlays to be made to support this cause but also that more emphasis is put on increasing the quality and accessibility of services on offer, for instance, by modifying the currently applied instruments and standards and by extending cooperation between labour offices and employers. The above remarks of course do not necessarily have to concern all labour offices in Poland but generally their performance in the area of job broking and counselling has no significant effect on the situation of the unemployed.

The results of the study indicate also that the effectiveness of assistance offered by PUPs to the young varies. Apprenticeships proved very effective, although mainly in the case of programmes targeting young people with relatively low qualifications. Assistance to post-secondary and higher education graduates did not generate any net profit, which is an argument in favour of suspending it. Our analysis suggests that the assistance targeting the long-term unemployed who experience greatest difficulties in returning to the labour force without assistance is insufficient. Firstly, these people tended to benefit from assistance under ALMP less often than the short-term unemployed; secondly, they participated above all in public and intervention works, i.e. those ALMP forms which do not increase the chances of engaging in unsubsidised work. At the same time, the effectiveness of instruments such as trainings or apprenticeships directed to the long-term unemployed does not appear to be lower than when directed to the short-term unemployed. Therefore, it can be hoped that better adjustment of the offer of public employment services will help to reduce unemployment in its

most severe, structural part. The results of the study also suggest that the long-term unemployed participants of trainings, apprenticeship and on-the-job training included above all people staying out of employment for a relatively short period of time (mostly from 1 to 3 years). It can thus be suspected that too little attention is currently paid to bringing back to the labour market those people who are at highest risk of social exclusion, including the actually inactive. Improvement in this respect will require changes in how labour offices operate and in particular that they improve their attempts to get through to the unemployed, monitor their job searches and verify their actual labour market status.

Presently, in Poland, there exists no comprehensive approach to assistance to the unemployed. It is more and more common in OECD countries that so-called personalised action plans are developed. They are contracts between labour offices and unemployed people which state what forms of assistance the latter may obtain but also what actions they should undertake to return to the labour force. More attention is also paid to cooperation between labour market and social welfare institutions, personalisation of ALMP assistance and its progression – from cheapest and simplest (in the case of short-term unemployed with high chances of finding a job) to more complex forms of assistance (in the case of people experiencing real problems with returning to the labour force without assistance).

A different, although also significant, problem is that of increasing the access to and quality of information about available policies as well as about the experiences of people covered by them – thanks to such information studies similar to that carried out for the purposes of this Report could be executed more frequently and provide more detailed knowledge about how to shape the labour market policy in Poland.

## Conclusions for the economic policy



In 2003-2007, the labour market in Poland made the most of the economic upturn and fully absorbed the unemployment growth and employment decline of 1998-2002. Hence, almost 10 years after the Russian crisis, both the unemployment and employment rates went back to the levels seen in 1997, which, in this respect, was the best year of the entire transition period. Nevertheless, the creeping economic downturn in the world and in Europe heralds a slowdown in Poland's economic growth – probably in two or three years' time. Therefore, we should envisage a possibility of not only the recently high rates of unemployment decline and employment growth slowing down but also of these trends being reversed with time.

## Macroeconomic policy – does it serve the labour market or does it not

As argued in Part I, the so-called aggregate shocks are of key importance for the economic situation. This means also that fluctuations in unemployment and employment rates are mainly induced by disturbances which hit a large number of businesses operating in a given country over a short period of time and which consequently affect most households involved in the labour market. Public authorities may – as recommended by Keynes, try to counteract such fluctuations by applying certain fiscal and monetary policy instruments in order to stimulate or inhibit aggregate supply by increasing or reducing the budgetary deficit on the one hand, or by affecting the alternative cost of money in the form of nominal interest rates. Our analysis, as presented in Part I, suggests, however, that the above-mentioned task is very difficult. This is so because the government and the central bank operate under the conditions of limited information base, which may lead to erroneous decisions that enhance rather than mitigate cyclical fluctuations, especially if combined with incomplete recognition of mechanisms of monetary and fiscal impulse transmission (typical for countries under transition) as well as with lack of essential instruments and models which help to correctly identify shocks that hit the economy.

The results of the macroeconomic structural model presented in Part I suggest that this is exactly the kind of situation that we saw in Poland in 2001-2002, when the Central Bank in Poland considerably tightened its monetary policy by increasing the real interest rates in reaction to a supply shock which had an effect on relative prices but essentially did not affect general price levels. The presented results demonstrate that the application of this monetary policy – like not other in Central Europe at that time – in Poland led to unemployment growth of approx. 1 percentage point above the level dictated by the consequences of the Russian crisis as well as of the cyclical economic slowdown which reached its zenith at the beginning of 2002. One key lesson from this experience is that it is necessary to review the information base which is used in the process of making monetary policy decisions. This is so because it seems that, compared with other European countries, Poland distinguishes herself by paying too much attention to supply shocks, such as changes in prices of raw materials and food products as well as changes in wages, which have an impact on relative prices and real variables rather than on the level of inflation (understood as the rate of aggregate price growth in medium and long term). Such emphasis on the importance of supply shocks in monetary decision-making seems to obscure the key impact on inflation of strictly monetary shocks which directly concern the aggregates M0-M3, including above all changes in the consumer credit dynamics. The hitherto practices appear to boost rather than minimise the risk of Poland's economy incurring too large a cost of its disinflation policy.

As for fiscal policy, it should be emphasised that its traditional definition as government policy that attempts to control demand by increasing or reducing the budgetary deficit, is definitely too narrow in the case of Poland – as well as of most countries in the region. This is so because although both theoretical and empirical research demonstrates that the attainment of macroeconomic stability, or a balanced budget throughout the economic cycle, is very much desired, at the same time – as indicated already in the previous issues of *Employment in Poland*, it is not so much the budgetary balance but the structure of financial flows on the expenditure side of the budget that are of key importance for the Polish labour market. As described in Part I, the persisting negative trend in labour supply, which has been continued in Poland irrespective of fluctuations in the economy or labour supply, clearly demonstrates that it is the adopted social policy model which encourages people in pre-retirement age to withdraw from labour force that plays a key role. It is also this model that should be seen as a source of negative labour supply impulses which we identify in Part I and which are of crucial significance in the context of the gap between Poland's labour market and those in the neighbouring countries. It is absolutely necessary to review this model by applying lower transfer expenditure in order to enhance labour supply and employment growth in medium and long term. International experience indicates very convincingly that the elimination of social transfers targeting working age people who are able to contribute to the labour market translates fully into participation and employment growth and generally remains neutral for unemployment. Combined with appropriate readjustments of active labour market policies, which, as demonstrated in Part IV, are not directed to over-50-year-olds, such policy would make it possible for Poland to move on from the ineffective welfare state model to the modern work-fare state model, based on security and flexibility (*flexicurity*).

