Employment in Poland 2009

Entrepreneurship for work

Edited by Maciej Bukowski

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Introduction

The report 'Employment in Poland 2009 – Entrepreneurship for Work' is the fifth edition of the *Employment in Poland* series, a thorough study of the most significant processes occurring in the Polish and European labour markets. We hope that, as with previous editions, it will be an interesting and inspiring read, useful in your work and research.

Part I is devoted to the analysis of cyclical characteristics of the Polish labour market, presented in comparison with the EU and OECD economies. We examine the reaction of employment, unemployment and economic activity to economic fluctuations, in order to find out to what extent economic changes influence the labour market in Poland and other EU countries, especially New Member States. In this context, it is particularly important to compare the course and impact of the 2008-2009 crisis with the Russian crisis of 1998 and the economic downturn of 2001-2002. This analysis serves as the basis for the identification of shocks that have caused the most significant fluctuations in the Polish labour market and for the analysis of the nature of changes induced by these shocks. We outline the dynamics of the labour market fluctuations, followed by the description of the role that labour market and product market institutions play in adaptation to changing economic conditions. This provides the basis for further analyses in the subsequent parts of the report.

Part II addresses the issues of the long-term structural transformation of the Polish economy and its consequences for the labour market in its economic, social and institutional dimension. The starting point is the analysis of the scope and direction of changes in the sectoral structure of employment in Poland between 1996 and 2007, followed by the comparison with highly developed countries, especially the EU15, and other countries at a similar level of development (NMS). The examination of between-sector flows of labour, changes in the productivity of the Polish economy and individual sectors is used to identify areas where productivity differs from other countries. This enables deeper reflection on the nature of the convergence of the Polish economy and the Polish labour market, and pinpointing the areas in which results achieved by Poland could be improved, when compared with other countries in the region. Finally, in Part II we present an analysis of the impact of structural changes on labour market performance with regard to the adaptability of workers and the quality of working life.

In Part III, we analyse labour market flows on the Polish labour market and compare them with the situation in other countries. We present several measures of flows to quantify comprehensively the dynamics of these labour markets. Particularly important are the decompositions of unemployment fluctuations into contributions of hirings and dismissals, which enable the identification of channels through which shocks affect the labour market in various countries. We expect these differences to depend on institutions, so in the second chapter we assess the impact of institutions of product and labour markets on the intensity of flows. We also discuss how the institutions crucial for labour market flows evolved in Poland and other OECD countries in 1996-2009. Therefore, the third part of this study brings a more thorough presentation of links between institutions and fluctuations in the labour market mentioned in Parts I and II.

Part IV discusses the crucial element of the institutional system of the labour market, i.e. social dialogue (collective bargaininbg) and its significance in the evolving labour market in Poland. We present a detailed analysis of issues often discussed in the literature but rarely mentioned in Poland. This part provides important elaboration of the institutional analysis presented in Part I-III of this study, describing how the previously explained processes have influenced the social dialogue in Poland. Our analysis begins with description of the interdependences between the parties of social dialogue, both in the light of economic theory and in the international context. We present and evaluate the model of social dialogue in Poland, with special attention paid to the activities of the Tripartite Commission for Socio-Economic Affairs, but also scrutinising the issues of autonomous dialogue and workers' representation.

The report is completed with conclusions and recommendations how the adaptability of the Polish economy can be improved, especially with regard to the institutional environment of the labour market. These policy prescriptions aim at mitigating the adverse social and economic impact of cyclical fluctuations and structural changes and increasing the potential for higher productivity growth and better international competitiveness at the same time.

Part I. Labour market in the business cycle

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Introduction

The global recession of 2008-2009 led to the greatest changes on developed countries' the labour markets since the oil crisis in the mid-1970s. Over the last thirty years, several countries have experienced similar fluctuations, but never before has a sudden decline of output and increase of unemployment affected the entire continent. The global recession of 2008-2009 was caused by the 2007 *subprime* mortgage market crisis in the United States.[1] In a short period of time the crisis affected almost all developed countries, including Western and Central Europe. Poland, however, was largely unaffected. Accompanied only by Malta, Poland managed to avoid recession, experiencing only a moderate slowdown. Chapter 1 deals with an analysis of the reaction of Polish economy to the 2008-2009 crisis, with reference to the changes in other developed countries, particularly in Europe. An emphasis is put on the quantitative aspect of the adjustments on the labour market – employment and unemployment levels, average working time etc. The comparison of behaviour of the Polish labour market in 2008-2009 with the one in the aftermath of the Russian crisis 10 years earlier is also presented. We also refer to the structural properties of the Polish labour market, studied in the previous edition of *Employment in Poland*, when we analyse how the inflows to the pension system and economic activity of the elderly were affected by the withdrawal of early retirement in 2008.

The limited impact of the global recession on the Polish labour market in 2008-2010 clearly differed from the employment and unemployment changes recorded in the past, when economic slowdowns of similar depth resulted in a much more potent adjustments on the labour market. The second chapter deals with the analysis of cyclical variability of major macroeconomic aggregates in Poland, in comparison to the other countries in the region. The elasticity of the labour market in Poland and other EU countries to changes in the economic growth rate is investigated, as well as the elasticity of Polish labour market variables to fluctuations of GDP components such as investment, export or consumption levels. Then, we use a macroeconomic general equilibrium model to determine the sources of fluctuations in the labour market in Poland and remaining New Member States of the EU. Finally, we briefly discuss the findings presented in the literature regarding institutional determinants of the scale and persistence of the response of various economies and labour markets to macroeconomic shocks. This presentation constitutes a basis for further analysis included in the following parts of this study.

[1] Granted to borrowers who may have serious problems with repayment.

1. Global economic crisis and changes on the Polish labour market

1.1. Recent changes on the labour market

The recent financial crisis began in late 2007 in the United States. It soon affected virtually all developed countries. Quarterly GDP growth turned negative and unemployment started to grow dramatically, reaching levels that had not been recorded since the oil shock of the mid 1970's. At the height of the recession the unemployment rate in the OECD countries reached approximately 9 percent (and even one percentage point more in Europe). Despite the exceptional depth of the recession, some recovery in the global economy could be observed as early as mid-2010. This growth resulted in a slight increase in employment and decrease in unemployment recorded in subsequent quarters. OECD and IMF forecasts indicate, however, that the situation on the labour market in developed countries will remain problematic for at least two years. Moreover, countries were affected by the crisis to varying degrees. In some markets, the decline in output was accompanied by a proportional decrease in employment (Spain, Ireland, Baltic States). In others, a sharp decline in GDP was accompanied by only a slight adjustment in total employment (Germany, Japan and Slovakia). It is assessed that the most severe labour market downturn was experienced by the economies in which the crisis was closely associated to the liquidity problems in the banking sector and the collapse of the real estate market. In the countries affected mostly through slump in the international trade, the changes on the labour market were generally of lesser significance. Changes in the employment levels were also to a different degree accompanied by modifications to working hours. In addition to the nature of the crisis, however, the policy response in particular countries also played a role.

Table I.1. GDP growth dynamics between 2006 and 2010, quarterly, year on year, seasonality adjusted (in percent).

	II quart. 2006	II quart. 2007	II quart. 2008	III quart. 2008	IV quart. 2008	I quart. 2009	II quart. 2009	III quart. 2009	IV quart. 2009	I quart. 2010	II quart. 2010
Poland	6.2	7.0	5.8	5.1	2.5	1.5	1.2	1.2	2.8	3.0	3.5
Germany	3.5	2.7	1.7	0.5	-2.0	-6.6	-5.5	-4.4	-2.0	2.0	3.7
EU-27	3.3	2.8	1.4	0.3	-2.1	-5.1	-5.1	-4.3	-2.2	0.7	2.0
Euro zone	3.0	2.8	1.2	0.1	-2.1	-5.2	-4.9	-4.0	-2.0	0.8	1.9
US	3.0	1.8	1.2	-0.3	-2.8	-3.8	-4.1	-2.6	0.2	2.4	3.0
OECD	3.2	2.6	1.4	0.1	-2.5	-5.0	-4.6	-3.4	-0.6	2.4	3.1

Source: OECD data.