## Labour market regulation flexibility, wage rigidities and absorption of macroeconomic disturbances

In Part II we argue that, compared with other countries in the region, the Labour Code in Poland poses relatively few obstacles and costs when it comes to entering into and terminating a traditional employment relationship. Therefore, it can be claimed that – contrary to popular opinion – this fairly low stringency of labour legislation as well as continuing changes in the model and structure of work contracting in Poland helped to absorb the cyclical slowdown of 2001-2002 and brought unemployment to levels which no longer

distinguished Poland negatively from other European countries. At the same time, it ought to be borne in mind that a considerable liberalisation of the Labour Code came above all in 2002-2004, that is long after the Russian crisis occurred and its negative consequences hit the Polish economy. In 1999-2000, in turn, the strictness of employment protection legislation was much greater.

It seems that one of the macroeconomic consequences of this state of things, i.e. of relatively greater protection of interests of working people than of the unemployed, was the lowering of the degree of wage compression in 1999-2001, which should have taken place in the face of the fast-growing unemployment and plunging capital productivity. Although the econometric structural model presented in Part I indicates that "favourable" – from the point of view of employers, developments in wage dynamics prior to the Russian crisis were the reason why the reaction of wage mechanisms to this crisis was not a particularly potent factor which would intensify its consequences. Nevertheless, as the economic slowdown persisted, a visible reduction of its costs in the labour market required that wage demands be clearly lowered. It can be assumed that, after 2001, the liberalisation of the statutory provisions, which increased the bargaining power of the unemployed in relation with the employed, made it possible to lower the unit cost of labour and consequently produced employment growth and unemployment decline. This phenomenon illustrates the importance of institutional solutions, which affect the swiftness of real wage adjustments to changes in the macroeconomic environment, for speedy absorption of macroeconomic shocks.

This means also that any and all potential amendments to the applicable regulations as well as changes in the institutional labour market structure in the coming years must account not only for the needs of those in employment but above all of the unemployed. One example of a tool that favours the former at the expense of the latter is the minimum wage. Raising the minimum wage leads to the compression of working people in the bottom segments of the earnings distribution, however, at the cost of higher unemployment. This concerns above all those markets where the ratio of the minimum to average wage is particularly high. In the context of adaptability of the Polish economy to macroeconomic disturbances, there are two characteristics of the existing construction of the minimum wage that should be assessed negatively. Firstly, it is the indexing mechanism which – in a couple of years' time – may lead to a considerable increase in the minimum wage and thus swell the level of natural unemployment. Secondly, it is the use of the same minimum wage across the country, irrespective of inter-regional (both between and within voivodeships) differences in unemployment levels and unit labour cost. By making indexing mechanisms more flexible and by allowing differences in the minimum wage depending on the situation in local labour markets, it would be possible to eliminate wage rigidities that are inherent in the legal system and thus to increase the ability of the Polish economy to adapt to macroeconomic disturbances. Such changes would also make it possible to better weigh out the interests of those in and out of employment. From a broader perspective, all labour market policies, including negotiations at the level of the Tripartite Commission, should focus on the security of all labour market participants and not on the protection of existing jobs, as it often used to be the case in the past.

The analysis presented in Part III provides an additional context to the above problem. It indicates that the wage arrangements used in the public sector are ineffective, especially in state-owned production and services companies as well as in public administration. On the one hand, this inflexible remuneration system increases the wage cost, and on the other hand, it limits down the possibilities of attracting highly qualified personnel. For the most part of the public sector, however, this problem could be remedied thanks to speedy privatisation of state-owned companies. In those areas where this solution cannot be applied, for instance in public administration, it is necessary that far-reaching modernisation of pay systems be carried out and that they be based on individual worker productivity and not – as it has been so far, on seniority and bargaining power. Moreover, it is desirable that the existing pay structure in administration be reviewed to shift some part of wage funds from lower-qualified workers to highly-qualified specialists. Another plausible remedy that could lower the cost of simple services (e.g. cleaning, building administration) in public institutions and units is to resort to outsourcing more often.

## A typical employment forms and assistance to vulnerable labour market groups

In Part II we emphasise the importance of the notion of adaptability to changes in the labour market, which is still very seldom referred to in Poland. We define adaptability as an ability of labour market participants to deal with various challenges encountered at different stages of life and professional career and concerning the allocation of time to work, household duties, other commitments and leisure. Understood as such, adaptability is two-dimensional – one dimension has to do with changes in the market environment and the other is determined by the evolution of labour market position as professional career unfolds over lifetime. The arguments presented in Part II convince that the numerous opportunities that atypical employment forms could open up in terms of market participation of people facing the choice between work and family duties or those who find it difficult to engage in full-time work due to age or health reasons, are largely neglected.

In the area of legislation, Poland has essentially caught up with other countries, whose regulations better suit the use of atypical employment arrangements in a bid to increase labour market participation among groups whose status is more vulnerable, such as young inexperienced workers, women with children and older people who require relatively longer periods of rest during working week. This means that there are crucial challenges in the scope of information policy propagating flexible work arrangements among

both employers and employees and their representatives, such as trade unions. It is necessary to shift emphasis in the social dialogue and reinforce views that the modern labour market requires rather that its participants be protected and able to adapt than existing jobs maintained at all cost. It is exactly atypical employment arrangements, which reconcile the need for flexibility of the part of employers with security and adaptability on the part of employees aided, in case of redundancy, by active labour market policies, that can prove the most suitable remedy in a great number of cases.

## Active labour market policies and assistance to the unemployed and economically inactive

In Western European countries, their transition from welfare to workfare state involved a gradual changeover from the passive social policy model, based on direct money transfers directed to the unemployed and economically inactive, to the active model with active labour market policies (ALMP) at its core. The key role of ALMP is to reconcile high adaptability and flexibility of the economy with guarantees of basic social security and stability to all citizens, especially to those who are most vulnerable to the negative results of disturbances and economic changes. Presently, in Western European countries, the extent of policies intended to activate unemployed and economically inactive people is much greater than their average scale twenty years ago. This is not the case for Poland. In Poland expenditure on ALMP is in European terms relatively low, although there has been some considerable change in this respect over the last couple of years. It can be said that Poland now finds herself at the beginning of the process of improving the instruments that are necessary to replace passive strategies for solving social problems with a more active approach.