Table I.2. Dynamics of real exports between 2006 and 2010, quarterly, year on year, seasonality adjusted (in percent).

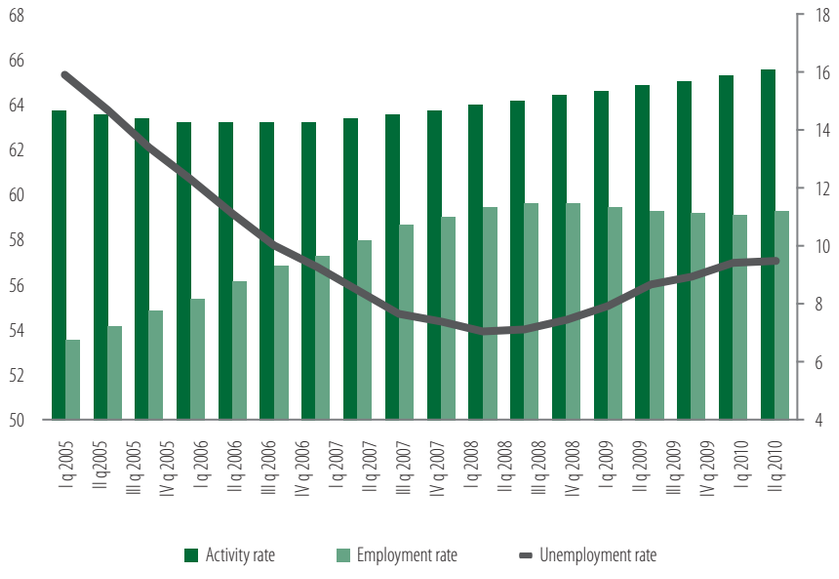
	II quart. 2006	II quart. 2007	II quart. 2008	III quart. 2008	IV quart. 2008	I quart. 2009	II quart. 2009	III quart. 2009	IV quart. 2009	I quart. 2010	II quart. 2010
Poland	10.9	7.2	10.5	8.8	-2.8	-10.1	-11.7	-8.1	1.9	9.7	14.9
Germany	12.6	9.3	5.0	2.8	-6.3	-17.2	-18.2	-15.5	-6.2	7.8	18.2
EU-27	11.6	4.8	4.2	1.4	-6.2	-15.4	-16.2	-12.9	-4.9	5.3	11.2
Euro zone	9.1	6.3	3.7	1.0	-7.0	-16.4	-17.0	-13.6	-5.2	5.6	11.6
US	8.3	7.7	11.5	6.1	-2.8	-11.6	-15.0	-10.7	-0.1	11.4	14.1
OECD	9.7	6.1	6.8	2.4	-6.3	-15.8	-15.9	-11.9	-2.0	9.9	14.1

Source: OECD data.

The crisis affecting the developed economies was also a cause of the slowdown recorded in Poland in 2009. The downturn was, however, largely triggered by external factors, most of all by a decline in exports. Since Poland had not experienced the real estate bubble that had grew in many other OECD economies in the period preceding the crisis, the recession in the construction sector was noticeably weaker than that affecting the markets where property was greatly overvalued. Furthermore, the Polish banking sector was not as heavily involved in the financing of the construction industry as it was the case with American, British and Irish banks. Therefore the banking sector in Poland was exposed to fluctuations in liquidity only during the initial phase of the crisis and these were quickly dispelled by a coordinated response from the Polish financial supervisory bodies and central bank. Moreover, the contraction in exports in Poland was shorter-lived than in most EU and OECD countries, the decline in the volume of trade was relatively smaller, and its share in output before the crisis was lower than in the other CEE Member States of the European Union and OECD. This allowed maintaining positive GDP growth, which distinguished Poland from other European economies. As a result, between the first half of 2008 and 2010

employment increased by 1.6 percent (which is equivalent to the employment rate increase by 0.5 percentage points), although the actual number of unemployed increased by 30.7 percent (about 398 thousand people, the number equivalent to the unemployment rate raising by 2.0 percentage points), with more than a half of the unemployment increase being recorded between the 3rd quarter of 2009 and the 2nd quarter of 2010. Given the general decrease in employment after 2008 (amounting to 2.6 percent in the European Union between the first half of 2008 and 2010) and the increase in the number of unemployed (by 43.0 percent in the EU) the quantitative adjustment observed in the Polish labour market may be considered moderate. [2]

Figure I.1. Activity and employment rates (left axis) and unemployment rate (right axis) of population aged 15-64 in Poland, between 2006 and 2nd quarter of 2010 (in percent).



Source: Own calculations based on LFS data.

Figure I.2. Changes in the number of employed (horizontal axis) and unemployed women (vertical axis) between the 1-2 quarter of 2008 and 1-2 quarter 2010 in European countries (in percent).

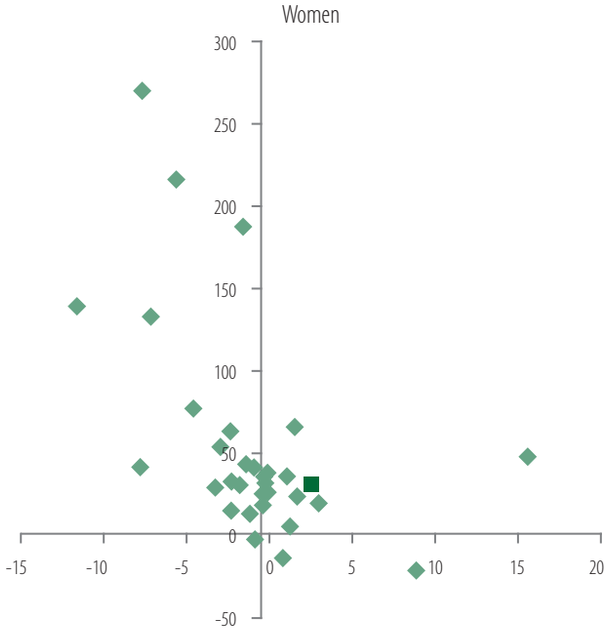
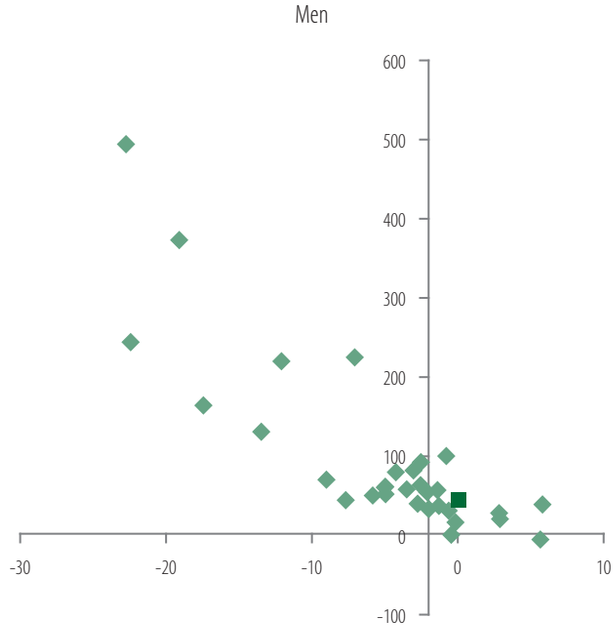


Figure I.3. Changes in the number of employed (horizontal axis) and unemployed men (vertical axis) between the 1-2 quarter of 2008 and 1-2 quarter 2010 in European countries (in percent).