Therefore, it is even more essential to draw from international experience and from the current state-of-the-art diagnosis, to develop ALMP in such a way that they would best serve their purpose, which boils down to helping unemployed people to quickly find satisfactory employment. Thanks to the results of empirical research – presented in Part IV, consisting in a study of an countrywide group of ALMP beneficiaries in comparison with an appropriately selected control group, it is possible to formulate some recommendations concerning the evolution of ALMP in the next couple of years. Firstly, we point out that it is necessary that the existing expenditure structure be reviewed in order to make sure that available funds are allocated in a more efficient way. This means that we should engage less in those forms of assistance which prove hardly effective or even ineffective, including public and intervention works, and that they should be replaced with less costly instruments which play a different role, such as useful community work. On the other hand, outlays on the financing of trainings should be increased, especially that trainings prove to be a cheap and effective tool when it comes to increasing chances of the unemployed to find jobs. At the same time, however, in the case of these training programmes, although their net effectiveness is not subject to any doubt, it is absolutely necessary to control the scale of their by-product in the form of deadweight loss, meaning the amount of outlays spent on assistance to those who do not really need it. We argue that apart from reallocating funds from inefficient to efficient initiatives, it is necessary to review the process of selecting people who are offered assistance. In the case of trainings, a more careful selection must focus above all on those unemployed people for whom this competence gap is particularly wide. What is more, the existing selection process for training programmes must be changed because in its current form it favours those unemployed whose skill deficits are relatively small. Similarly, as far as internships are concerned, it seems particularly important to move away from financing internships for people with higher education degree and place more emphasis on providing such opportunities to young people with relatively low professional skills.

In a longer-term perspective, it seems that, following the example of other OECD countries, we should gradually resign from addressing ALMP to pre-defined target groups and strive to “profile them individually, or provide individualised assistance to the unemployed, based on earlier identification of individuals facing long-term unemployment.

## Appendices

## APPENDIX I. ALMP spending in the EU countries in 1995-2005

**Table IV.1.**

**ALMP spending in the EU countries in 1995-2005**

Country	ALMP expenditure as a percentage of GDP			ALMP expenditure as a percentage of total labour market expenditure			ALMP expenditure per unemployed as a percentage of GDP per working age person		
	1995	2000	2005	1995	2000	2005	1995	2000	2005
Austria	0.36	0.5	0.62	25.4	40.4	29.1	0.09	0.14	0.12
Belgium	1.37	1.31	1.08	33.4	37.4	31.3	0.14	0.19	0.13
Czech Republic	0.14	0.21	0.25	51.9	42.9	51.0	-	0.02	0.03
Denmark	1.88	1.58	1.74	29.9	34.3	40.9	0.28	0.37	0.36
Estonia	0.1	0.1	0.1	-	-	36.7	-	0.01	0.01
Finland	1.54	1	0.89	28.5	32.2	31.9	0.10	0.10	0.11
France	1.29	1.31	0.9	42.2	44.4	35.7	0.12	0.15	0.10
Germany	1.26	1.16	0.97	45.3	48.9	29.2	0.16	0.15	0.09
Greece	0.32	0.19	0.06	41.5	32.7	-	0.03	0.02	0.01
Hungary	0.42	0.39	0.29	32.0	45.3	42.7	-	0.06	0.04
Ireland	1.63	0.79	0.63	37.5	49.9	43.2	0.13	0.19	0.15
Ireland	0.18	0.5	0.54	15.5	44.2	39.7	0.02	0.05	0.07
Luxembourg	0.19	0.29	0.52	24.7	40.3	43.7	0.07	0.13	0.12
Lithuania	0.2	0.2	0.22	-	-	64.0	-	0.01	0.03
Latvia	0.2	0.1	0.21	-	-	39.5	-	0.01	0.02
Netherlands	1.11	1.47	1.33	27.7	52.7	39.7	0.17	0.53	0.28
Poland	0.4	0.23	0.43	18.7	22.4	33.3		0.01	0.02
Portugal	0.78	0.58	0.69	46.4	39.0	34.9	0.11	0.15	0.09
Slovakia	0.76	0.32	0.18	63.8	27.6	-	-	0.02	0.01
Slovenia	0.64	0.49	0.34	-	-	-	-	0.07	0.05
Spain	0.51	0.93	0.78	18.1	40.9	35.0	0.03	0.08	0.08
Sweden	2.23	1.31	1.32	51.0	49.7	52.4	0.25	0.23	0.18
Great Britain	0.44	0.36	0.49	32.7	54.1	72.1	0.05	0.07	0.10
EU15 average	1.01	0.88	0.84	33.3	42.7	39.9	0.12	0.18	0.13
NMS8 average	0.36	0.26	0.25	-	-	44.5	-	0.03	0.03