Note: The axes indicate the total changes in the EU countries. Poland is marked.

Source: Own calculations based on Eurostat data.

[2] Luxembourg, Malta and Turkey were the only countries where employment rose relatively more than in Poland; Germany, Belgium Luxembourg, Croatia and Italy – where the unemployment rose less than in Poland.

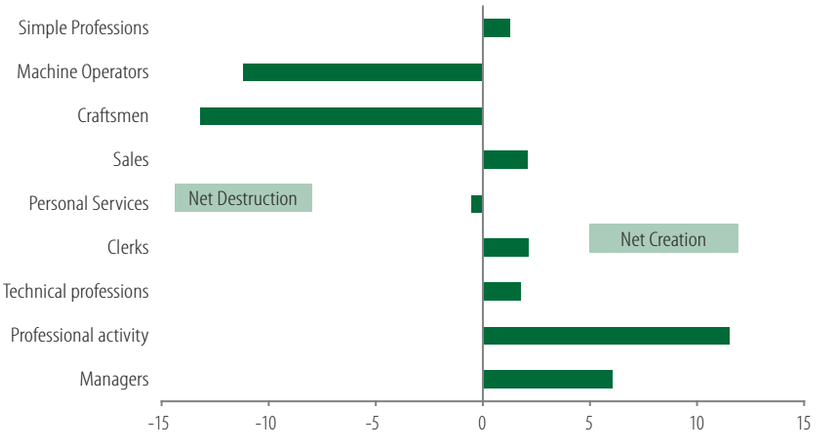
Figures I.2-I.3 show that the deterioration of situation on European labour markets in 2008-2010 affected men to a larger extent than women, although the opposite is usually the case during recessions (OECD, 2010). This aspect of the *subprime* crisis' consequences relates to its sectoral impact. The most significant employment decrease occurred in industries directly affected by the aforementioned crisis i.e. construction and manufacturing which employ predominantly males (see CRZL, IBS 2010). However, employment in financial, insurance and real estate services, which were expected to be vulnerable to the financial nature of the crisis, has barely changed. In the EU15 and in Poland (but not in the NMS8), the crisis' impact was buffered played by the increase in employment in public administration, education, health and social care – and these are female-dominated sectors. In Poland this sector of employment experienced the most significant increase, similarly to the situation that was recorded during the downturn of 2001-2002 (see Ministry of Economy and Labour, 2005). This time, however, by both high and low-productivity services noticeably contributed to employment growth, by 1.4 percentage points of employment rate, which was not observed during 2001-2002.

Table I.3. The contribution of particular sectors to changes in employment between the first quarter of 2008 and the first quarter of 2010 in Poland, EU New Member States and EU15 (in percent).

	Poland	NMS8	UE15
Agriculture, forestry, hunting, fishing	-0.94	-0.42	-0.09
Mining and quarrying	0.07	-0.05	-0.03
Manufacturing	-1.78	-3.09	-1.52
Electricity, gas and water supply	-0.07	-0.11	0.09
Construction	0.13	-1.08	-1.03
Trade, repairs, transport, catering and hotel industry	0.52	-0.37	-0.69
Financial services, insurance, real estate	0.08	0.09	-0.07
Administration, education, health and social care	1.32	0.10	0.80
IT, scientific, technical, professional and supportive activities	0.93	0.19	0.13
Culture, entertainment, recreation and other services	0.05	-0.11	0.03
Total	0.38	-4.86	-2.15

Source: Own calculations based on Eurostat data.

Figure I.4. Net balance of job creation and job destruction by occupation in Poland in 2009 (in percentage points).



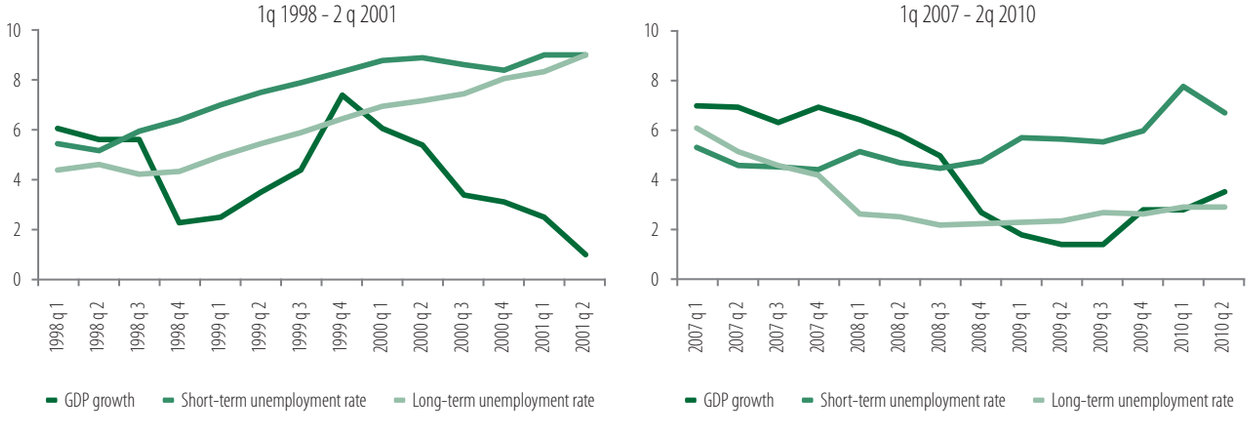
Source: World Bank (2010).

While the decrease in employment in some market sectors can be attributed to lower demand for labour caused directly (construction) or indirectly (manufacturing) by the financial crisis, its growth in other sectors and the decline in employment in agriculture reflect medium-term trends associated with technological progress, economic restructuring, and evolution of GDP and employment structure associated with the international integration. This applies especially to Poland. Figure I.4 shows that, during the height of the global crisis in 2009, Polish companies increased the demand for highly-skilled workers, including in technical professions, although the total demand for labour decreased.

The most significant contraction in the number of jobs was experienced by some professional groups traditionally associated with manufacturing (machine operators) and small scale production (craftsmen). For these professions, the crisis did not constitute the primary cause of changes, but rather accelerated the transformations which naturally occur as the economy modernises. Consequently, a great number of jobs lost in 2009 are likely not be re-established once the crisis is finished, and a number of jobs in other professions will be created. Some people who lost jobs will probably need to accumulate new skills and others will be directly affected by an increased risk of long-term unemployment.

In the previous editions of *Employment in Poland*, the authors argued that the scale of unemployment and its severity in Poland in 1998-2005 stemmed largely from the fact that after the initial rise in unemployment in 1998 (caused by the collapse of exports to Russia), the long-term unemployment rate increased quickly, leading to a prolonged exclusion of a large group of people from the labour market. This happened despite the fact that the Russian crisis in itself did not cause a sharp fall in the economic growth, as shown in *Employment in Poland* 2006 (Ministry of Labour and Social Policy, 2006). GDP declined in late 2000, following a significant weakening of capital productivity, thus probably being a result of earlier overinvestment. Comparison of short-term and long-term unemployment trajectories in the current crisis and the one that was a result of the Russian crisis[3] shows a different nature of labour market adjustments that took place in these situations. Recently, the long-term unemployment rate, that had been declining until 2008, has remained stable around 2 percent, while the increase in total unemployment has been caused by the rise in short-term unemployment. As argued in the third part of this report, which studies the influence of variability in inflows to and outflows of unemployment on fluctuations in unemployment levels, the rise in unemployment after 1998 mainly resulted from the reductions in recruitment by companies and thus lower chances of the unemployed to find jobs while, in 2008 and 2009 the most a rise in unemployment was rather due to an increase in dismissals. Although this was a common feature of the *subprime* crisis in the developed countries, the different nature of labour market flows in Poland in 1998-1999 and in 2008-2009 may indicate significant structural changes that took place over a decade. These changes may be relate to both business practices (firms avoiding the over-investment trap) as well as in the institutional changes on the Polish labour market (simplified procedures of hiring and dismissal that reduce the risk of long-term unemployment).

Figure I.5. Rate of GDP growth, short-term and long-term unemployment rate between the first quarter of 1998 and the second quarter of 2001; the first quarter of 2007 and second quarter of 2010 (left and right figure respectively), in percent.

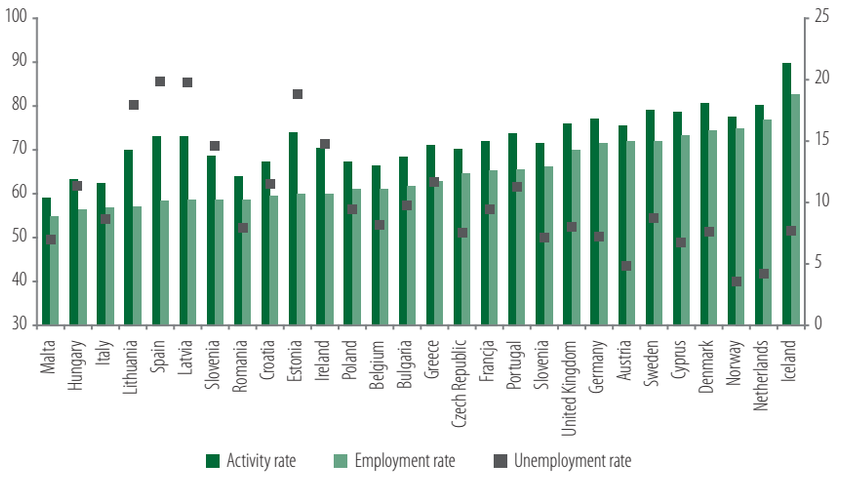


Source: Own calculations based on Eurostat data.

The moderate impact of the crisis on the Polish labour market (in comparison to other European countries) meant that the gap between Poland and the EU15 in terms of the employment rate was reduced by half, in comparison to the period between 2002 and 2005. However, it was still significant, exceeding 5 percentage points in 2010. Following a sharp rise in unemployment that occurred in some countries of the EU15 (e.g. Spain and the UK), the modest increase recorded in Poland meant that the gap in unemployment rates between Poland and the EU15 virtually disappeared. Nevertheless, the growing distance between Poland and EU15 countries in terms of economic activity was not reduced during the crisis – the difference in economic activity rates of people aged 15-64 years in Poland and the EU15 increased significantly over the last decade, reaching 7 percentage points in 2009. The main reason for this state of affairs was the widening gap between the economic activity of the oldest and youngest productive age groups in Poland as compared to the EU15.

[3] The periods of 11 quarters were compared, beginning with the first quarter where the dynamics of economic growth decreased during a given crisis – the first quarter of 1998 and the first quarter of 2007. The length of analysed period was based on data availability.

Figure I.6. Activity and employment rates (left axis) and unemployment rate (right axis) of population aged 15-64 in European countries in the first half of 2010 (in percent).



Source: Own calculations based on Eurostat data.

Figure I.8 shows that in recent years the labour supply of individuals aged over 45 increased slightly, and this process has not been stopped by the economic downturn. The anticipated and subsequently implemented abolition of the right to early retirement in 2007-2008 resulted in a massive outflow of workers in pre-retirement age into inactivity. In 2009, especially in its second half, the number of pensions granted declined significantly and this trend is expected to continue in 2010 and in the following years. Consequently, a further rise in activity rates of people of pre-retirement age can be expected, as well as the rise of the average age of exit from the labour market. However, because of the scale of the recent outflows, activity rates in the 55-59/64 age group may be expected to reach the European standards no sooner than in a few years, when people currently aged 45-54 will enter the 55+ age group. The activity rates of the 45-54 age group are for both genders about twice as high (but still lower than the indicators for their peers in the EU15) than those that characterise the people currently in pre-retirement age. Moreover, as argued in the previous edition of *Employment in Poland*, without raising the retirement age of women, the employment rate of oldest participants on the labour market would not reach in Poland the levels similar to those already recorded in many Western European countries, the Czech Republic and the Baltic States. In the case of people at the age typical for participation in education and entering the labour market (15-24 years) and starting a family (25-29 years), the previous decline in activity was halted between 2007 and 2009. However, in the case of the 15-24 age group a gap of 10 percentage points, as compared with the EU15 average, was still recorded for both males and females.

Figure I.7. Activity rate of population aged 15-24 and 25-29 by gender (in percent).

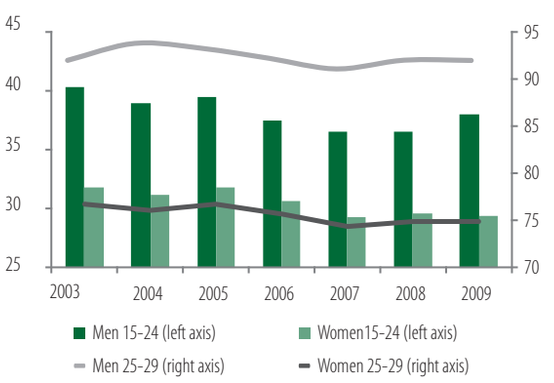
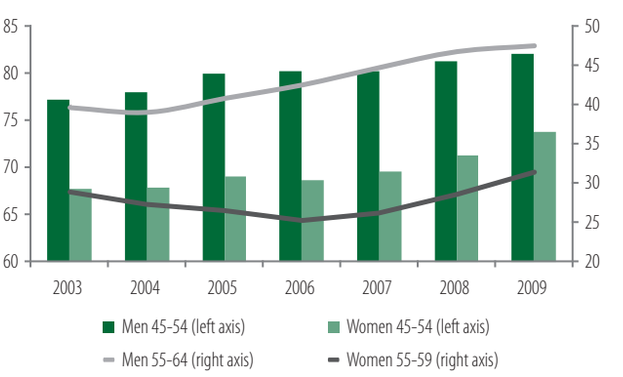
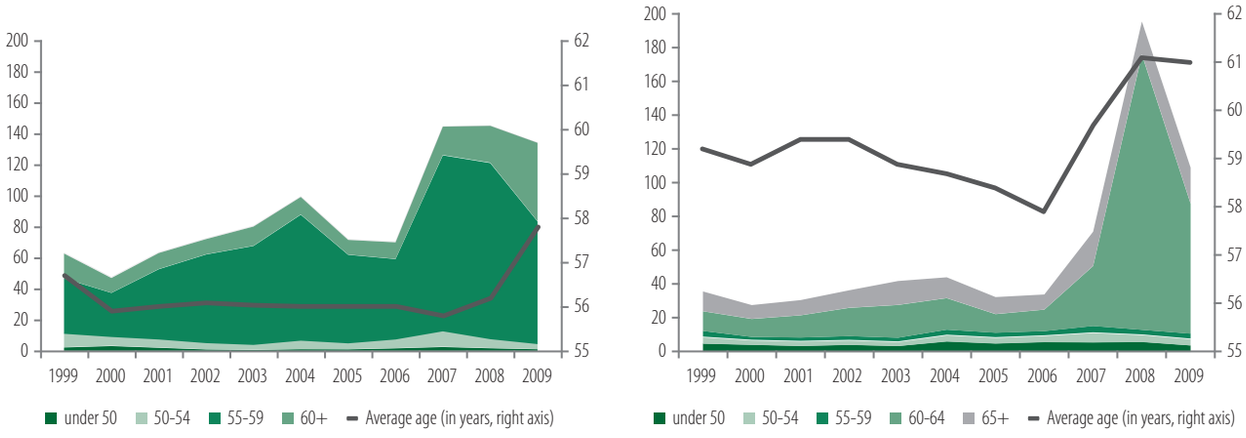


Figure I.8. Activity rate of population aged 45-54 by gender and 55-59 for women/55-64 for men (in percent).