Source: OECD, EUROSTAT

## APPENDIX II Microeconomic analyses of ALMP effectiveness – summary of results

**Table IV.2.**  
**Microeconomic studies of effectiveness of training programmes**

Study	Place and period of observation	Methodology	Conclusions
<b>Western Europe</b>			
Weber, Hofer (2003)	Austria, 1999-2000	Hazard model	Men and total population: extension of the average unemployment spell, women – no impact
Cockx (2003)	Belgium, 1989-1993	Control function	Shortening of the average unemployment spell by 4-6 months
Cavaco, Fougère, Pouget (2005)	France, 1995-1998	Duration model	Employment probability higher by 8 percentage points, benefits greater for highly-qualified workers
Fitzenberger, Speckesser (2005)	Germany, 1993-1997	Propensity score matching	Western Germany: negative effect (lock-in) in the short term, strongly positive impact on employment in the long term;; Eastern Germany: negative effect (lock-in) in the short term, – marginally positive impact in the long term
Hujer, Wellner (2000)	1985-1992 Western Germany  1990-1992 Eastern Germany	Propensity score matching	Short trainings more effective than long ones; Western Germany: shorter average unemployment spells; Eastern Germany: no substantial effect
Lechner, Miquel, Wunsch (2004)	Western Germany 1993-2002	Propensity score matching	a) Employment – short trainings: considerable positive impact in the short and long term (up to 7 years after the completion of a training), long trainings: considerable positive impact in the short term, no impact in the long term; internships: no impact, b) Unemployment – no substantial impact, c) Wages – considerable positive impact in the case of long and short term trainings
Arellano (2005)	Hiszpania, 2000-2001	Proportional hazard model	Positive effects, especially for women
<b>Skandinavia</b>			
Rosholm, Svarer (2004)	Dania, 1998-2002	Hazard model	Extension of the average unemployment spell; "threat effect" occurs
Graversen (2004)	Dania, 1994-1998	Timing-of-events	Extension of the average unemployment spell (analysis only on a group of men aged 25 and more)
Hämäläinen (2002)	Finlandia, 1989-1994	Binomial probit model	Higher probability of employment
<b>Central and Eastern Europe</b>			
Leetmaa Vörk (2004)	Estonia, 2000-2002	Propensity score matching	Higher probability of employment by 4-6 percent after one year and by 8-12 percent after two years following the registration in an employment office; no impact on wages
Puhani (1998)	Polska, 1992-1996	Matching, model trwania	Strong negative impact on male unemployment rates (average drop of 10-15 percentage points), in the case of women – considerable negative impact only in the first month after the completion of a training programme
Kluve, Lehmann, Schmidt (2005)	Polska, 1992-1996	Matching	Positive impact on employment levels
Lubyova, van Ours (1999)	Slovakia, 1993-1998	Duration model	Higher probability of transitions from unemployment to employment; considerable impact for men and women alike
van Ours (2000)	Slovakia, 1993-1998	Duration model	Higher probability of transitions from unemployment to employment; no impact on the length of re-employment

Source: Own elaboration, Kluve et al. 2005

**Table IV.3.****Microeconomic studies of effectiveness of employment subsidies in the private sector and direct job creation in the public sector**

Study	Place and period of observation	Methodology	Conclusions
<b>Western Europe</b>			
Jaenichen (2002)	Germany, 1999-2001	Propensity score matching	In the private sector: considerable shortening of the average unemployment spells
<b>Skandynawia</b>			
Rosholm, Svarer (2004)	Denmark, 1998-2002	Timing-of-events, hazard model	In the private sector: considerable shortening of the average unemployment spells; in the public sector: extension of the unemployment spells
Forslund, Johansson, Lindqvist (2004)	Sweden, 1998-2002	Matching, Instrumental variable model	In the private sector: shortening of the unemployment spells by an average of 8 months, probably considerable indirect effects (deadweight loss and substitution)
Zhang (2003)	Norway, 1990-2000	Proportional hazard model	In the private sector: higher probability of outflows to employment; in the public sector: no impact on the probability of transitions to employment following the programme, lock-in effect occurs
Graversen (2004)	Denmark, 1994-1998	Timing-of-events	In the public sector: extension of the average unemployment spells (analysis on a group of men aged 25 and more)
Nätti, Aho, Halme (2000)	Finland, 1990-1995	Regression (cross-sectional data)	In the public sector: fall in employment levels
Carling, Gustafson (1999)	Sweden, 1995-1999	Hazard model, instrumental variable model	In the private sector: average duration of employment is longer for beneficiaries of start-up grants than for participants of subsidized employment programmes
<b>Central and Eastern Europe</b>			
Kluge, Lehmann, Schmidt (2005)	Poland, 1992-1996	Matching	In the private sector: negative impact on employment levels, especially for men; in the public sector: negative impact on employment levels, especially for men
Lubyova, van Ours (1998)	Slovakia, 1993-1998	Duration model	In the private sector: higher probability of transitions from unemployment to employment, especially in the case of men; in the public sector: lower probability of transitions from unemployment to employment, especially for women
van Ours (2000)	Slovakia, 1993-1998	Duration model	In the private sector: higher probability of outflows from unemployment to employment, extension of the duration of re-employment; in the public sector: decreased probability of outflows from unemployment to employment, no impact on the duration of re-employment

**Table IV.4.**  
**Microeconometric studies of effectiveness of labour market services**

Study	Place and period of observation	Methodology	Conclusions
<b>Europa Zachodnia</b>			
Weber, Hofer (2004)	Austria, 1999, 2000	model hazardu, timing-of-events	Pozytywne efekty dla krótkotrwale bezrobotnych (kobiet i mężczyzn), brak efektów dla długotrwale bezrobotnych
Crépon, Dejemeppe, Gurgand (2005)	France, 2001-2004	modele trwania	Istotnie podwyższa odpływy do zatrudnienia (o 1 p.proc.) oraz obniża ponowne napływy do bezrobocia (o ponad 6 p.proc.)
Hujer, Caliendo, Thomsen, (2005)	Germany, 2001-2002	propensity score matching	Pozytywne efekty dla mężczyzn i kobiet w przypadku pośrednictwa pracy  Pozytywne (negatywne) efekty dla kobiet (mężczyzn) w przypadku pomocy w poszukiwaniu pracy
<b>Europa Środkowo - Wschodnia</b>			
Terrell, Sorm (1998)	Czech Republic, 1992 -1994	model hazardu	Istotnie skraca okres pozostawania w bezrobociu

**Table IV.5.**  
**Microeconometric studies of effectiveness of youth measures**

Study	Place and period of observation	Methodology	Conclusions
Cockx, Göbel (2004)	Belgium, 1998-2000	Proportional hazard model	Supported employment: <ul style="list-style-type: none"> <li>• positive effects for women, for men</li> <li>• only in the first year</li> <li>• extension of the duration of employment by 8.7 months for women and by 3.1 months for men</li> </ul>
Jensen, Rosholm i Svarer (2003)	Denmark, 1996	Experiment	Professional training programme for unemployed benefit-takers with secondary education or less: <ul style="list-style-type: none"> <li>• no threat effects</li> <li>• positive impact on transitions from unemployment to education</li> <li>• no impact on transitions from unemployment to employment</li> </ul>
Caroleo, Pastore (2002)	Italy, March-June 2000	Logit model	No impact on the situation of labour market participants
Hardoy (2001)	Norway, 1989-1993	Highest credibility model	Trainings (general, professional): <ul style="list-style-type: none"> <li>• negative effects;</li> </ul> Supported employment and mixed interventions: <ul style="list-style-type: none"> <li>• positive impact on female employment</li> <li>• no impact in the case of men</li> </ul>
Larsson (2002)	Sweden, 1985-1995	Probit model, matching	Negative impact on wage levels and employability