Source: Own calculations based on LFS data.

Figure I.9. The number (in thousands) of women (left figure) and men (right figure) granted a pension by age and the average age of persons retiring between 1999 and 2009 (in years).



Source: Own calculations based on ZUS (Social Security Institution) data.

1.2. Adjustments of working time, size and structure of employment in 2008-2010

In the face of short-term wage rigidities, the modifications of employment become a key mechanism of adjustment to labour demand shocks. The adjustment may however also include modifications of working time. This may mean (i) limiting the amount of overtime, (ii) reducing the regular working time as well as monthly remuneration, in particular by replacing full-time with part-time job, or the opposite (iii) dismissing part of the staff and raising the average working time of remaining workers. It must be noted that alterations of the average working time in a given economy have a similar impact on the overall labour utilization and potential output as the changes in the volume of employment. Certain disturbances, for example resulting from liquidity problems or a sharp drop in foreign demand for manufactured goods, may be perceived by entrepreneurs as temporary. In such cases they may decide to reduce working hours rather than dismiss workers during the recession, which also allows faster and cheaper increase in production in the recovery phase. This phenomenon, known as labour hoarding may be the most efficient strategy if the costs of hiring and dismissal are relatively high, whether due to institutional factors or because of labour supply characteristics. In addition, labour hoarding and lowering the average number of working hours per employee may be superior to layoffs also from the perspective of policy makers. [4]

Figure I.10 shows the contribution of changes in employment and in average working hours to changes in the total utilisation of labour in the European countries between the first quarter of 2008 and the first quarter of 2010. The following Figure I.11 presents the impact of changes in full-time and part-time employment on changes in total employment levels in this period. Figure I.12 on the other hand illustrates the effect that the modifications of the average working hours in both full- and part-time jobs had on the average number of weekly working hours in the European countries. The methodology of these decompositions is presented in Box I.1.

[4] Indeed, between 2008 and 2009 number of countries (such as Germany, Austria, Belgium, Italy, Japan and Turkey) subsidies to reduced working hours of workers facing high risk of dismissals were used as to mitigate the impact of the crisis. Such a possibility was also introduced in Poland. This issue is further discussed in the chapter 1.3.

Box I.1. Decomposition of changes in the total labour utilisation (in hours) – methodology.

Total hours worked $TH_{t,i}$ (in time *t*, in the country *i*) is the product of total number of persons employed $E_{t,i}$ and the average working hours $H_{t,i}$. The change of the total number of hours worked between the first quarter 2008 and 2010 may be decomposed into the contributions of the changes in:

- Employment 15+ $\alpha^{E}_{t,i}$ – how the total number of hours worked would change due to changes in the number of employed aged 15+, if the average working hours remained constant;
- Hours of work $\alpha^{H}_{t,i}$ – how the total number of hours worked would change due to changes in the average working hours, if the number of employed aged 15+ remained constant,
- Residual $\alpha^{R}_{t,i}$.

In accordance with the following formulae:

$$\alpha^{E}_{2010,i} = (E_{2010,i} - E_{2008,i}) \times H_{2008,i}$$
$$\alpha^{H}_{2010,i} = (H_{2010,i} - H_{2008,i}) \times E_{2008,i}$$
$$\alpha^{R}_{2010,i} = (E_{2010,i} - E_{2008,i}) \times (H_{2010,i} - H_{2008,i})$$

The changes in the total employment $E_{t,i}$ may be presented as sum of changes in full-time and part-time employment:

$$(E_{2010,i} - E_{2008,i}) = (E^{M,F}_{2010,i} - E^{M,F}_{2008,i}) + (E^{M,P}_{2010,i} - E^{M,P}_{2008,i}) + (E^{K,F}_{2010,i} - E^{K,F}_{2008,i}) + (E^{K,P}_{2010,i} - E^{K,P}_{2008,i})$$

where $E^{X,Y}_{t,i}$ is the number of men *M* (women *W*) remaining in full-time (*F*) and part-time (*P*) employment (time *t*, country *i*).
Finally, changes in the average hours worked may be presented as the sum of contributions of changes in:

- The average hours worked by full-time workers $\beta^{FH}_{t,i}$ – how the total number of hours worked would change due to changes in average hours worked by full-time workers, if the structure of employment with respect to full-time and part-time jobs and the average hours worked by part-time workers remained constant,
- The difference in average hours worked by full-time and part-time workers $\beta^{DH}_{t,i}$ – how the total number of hours worked would change due to change in the difference between the average hours worked by full-time and part-time workers, if the structure of employment with respect to full-time and part-time jobs and the average hours worked by full-time workers remained constant;
- Changes in the structure of employment with respect to full-time and part-time jobs $\beta^{SH}_{t,i}$ – how the total number of hours worked would change due to the changes in the employment structure with respect to full-time and part-time jobs (increase means higher share of part-time workers), if the the average hours worked by full-time and part-time workers remained constant;
- Residual β^{R}.

In accordance with the following formulae:

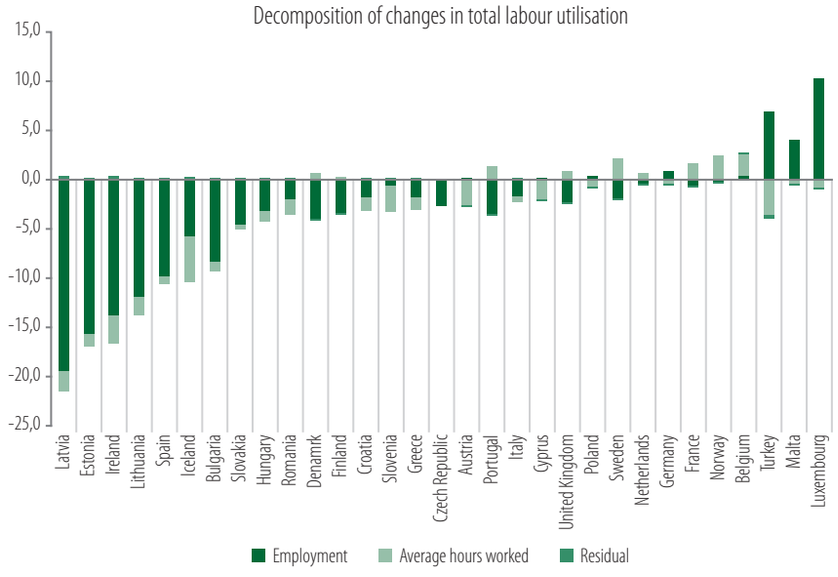
$$\beta^{FH}_{2010,i} = (H^{F}_{2010,i} - H^{F}_{2008,i})$$
$$\beta^{DH}_{2010,i} = [(H^{P}_{2010,i} - H^{F}_{2010,i}) - (H^{P}_{2008,i} - H^{F}_{2008,i})] \times (e^{F}_{2008,i} - e^{P}_{2008,i})$$
$$\beta^{SH}_{2010,i} = [(e^{F}_{2010,i} - e^{P}_{2010,i}) - (e^{F}_{2008,i} - e^{P}_{2008,i})] \times (H^{P}_{2008,i} - H^{F}_{2008,i})$$
$$\beta^{R}_{2010,i} = [(e^{F}_{2010,i} - e^{P}_{2010,i}) - (e^{F}_{2008,i} - e^{P}_{2008,i})] \times [(H^{P}_{2010,i} - H^{F}_{2010,i}) - (H^{P}_{2008,i} - H^{F}_{2008,i})]$$

where $H^{X}_{t,i}$ is the average number of hours worked by full-time (*F*) or part-time (*P*) workers, and $e^{X}_{t,i}$ s the share in total employment of the full-time (*F*) or part-time (*P*) workers (time *t*, country *i*)

During the crisis in most countries, in particular in these which experienced significant reductions in employment, the average working hours declined along with employment, intensifying the decline in total labour utilisation. In the Baltic States and in Ireland this phenomenon was associated with shifting some employees (including male workers) to part-time employment and limiting overtime of full-time employees. The adjustments in Greece and some of the NMS (Slovakia, Hungary and Slovenia) were of a similar nature. In Germany, Austria and Turkey the reduction of the average hours worked occurred parallel to the increase in employment (overall between the beginning of 2008 and 2010). Interestingly, the decrease in the average hours worked by German employee can be attributed mainly to decreasing overtime of full-time workers. Almost no shift between full-time and part-time work occurred, despite the initiatives taken by the government. However, such a development was observed in Austria, where the reduction in the hours worked was relatively bigger than the slight increase in employment, and so the total labour utilisation, measured in hours worked, declined. In contrast, in Great Britain, Portugal, Sweden, France, Norway and Belgium the decline in employment was accompanied by the rise

in the average hours worked that resulted from an increase in the averaged hours worked by full-time employees. Consequently, in Belgium, France and Norway, the total number of hours worked actually increased during the crisis. The behaviour of the Polish labour market during this time mostly resembled that of Germany. Employment increased slightly, but at the same time the average hours worked decreased, especially in case of the full-time employees. Among males, it was resulted from less overtime work.In the case of women employed full-time, from reduction in average hours worked below the 40-hour threshold. As the relative decrease in average hours worked between the first quarter of 2008 and the first quarter of 2010 was slightly higher than the increase in the number of employed, the total labour utilisation (hours worked) in Poland declined by 0.4 percent.

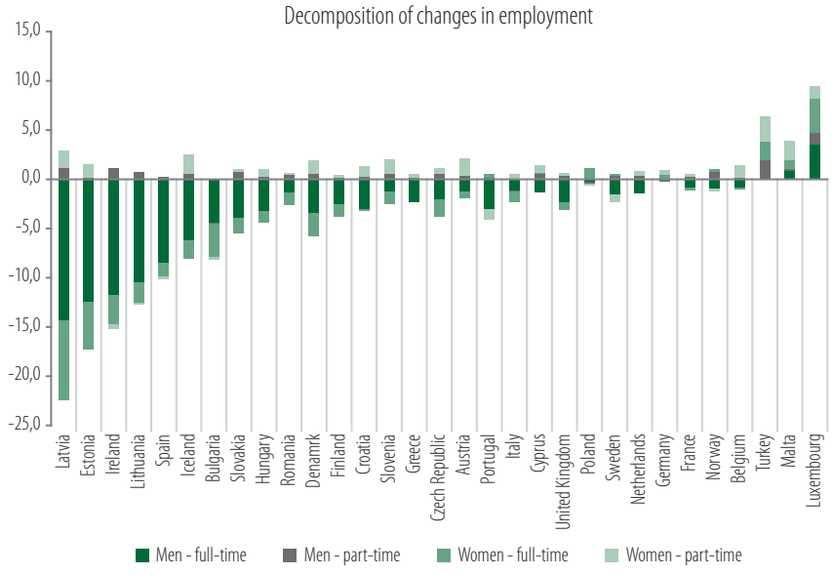
Figure I.10. Decomposition of changes in total hours worked in European countries between the first quarter of 2008 and the first quarter of 2010 (in percent).



Comments: Decomposition of changes in total labour utilisation, measured in hours worked, into changes in the average hours worked and total employment.

Source: Own calculations based on Eurostat data.

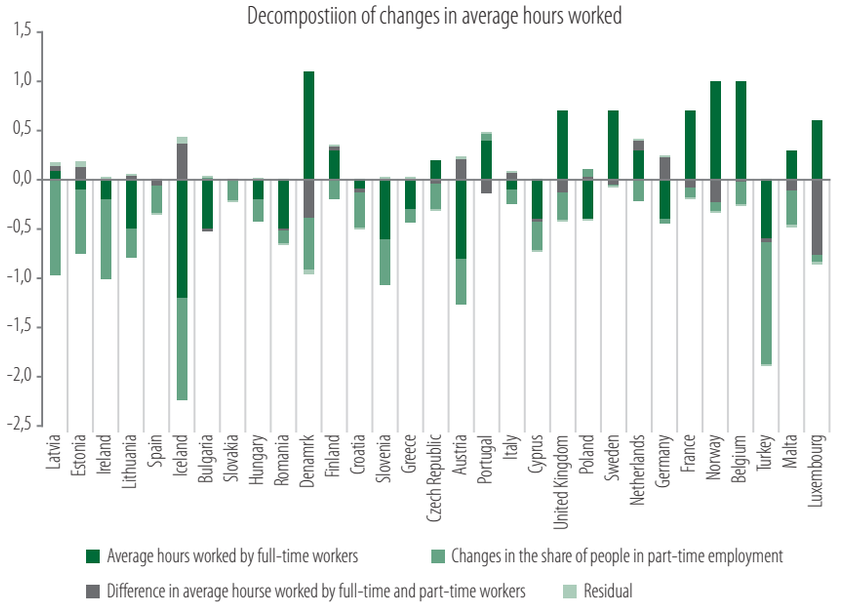
Figure I.11. Decomposition of changes in total employment in European countries between the first quarter of 2008 and the first quarter of 2010 (in percent).



Comments: Decomposition of changes in total employment into changes of in full- and part-time employment by gender.

Source: Own calculations based on Eurostat data.

Figure I.12. Decomposition of changes in the average weekly hours worked in European countries between the first quarter of 2008 and the first quarter of 2010.



Comments: Decomposition of changes in the average weekly hours worked into contribution of changes in the average weekly hours worked in full-time employment, contribution of changes of the difference in average hours worked in full-time and part-time employment, and contribution of changes of the share of part-time workers in total employment.

Source: Own calculations based on Eurostat data.

1.3. Labour market policy response to 2008-2009 crisis in European countries

Due to the global recession, unemployment increased in most developed countries, and in almost all cases governments reacted with a variety of policies. However, particular governments intervened in slightly different areas. Table I.4 presents a summary of anti-crisis measures that have been taken by the OECD countries over the last two years.[5] In the OECD countries, on average 85 percent of resources allocated to labour market policies is spent on unemployment benefits and other forms of support for the unemployed. Moreover, the programmes designed to increase the volume of funds allocated to this purpose were implemented during the crisis in 21 OECD countries. In Austria, Canada and Belgium the value of benefits rose, with particular emphasis on those unemployed who had just lost jobs. Some countries introduced additional allowances for specific socio-demographic groups – in Finland for the youths, in Slovakia for parents, and in several other countries for people participating in training programmes. The United States, Switzerland and Canada all extended the period during which benefits could be claimed. A similar reform was to take place in the Czech Republic but the plans were abandoned on fiscal grounds. The Greek government introduced a flat-rate benefit for people affected by unemployment and low-income families. A separate group of benefits for the unemployed are those generating direct income for the beneficiaries, for example housing and health benefits. In Japan, spending on housing policy increased and in Austria free health insurance for certain beneficiaries was introduced.