### APPENDIX III. Social and demographic characteristics of respondents by ALMP participation

**Table IV.6.**

**Selected social and demographic characteristics of ALMP participants and other unemployed groups**

Social and demographic characteristics	Aktywna polityka rynku pracy					Non-participation in ALMP
	business start-up grants	public works	intervention works	internships / vocational training	trainings	
Average age*	34.3	42.0	36.9	25.6	33.7	36.9
Share of men	58.1%	74.3%	58.4%	34.2%	60.8%	44.3%
Share of people with the following education qualifications:						
Primary vocational or lower	33.7%	78.0%	54.1%	17.9%	42.9%	56.9%
Secondary (vocational or general)	40.4%	18.3%	32.5%	56.9%	43.5%	32.0%
Tertiary or post-secondary	26.0%	3.7%	13.4%	25.2%	13.7%	11.1%
Share of people with work experience before April 2006	75.2%	71.6%	74.0%	43.5%	69.2%	62.6%
Share of married or cohabitating couples**	63.8%	64.2%	50.0%	17.1%	44.3%	57.2%
Share of people with children*	66.7%	71.6%	58.5%	25.0%	53.5%	66.0%
Share of people with children aged 3 or younger*	13.5%	2.8%	6.2%	8.7%	8.2%	12.8%
Share of people with children aged 18 or younger*	51.9%	40.6%	39.1%	21.5%	38.1%	45.3%
Place of residence*						
Villages	31.7%	61.5%	46.3%	35.9%	30.4%	43.3%
Towns of up to 24,000 inhabitants	21.2%	18.3%	26.8%	20.9%	13.3%	17.1%
Cities of 24,000 - 100,000 inhabitants	20.2%	14.7%	16.3%	21.2%	22.5%	17.4%
Cities of 100,000 – 500,000 inhabitants	12.5%	1.8%	4.9%	11.5%	13.5%	10.5%
Cities of 500,000 – 1 million inhabitants	12.5%	3.7%	2.8%	6.0%	14.1%	7.6%
Cities of over 1 million inhabitants	0.0%	0.0%	0.0%	0.9%	3.8%	1.3%

\* as in January 2008 \*\* as in April 2006

Source: Own calculations based on data derived from, among others, PULS and CATI survey

## APPENDIX IV. Matching procedure

The analysis started off with estimating a series of binomial logit models of participation in given ALMP programmes. Explanatory variables included factors, which could affect the probability of both participating in ALMP and moving from unemployment to employment. Consequently, the set of explanatory variables was a slightly modified catalogue of variables from the logit model of transitions from unemployment to employment.

The set of independent variables included the following:

- Type of poviast, in which a person is registered (in accordance with the classification presented in *Employment in Poland 2006*, i.e. Development centres, Suburbs, Towns, Former state farms, Low-productivity agriculture, Agricultural and industrial)
- Type of place of residence (village, town of up to 24,000 inhabitants, city of 24,000 - 100,000 inhabitants, city of 100,000 - 500,000 inhabitants, city of 500,000 - 1 million inhabitants, city of over 1 million inhabitants)
- Education (none or incomplete elementary, elementary, basic vocational, vocational secondary, general secondary, post-secondary, tertiary)
- Age
- Gender
- Has a child aged 3 or younger (in the second quarter of 2006)
- Lives with a working spouse / partner (in the second quarter of 2006)
- Has professional experience (in the second quarter of 2006)
- Gained extra qualifications at own initiative during 2006-2008
- Length of unemployment in months (in the second quarter of 2006)

Due to the fact that predicted probabilities only served the purpose of matching ALMP participants with similar non-participants, logit models were estimated without weighting (see, for instance, Todd 1999, Bryson et al. 2002).

The next stage of the analysis involved selecting appropriate control groups. ALMP participants were matched with their "nearest neighbours" from the group of non-participants, where proximity was understood as a difference between propensity scores<sup>1</sup>. Two matching algorithms were tested: nearest neighbour method (with caliper) and kernel method.

Since ALMP beneficiaries were greatly outnumbered by the non-participants, each ALMP participant was matched with 2 or 3 neighbours from the control group with closest propensity scores. Multiple matching increased the size of the control group, which reduced standard errors. We applied the version of the algorithm with replacement, which means that individuals not participating in ALMP could be matched to more than one ALMP beneficiary. Additionally, in order to secure good quality of matches, we imposed a tolerance level on the distance between the propensity score of a unit from the treatment group and that of a unit from a control group. As a result some treated individuals were not matched with controls, which is illustrated in the Table IV.7. Nevertheless, thanks to the caliper we obtained control groups with observable characteristics insignificantly different from those in ALMP groups.<sup>2</sup>

**Table IV.7.**  
**Number of non-matches**

Method	Trainings	Public works	Intervention works	Internships / vocational trainings	Business start-up grants
Nearest neighbour with caliper	13	2	16	30	6

The idea behind kernel matching was to associate the outcome of ALMP participants with a matched outcome computed as a kernel-weighted average of the outcomes of all non-participants. The weights assigned to non-participants are inversely proportional to the distance to a comparator in the ALMP group.

<sup>1</sup> And more precisely as the odds ratio ( $p/1-p$ ) due to oversampling of ALMP participants (see Todd, 1999)

<sup>2</sup> We have compared mean values of all variables from the set of independent variables.

**Table IV.8****Average treatment effects of ALMP programmes – estimates using nearest neighbour and kernel matching**

Type of ALMP	Method	Treatment effect of ALMP* (weighted difference)	Standard error**
trainings	nearest neighbour (NN3)	0.146	0.031
	kernel (epanechnikov)	0.128	0.027
public works	nearest neighbour (NN3)	-0.046	0.058
	kernel (epanechnikov)	-0.037	0.052
intervention works	nearest neighbour (NN2)	0.020	0.046
	kernel (epanechnikov)	0.004	0.036
internships / vocational training	nearest neighbour (NN3)	0.131	0.034
	kernel (epanechnikov)	0.104	0.030
business start-up grants	nearest neighbour (NN3)	0.286	0.058
	kernel (epanechnikov)	0.319	0.045

\* treatment effect of ALMP is understood as a difference of the share of employed in the group of ALMP participants and that in the chosen control group

\*\* standard errors do not account for the fact that propensity scores were estimated

As demonstrated in Table IV.8., estimates of average treatment effects of ALMP programmes were not significantly different for the two methods used. We decided to present the results obtained using kernel matching because it did not require that individuals from ALMP groups be rejected, it permitted a better balance of covariates within ALMP and control groups and produced lower standard errors. Hence, estimates obtained using this method seem to be more reliable.