In Poland unemployment benefit was changed at the beginning of 2010. Now, instead of a flat-rate benefit available for 6 months, the benefit is reduced by 20 percent after the first three months of payments.[6] This change, although improving the system, was not caused by the crisis nor was it in response to its effects. It was originally planned in 2008 and was to come into force from the 1st of January 2009. Its implementation, however, was delayed by one year. Furthermore, in Poland, an act under which persons who lost jobs or terminated self-employment after the 1st of July 2008, were entitled to apply for a subsidy towards the repayment of a mortgage, came into force in Poland in August 2009. The data gathered by the Bank Gospodarstwa Krajowego (BGK),[7] which runs the programme, indicate that up to December 2010 the subsidies were granted to no more than 1,402 debtors, amounting in total to 7.7 million PLN. The scale of participation in the programme and the total payments indicate that the impact of this act on the economy is likely to be irrelevant.

The Active Labour Market Programmes ALMP programmes are more numerous and more diverse than passive policy tools. The most important of them are: employment subsidies, short-time work, direct job creation, financial support for new enterprises, coaching

[5] In this paragraph, Table I.4 and information about countries other than Poland, are based on OECD (2010) data.
[6] Since the 1st of June 2010, the unemployed shall receive the amount of 742.10 PLN in the first three months and in the following three (or nine) the amount of 582.70 PLN.
[7] Based on: http://wyborcza.biz/biznes/1,100896,8848479,Drogi_frank_winduje_raty_kredytow.html.

and training, reduction of labour costs, job counselling and intermediation and work agencies' help. In 2009, each of the OECD countries introduced at least one ALMP programme. Many countries – over 20 – created a short-term employment plans and strengthened job search assistance systems and training programmes. Fifteen OECD countries introduced subsidies to newly created jobs, while in a number of them only a particular groups were entitled to such subsidies. The main criterion used was the length of unemployment spell. In Austria, Korea and Portugal, special subsidies were addressed to long-term unemployed and in Sweden to people permanently out of work. Particular attention was paid to youth, in particular by expanding youth-oriented programmes, and also to older workers. In Ireland, a special programme covered industries and professions in which the risk of bankruptcy is particularly high. In Korea the support was focused on regions with the highest unemployment.

Short-time work programmes, also known as work sharing programmes, are used in a number of OECD countries. They are based on the idea that, instead of dismissing full-time employees, it is more efficient to reduce working hours for a higher number of staff. Prior to the crisis, only Belgium saw more than 1 percent of employees participating in such programmes. In the period 2007-2009, however, there was a significant increase in the number of participants in such programmes, particularly in Belgium, Turkey, Italy, Germany and Luxembourg where the rate of participation in such programmes exceeded 3 percent of economically active population. In four countries (the Czech Republic, Hungary, Portugal and the Netherlands) participation in these forms of support was combined with obligatory training, and in several other countries the training was subsidized from public funds. It is worth noting that in the countries where training programmes are voluntary, the participation rate is relatively low, usually not exceeding 10 percent. Some governments decided to expand the scope of these activities, for example by increasing income replacement rates (France), easing off on the criteria for participation (Canada, Japan), increasing the length of the programme (France, Switzerland and Turkey). Nevertheless, they are short-term programmes and in many countries their completion was planned by the end of 2010.[8]

Table I.4. Number of countries undertaking specific measures to mitigate the crisis on the labour market.

Measures	The number of countries undertaking the activity in 2008 and/or 2009	When the measures apply to a specific group only	The number of countries that reduced the spending in 2010	The assessment of effectiveness
Active measures				
Subsidies	15	9	2	Effective, but on a not satisfactory scale
Non-wage labour costs reduction	16	5	4	Effective
Reduced working hours support	22	-	4	Effective, but in a short period only
Direct job creation	12	-	1	Used less than before due to limited effectiveness
Public employment services	21	2	-	Effective during booms, but less during the recession
Support for start-ups	8	1(+1)	-	-
Training programmes for unemployed	23	1(+6)	-	Effectiveness increasing, more use expected in the future
Work experience programmes	13	4(+1)	1	See above
Training programmes for employed	15	1	2	See above
Apprenticeships	10	5	1	Especially important during recession
Passive measures				
Unemployment benefits	15	0(+2)	-	Necessary during the crisis, however there is a risk of long-term dependency of beneficiaries on received support or remaining employed for the minimum period required to be granted support
Social assistance	5	-	2	See above
Non-financial support for unemployed	15	-	-	See above
Benefits for people with low income	15	-	-	

Comments: The numbers in brackets indicate the number of countries in which a given measure applies to a specific group only.
Source: Own elaboration based on OECD (2009, 2010) data.

[8] The countries using this solution permanently include France, Germany, Austria, Finland and Portugal.

In Poland, the Act of the 1st of July 2009 on mitigating the effects of economic crisis on employees and entrepreneurs, introduced the possibility to subsidise, with funds from FGŚP (Guaranteed Employee Benefits Fund), the costs associated with a reduction of hours of work or a temporary stoppage of employment. This applied to companies which meet the criteria set out in the Act. According to PIP (National Labour Inspectorate) report of 9 August 2010,[9] only 162 companies made claims for payments associated with temporary stoppage, reduction of working hours or partial refinancing of social security contributions. These claims concerned only 11 353 people and amounted to 20.6 million PLN. The agreements were concluded for about ¾ of total amount requested, and till August 2010 the sum of only 5.9 million was disbursed. As the applications submitted concerned 0.07 percent of the total number of employees, and payments amounted to about ¼ of the requested sum, the impact of this mechanism of employment and hours of work adjustment in the Polish economy is probably negligible. Moreover, the Act introduced an option of extending (in some cases) the hours of work settlement period to a maximum of 12 months, as well as the possibility to vary the number of hours for each employee from month to month by establishing an individual hours of work schedule. It was also decided that the period of fixed-term employment, as well as the total period of employment on the basis of successive fixed-term contracts (between the same parties), should not exceed 24 months.

Reductions in non-wage labour costs, such as taxes and social security contributions, are often used by governments to combat unemployment, due to a relative easiness of implementation. Actions taken during 2008 and 2009 can be divided into two groups: general reductions and those aimed at new hires. Cutting unemployment insurance contributions in some countries, such as Germany and Japan, resulted in a slight decrease in total labour costs, as they initially constituted a small fraction of these costs. The reductions in social security contributions paid by employees proved to be much more effective. In Hungary, the rate was lowered from 24 to 21 percent, in Portugal from 19 to 17 percent (although not in all industries). The reforms in other countries focused on the new hires. For example, in Portugal the social security contribution rate was lowered by 50 percent for newly hired employees over 55 years of age. Ireland, on the other hand, completely abolished the payment of contributions in the first year for all hired long-term unemployed (over 6 months). In France and Spain progressive tax relief was introduced – for example, French employees receiving the minimum wage are completely exempt from paying social security contributions, and this relief decreases when earnings increase. When wages reach 1.6 times the minimum wage the employee pays the full rate of contribution. Another solution, implemented in the United States, is an exemption from payroll tax, and in Finland, the changes were mostly introduced in peripheral regions. In most cases, these measures are temporary, but they were implemented permanently in Finland, New Zealand and Turkey.

The training programmes were expanded or modified in most OECD countries (23). Work experience programmes were introduced in 13 of them. The programmes for people previously employed were extended in 15 countries, 10 of which increased the support for professional apprenticeship. Financial incentives for companies to encourage the employment of apprentices were introduced in several countries including Australia, Canada and France. Some governments paid special attention to specific sectors of the economy – that was the case in the UK, Austria and Belgium. These countries began to subsidize training in health and social care. Switzerland, Greece and Australia focused on companies producing energy-efficient units. In some countries, the support for new businesses was increased – for example in the UK the support period was extended, and in Poland the scope of incentives was increased.

In Poland, the aforementioned 2009 Act on mitigating the effects of the crisis introduced the possibility of financial aid from the Labour Fund to cover the cost of training, or postgraduate level course, for employees of firms experiencing temporary financial difficulties which had created earlier the so called training fund. This support was available for up to six months in case of training and up to twelve months in case of postgraduate courses. According to the previously mentioned PIP (National Labour Inspectorate) publication of 9 August 2010, financial aid for the training was granted to 491 people and it amounted to 555,000 Polish PLN in total, while aid for postgraduate studies was not granted to any employee.