**Table IV.9.**  
**Mean values of covariates in ALMP and control groups selected using kernel method<sup>3</sup>**

Covariate	Trainings			Internships / professional training			Public works			Intervention works			Business start-up grants		
	ALMP group	Control group	bias [%]	ALMP group	Control group	bias [%]	ALMP group	Control group	bias [%]	ALMP group	Control group	bias [%]	ALMP group	Control group	bias [%]
Centra rozwoju	0.22	0.22	0.5	0.12	0.12	0.3	0.00	0.00	-	0.04	0.05	-4.8	0.13	0.13	1.2
Suburbia	0.04	0.04	0.3	0.07	0.08	-2.7	0.00	0.00	-	0.04	0.04	-0.2	0.12	0.10	7
Miasta	0.28	0.28	0.8	0.26	0.25	1.0	0.33	0.32	2.7	0.22	0.23	-2.7	0.18	0.22	-10.1
Byłe PGR	0.19	0.19	0.5	0.22	0.22	-0.1	0.44	0.44	0.2	0.31	0.29	3.5	0.25	0.23	4.4
Niskoproduktywne rolnictwo	0.11	0.12	-1.5	0.18	0.18	-0.9	0.18	0.18	-0.2	0.26	0.25	2.2	0.16	0.16	0.4
Rolniczo-przemysłowy	0.15	0.15	-0.8	0.15	0.14	1.3	0.05	0.06	-4.2	0.14	0.14	0.1	0.15	0.15	-0.2
miasto do 24 tys. mieszk.	0.14	0.14	-1.6	0.21	0.24	-7.4	0.19	0.19	-0.6	0.26	0.26	1.6	0.20	0.19	4.3
miasto 24-100 tys. mieszk.	0.23	0.23	1.1	0.22	0.23	-3.2	0.15	0.16	-3.6	0.17	0.17	0.3	0.21	0.21	1.5
miasto 100-500 tys. mieszk.	0.14	0.13	2.0	0.12	0.12	-0.1	0.02	0.02	-1.7	0.05	0.06	-3.1	0.13	0.12	2
miasto 500 tys. - 1 mln	0.14	0.15	-0.3	0.06	0.06	0.7	0.04	0.04	-0.6	0.03	0.04	-3.1	0.11	0.10	4.4
miasto > 1 mln mieszk.	0.04	0.03	2.1	0.01	0.01	1.5	0.00	0.00	-	0.00	0.00	-	0.01	0.01	-0.5
brak lub niepełne podstawowe	0.00	0.00	0.0	0.00	0.01	-2.1	0.01	0.01	3.6	0.00	0.00	-	0.00	0.00	-
podstawowe	0.12	0.12	1.3	0.05	0.06	-1.5	0.37	0.36	3.6	0.25	0.23	4.9	0.08	0.09	-4.1
policealne	0.04	0.04	-0.7	0.04	0.04	1.6	0.01	0.02	-3.7	0.06	0.06	-1.9	0.06	0.07	-4.1
średnie ogólnokształcące	0.15	0.15	0.0	0.29	0.32	-9.5	0.04	0.05	-3.1	0.11	0.11	-1.5	0.10	0.12	-6.3
średnie zaw.	0.26	0.27	-0.5	0.26	0.23	7.2	0.13	0.13	-0.8	0.22	0.22	-1.2	0.31	0.30	3.1
wyższe	0.10	0.10	-1.1	0.20	0.20	1.2	0.02	0.03	-3.5	0.07	0.08	-3.1	0.17	0.16	3.6
zasadnicze zawodowe	0.29	0.29	1.2	0.11	0.11	-0.3	0.40	0.39	2.7	0.28	0.27	2.3	0.26	0.24	6.5
kobieta	0.39	0.39	-1.3	0.66	0.69	-5.9	0.23	0.27	-10.3	0.40	0.43	-5.5	0.42	0.48	-11
wiek	34.23	33.97	2.3	25.82	26.29	-4.9	42.08	41.37	6.5	37.06	36.58	4.1	34.25	33.74	4.8
ma dziecko w wieku do 3 lat <sup>a)</sup>	0.11	0.11	0.0	0.11	0.10	2.4	0.03	0.05	-6	0.08	0.10	-4.6	0.13	0.15	-5.1
dokształca się na własną rękę	0.23	0.23	0.3	0.36	0.36	-1.8	0.09	0.10	-3.8	0.17	0.18	-2.3	0.16	0.19	-7.2
okres bezrobocia(mies.) <sup>a)</sup>	11.66	12.09	-2.2	9.24	10.93	-9*	22.49	22.49	0	15.92	16.36	-2.1	11.31	14.21	-14.6
nie ma doświadczenia zawodowego <sup>a)</sup>	0.29	0.30	-1.9	0.55	0.57	-3.4	0.26	0.28	-3.4	0.24	0.26	-3.4	0.24	0.29	-10.6
GD, małżonek/partner pracuje <sup>a)</sup>	0.38	0.37	2.0	0.19	0.20	-2.6	0.36	0.36	0.8	0.32	0.32	-0.5	0.48	0.45	7.1

GD – gospodarstwo domowe \*różnica średnich istotna na poziomie 10 proc. a) stan na II kw. 2006 roku

All calculations have been performed using PSMATCH2 procedure for STATA (Leuven and Sianesi (2003) "PSMATCH2: Stata module to perform full Mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing", <http://ideas.repec.org/c/boc/bocode/s432001.html>, v. 3.0.0.)

<sup>3</sup> These comparisons do not take weights into consideration

## APPENDIX V. Kaplan-Meier estimator

The estimator first proposed by Edward Kaplan and Paul Meier in 1958 concerns the conditional probability that a given individual has not experienced a certain event at least by time  $t$ . This estimator is used above all in research on social and economic processes, in which the probability of a certain event depends on the elapsed time. For example, in job search models, it is often claimed that the period of unemployment depends on how long a given person has been unemployed so far.

An important feature of the Kaplan-Meier estimator is that it can take into account censored observations. Referring to the earlier example, if at the time of the study an unemployed person still has not found a job, total duration of unemployment cannot be determined. In such a case, the least-squares estimator is not consistent.

The Kaplan-Meier estimator is calculated as follows:

$$S_j(t_j) = \prod_{j|t_j < t} \left(1 - \frac{d_j}{n_j}\right)$$

where:

$d_j$  – number of individuals who experienced an event

$n_j$  – total number of individuals who were at risk of experiencing an event

$t_j$  – period during which individuals are at risk of experiencing an event

## APPENDIX VI. Description of variables used in the SVECM model for NMS8 labour markets

In the SVECM model of NMS8 labour markets presented, after Bukowski, Koloch, Lewandowski (2008), in Chapter 2 of Part I, we have used six endogenous and two exogenous variables for every country. They were constructed on the basis of data derived from Eurostat, IMF, GGDC, supplemented by the data of national statistical offices. A detailed description of data sources used to construct particular variables may be found in Bukowski, Koloch, Lewandowski (2008).

The endogenous variables were defined as follows:

- Labour productivity – real output (in PPP adjusted USD) per worker;
- Real wage – average wage in the national economy, excluding agriculture, fishery and forestry, in national currency, 2005 prices;
- Employment rate – share of employed in the population aged 15-64;
- Unemployment rate – share of unemployed in the population aged 15-64;
- Real interest rate – yearly nominal interest rate minus the inflation rate (HCPI index change) for the same period, lagged by four quarters;
- Primary public balance – primary balance of the public sector expressed as a share of GDP for a given year (total deficit excluding the cost of public debt service).

The exogenous variables measuring the impact of EU15 and Russia together with other CIS countries external demand fluctuations, were defined for every NMS8 country as a percentage deviation of real GDP in EU15 and Russia – weighted by shares of export to EU15 and Russia plus other CIS countries in the GDP of a given country – from the trend determined using the Hodrick-Prescott filter.

## APPENDIX VII. Wage regression results - occupations

Occupations	Parameter	Corrected par.	H
1 Managing directors, CEOs, managers and their deputies in large companies	1.2738***	1.2011 (1)	44.5
2 Public authority representatives and high-ranking officials	0.9475***	0.8936 (2)	43.7
3 Managing directors, CEOs, managers and their deputies in medium companies	0.8207***	0.7983 (3)	42.3
4 Sea and inland water transport workers and air transport workers	0.7583***	0.5901 (7)	49.0
5 Lawyers	0.6155***	0.6404 (5)	40.4
6 Managing directors, CEOs, managers and their deputies in small companies	0.5828***	0.5959 (6)	40.8
7 Managers of other internal organisational units in large companies	0.5583***	0.5471 (9)	41.9
8 Managers of other internal organisational units in small companies	0.4877***	0.4913 (12)	41.2
9 Managers of other internal organisational units in medium companies	0.4841***	0.5029 (11)	40.6
10 Miners and stonework workers	0.44***	0.4379 (13)	41.5
11 Managers of other internal organisational units dealing with core business in medium companies	0.3733***	0.3308 (18)	43.2
12 Professional activists	0.3732***	0.3732 (16)	zmp
13 IT specialists	0.3668***	0.3951 (15)	40.2
14 Economists and management specialists	0.3182***	0.3357 (17)	40.7
15 Small business managers	0.299***	0.2607 (20)	43.0
16 Managers of other internal organisational units dealing with core business in large companies	0.2953***	0.2377 (21)	43.8
17 Managers of other internal organisational units dealing with core business in small companies	0.2724***	0.2281 (25)	43.3
18 Machine operators and mining equipment operators and related jobs	0.2567***	0.2292 (24)	42.5
19 Special school teachers	0.2386***	0.6436 (4)	27.6
20 Engineers and related jobs	0.2209***	0.2192 (26)	41.5
21 Healthcare specialists (excl. nurses and midwives)	0.2198***	0.1936 (29)	42.5
22 Arts and culture specialists	0.212***	0.2178 (27)	41.1
23 Financial and commercial officers	0.2059***	0.1966 (28)	41.8
24 College and university teachers	0.1777***	0.4076 (14)	32.9
25 Public administration specialists	0.1776***	0.2336 (23)	39.1
26 Seamen and related jobs	0.1721***	-0.069 (75)	52.7
27 Social sciences specialists and related jobs	0.1654***	0.2351 (22)	38.6
28 Technicians	0.1513***	0.1536 (33)	41.3
29 Business support consultants and commercial brokers	0.1369***	0.175 (30)	39.8
30 Machine operators and smelting equipment operators and related jobs	0.1313***	0.1277 (34)	41.5
31 Optical and electronic equipment operators	0.1289***	0.1268 (35)	41.5
32 Mid-level office clerks	0.1216***	0.1581 (32)	39.9
33 Tax and customs clerks and related jobs	0.1183***	0.1638 (31)	39.5
34 Casting specialists, welders, metal smiths, metal construction assemblers and related jobs	0.0981***	0.0735 (41)	42.4
35 Printing machinery operators and paper processing equipment operators	0.0966***	0.102 (38)	41.2
36 Biological and agricultural science technicians	0.0875***	0.105 (37)	40.7
37 Chemical industry machinery operators	0.0723***	0.0876 (40)	40.8
38 Electricians	0.0667***	0.0559 (45)	41.8
39 Agricultural science specialists and related jobs	0.0645***	0.07 (42)	41.2

Occupations	Parameter	Corrected par.	H
40 Machinery and equipment mechanics	0.0624***	0.0363 (48)	42.5
41 Primary school and pre-school teachers	0.0595***	0.5563 (8)	25.2
42 Lower secondary and secondary school teachers	0.0584***	0.524 (10)	26.0
43 IT technicians and related jobs	0.0494***	0.0527 (46)	41.2
44 Secretaries and office equipment operators	0.0488***	0.108 (36)	39.0
45 Stewards, ticket inspectors and guides	0.0375**	0.0498 (47)	40.9
46 Other schooling specialists and tutors	0.0361***	0.2717 (19)	32.7
47 Slow vehicle operators and related jobs	0.0303***	-0.0086 (62)	43.0
48 Financial and statistical personnel	0.029***	0.0681 (43)	39.8
49 Painters, building construction cleaners and related jobs	0.0265***	-0.0309 (67)	43.8
50 Energy industry equipment operators and related jobs	0.0222***	0.0177 (52)	41.6
51 Arts, sports and entertainment professionals	0.0196	0.0672 (44)	39.5
52 Physicists, chemists and related jobs	0.0152	0.0316 (50)	40.7
53 Metal and mineral manufacture machinery operators	0.015**	0.0167 (53)	41.3
54 Biological science specialists	0.0123	0.0962 (39)	38.1
55 Models and related jobs	0.0054	0.0054 (55)	tsss
56 Chemical manufacture machinery and equipment operators	0.0044	-0.0428 (68)	43.4
57 Blacksmiths, locksmiths and related jobs	kat. odn.	kat. odn. (59)	41.4
58 Food industry machinery and equipment operators	-0.0011	-0.0186 (64)	42.1
59 Rubber and plastic manufacture machinery operators	-0.0013	-0.0051 (60)	41.5
60 Safety and quality inspectors	-0.0079	0.0025 (57)	41.0
61 Office management personnel otherwise not classified	-0.01**	0.0352 (49)	39.6
62 Electronics fitters and related jobs	-0.0182*	-0.044 (69)	42.5
63 Glass and ceramics manufacture equipment operators and related jobs	-0.0184*	0.0011 (58)	40.6
64 Finishing building works providers and related jobs	-0.0232***	-0.0853 (79)	44.0
65 Auxiliary workers in mining and construction	-0.0264***	-0.1152 (81)	45.2
66 Nurses and midwives	-0.029***	-0.0077 (61)	40.5
67 Pressmen and related jobs	-0.0388***	-0.0565 (72)	42.1
68 Machine operators otherwise not classified	-0.0423***	-0.0474 (70)	41.6
69 Automatic production line and robot operators in electrical machinery industry	-0.0457***	-0.0139 (63)	40.1
70 Rail engine drivers, train dispatchers and related jobs	-0.0487***	-0.0632 (74)	42.0
71 Material record keepers, transport and production personnel	-0.0554***	-0.0627 (73)	41.7
72 Vehicle drivers	-0.0632***	-0.1712 (88)	46.1
73 Social assistance and social work staff	-0.0633***	-0.0289 (66)	40.0
74 Ceramicists, glass-workers and related jobs	-0.0641***	-0.054 (71)	41.0
75 Archive, library and scientific research workers	-0.0676***	0.0044 (56)	38.5
76 Inland fishermen	-0.0719	-0.0719 (77)	zmp
77 Mid-level healthcare personnel	-0.074***	0.0141 (54)	37.9
78 Fitters	-0.0744***	-0.071 (76)	41.2
79 Mathematicians, statisticians and related jobs	-0.0827***	-0.1939 (92)	46.2
80 Vocational training teachers and instructors	-0.0917***	0.0257 (51)	36.8
81 Construction workers dealing in building shell works and related jobs	-0.0921***	-0.1862 (91)	45.5
82 Auxiliary workers in transport and carriers	-0.0964***	-0.1153 (82)	42.2
83 Archive workers, library science and scientific research specialists	-0.0998***	-0.0264 (65)	38.5

Occupations	Parameter	Corrected par.	H
84 Information providers, receptionists and telephone operators	-0.1055***	-0.0823 (78)	40.4
85 Animal breeders and related jobs	-0.1167***	-0.2115 (96)	45.5
86 Money turnover workers	-0.1174***	-0.1037 (80)	40.8
87 Wood processing and paper production machinery and equipment operators	-0.1238***	-0.1196 (83)	41.2
88 Woodworking machinery operators	-0.1362***	-0.1393 (84)	41.5
89 Gardeners	-0.1368***	-0.1701 (87)	42.8
90 Workers in precise metal and similar material goods manufacture	-0.1507***	-0.1468 (85)	41.2
91 Simple jobs workers in industry	-0.1619***	-0.1659 (86)	41.5
92 Household and catering services workers	-0.1739***	-0.2221 (97)	43.4
93 Machinery operators in textiles	-0.1895***	-0.1749 (90)	40.8
94 Crop and animal production farmerj	-0.1957***	-0.2028 (94)	41.7
95 Foresters and related jobs	-0.1973***	-0.2009 (93)	41.5
96 Crop production farmer	-0.2052***	-0.417 (110)	51.2
97 Food processing worker	-0.2095***	-0.2568 (102)	43.4
98 Auxiliary workers in agriculture, fishery and related jobs	-0.213***	-0.2763 (105)	44.1
99 Waste loaders and related jobs	-0.2168***	-0.1714 (89)	39.5
100 Salespeople and demonstrators	-0.2187***	-0.2492 (101)	42.7
101 Wood processing workers, cabinetmakers and related jobs	-0.2223***	-0.2409 (100)	42.2
102 Personal care workers and related jobs	-0.2275***	-0.2041 (95)	40.4
103 Other personal care services workers	-0.2287***	-0.2576 (103)	42.6
104 Leather workers	-0.229***	-0.2809 (106)	43.6
105 Post office workers and related jobs	-0.237***	-0.2342 (99)	41.3
106 Caretakers, window cleaners and related jobs	-0.2386***	-0.2305 (98)	41.0
107 Domestics, cleaners and laundresses	-0.2882***	-0.2592 (104)	40.2
108 Textiles and clothing production workers and related jobs	-0.2979***	-0.2992 (107)	41.4
109 Messengers, luggage attendants, porters and related jobs	-0.3314***	-0.3353 (109)	41.5
110 Accessories and souvenirs manufacturers and related jobs	-0.3542***	-0.3155 (108)	39.8
111 Security services workers	-0.4651***	-0.5414 (112)	44.7
112 Sea fishermen	-0.5075**	-0.5075 (111)	tsss

\*\*\*, \*\*, \* stand for 1-, 5-, and 10-percent significance respectively. Remarks: "tsss" – too small sample size; Corrected parameter – parameter estimation corrected for differences in the number of hour worked based on LFS (numbers in the brackets represent post-correction ranks in the ranking); h – average weekly number of hours worked in 2006 (LFS). Professions where a majority of people have the following education qualifications: tertiary – light green colour; post-secondary and secondary – green colour; basic vocational – dark green colour (based on SES). If there is no colour indication it means that the sample was too small to allow for conclusions concerning the composition of employment in terms of education. For a detailed description of occupations included in the above-mentioned categories see the Classification of Occupations and Specialties.

Source: Own calculations based on LFS and SES CSO.





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