In Poland, the noteworthy initiatives and activities aimed at increasing the use of ALMPs as anti-crisis measures were taken by the Ministry of Regional Development. They were based on the Human Capital Operational Programme. Within the Programme framework, the following initiatives in particular were introduced (i) a relocation supplement (a one-off payment for those who found work over 50 km away from the current place of residence, to cover the cost of travelling or settling in a new location), (ii) a motivational supplement (amounting to triple the difference between the previous (higher) and current (lower) gross wage, but not exceeding 4000 Polish PLN, (iii) a grant intended to help start a new business (for the employees covered by the outplacement programme) and (iv) financial aid to cover the costs of specialised training or postgraduate level course for highly skilled employees dismissed due to reasons on employer's side. In contrast,[10] in 2011 the Labour Fund budget for active labour market policy programmes will be reduced from over 7 billion Polish PLN to around 3.2 billion Polish PLN in 2010.

[9] The most up-to-date information at the time of preparing this report.
[10] Moreover, horizontal measures were taken to facilitate the availability of the EU funds that may be used in the prevention of crisis effects, in accordance with previously established priorities.

2. Polish labour market in the business cycle

2.1. Cyclical characteristics of labour market in Poland and other European countries

In the last two decades the economies of Central Europe have been developing significantly faster than Western European countries and the United States. Since the initial shock of transition wore off (which took place between 1992 and 1995), the NMS8 managed to reduce their GDP gap with respect to the United States and the EU15 by about 20 and 30 percent (Czech Republic) and 70 and 80 percent (Poland and Estonia). This has not been, however, a steady process. In certain periods the dynamics of growth in some countries was clearly higher than the long-term average, slowing to a halt in the following years. Nearly every country within the region recorded episodes of high unemployment, as well as periods of rapid employment growth.

In macroeconomics, the occurrence of cyclical fluctuations is often explained with unpredictable, random disturbances. They influence economic incentives which affect agents and indirectly modify the economy's growth path. In this perspective, not every change in the growth trajectory can be seen as cyclical. If, for example, a structural breakthrough takes place, which results in the permanently faster technological progress in a given country, the participants of economic life, including employers and employees adjust their behaviour to take advantage the potential increase in productivity. The economy then enters a new path of balanced growth, where the expectations of firms and households regarding the long-term evolution of wages, prices and interest rates differ significantly from the previous ones. As a consequence of the permanence of such a change, an important part of the original disturbance (correction of trend) does not cause further shocks in the form of investment, consumption, employment and unemployment fluctuations, but may rather lead into permanent changes of these variables in the dynamic process that lasts just several quarters. Such modification of growth dynamics is not therefore a cyclical change, but rather a change in trend.

In this section we deal with temporary shocks, namely those that do not result in permanent (or at least longer then 8-10 years) changes of the growth dynamics of basic macroeconomic aggregates, in particular gross domestic product. Ex-post analysis of economic fluctuations in Poland and other European countries requires the distinction of cyclical changes and trend component in the historical time series. This can be done by the use of the Hodrick-Prescott filter (HP filter) for data of quarterly frequency, covering the period between the first quarter of 1995 and the second quarter of 2010 in all surveyed countries and, in some countries, the period between the first quarter of 1992 and the fourth quarter of 1994. The HP filter also facilitates the separation of the trend even when it does not have a deterministic nature and is subject to significant changes of dynamics over the years. A cyclical component distinguished in this way is a stationary series and as such may be a subject of econometric analysis performed with the use of standard cycle analysis tools, such as spectral analysis, identification of leading components of business cycle or lead-lag structures. This procedure also allows a statistical analysis of the relationship between the cyclical (and hence stationary) components of output or investment,[11] in a similar manner as the labour market indicators, which are inherently constrained.

Fluctuations in employment and unemployment levels, including a large increase in unemployment between 1999 and 2002, which remained high until 2004, constituted one of the main socio-economic problems in Poland in the last decade. In the first edition of Employment in Poland (Ministry of Economy and Labour, 2005), the authors expressed concerns that the increase in unemployment would be relatively difficult to overcome, and consequently long-lasting. However, after the Polish accession to the EU, the years 2006-2009 put the economy back on the track of fast economic growth, which allowed a rapid increase in employment and reduction of unemployment to low levels never previously recorded. In the subsequent editions of the report (Ministry of Labour and Social Policy, 2006, 2007) it was argued that these fluctuations were likely to have been triggered by macroeconomic factors, for example shocks in foreign trade, capital productivity dynamics and in the policy-mix. The depth of changes and their persistence was associated with the adjustment mechanisms of the Polish labour market and institutional factors which determine the adaptability to shocks on both supply and demand side of the labour market. Neighbouring countries, affected by similar problems, experienced less significant fluctuations in labour market aggregates. In contrast, moderate impact of the 2008-2009 crisis on the labour market that Poland has experienced so far is associated with a noticeably smaller change in output growth as compared to other European economies, including those in Central Europe. Also, the decline in the growth dynamics in Poland in 2009 was comparable with that recorded in 2001-2002, and yet this time such an unemployment has not risen and employment has not decreased as much as eight years earlier.

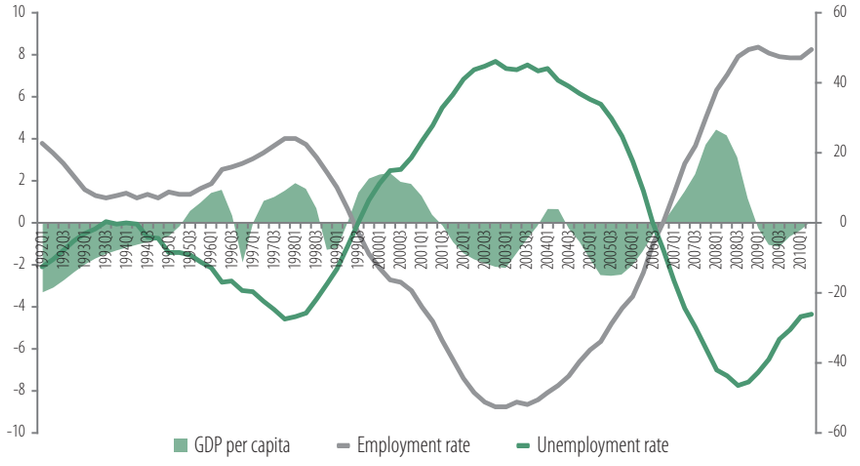
Figures I.13-I.15 indicate that, taking into account the variability of economic growth, the scale of fluctuations of labour market measures (especially the employment and unemployment rates) has been high in Poland. Between 1992 and 2006, the fluctuations of output around the trend developed symmetrically, with deviation around 2 percent. The boom recorded in 2007 and 2008 was an exception, as GDP exceeded the trend by more than 4 percentage points. However, concurrent with these changes, fluctuations in employment and unemployment were more significant during downturns than during recoveries (see Figure I.13). Despite this, their evolution did not confirm concerns expressed at the turn of the century regarding permanence of high unemployment in Poland, regardless of the business cycle (the so called hysteresis). The decrease in employment and increase in unemployment was first recorded in 1998 and it lasted five years. During that time the employment rate plummeted from the level of 4 percent above the trend

[11] Apart from cyclical component, the absolute values include, among others, trend and seasonal component.

to 9 percent below it. As regards the unemployment rate, it increased from the level of more that 20 percent lower than indicated by the medium-term trend, to almost 40 percent higher. After reversing these trends in mid-2003, there was also a five-year-long period of improvement on the labour market.

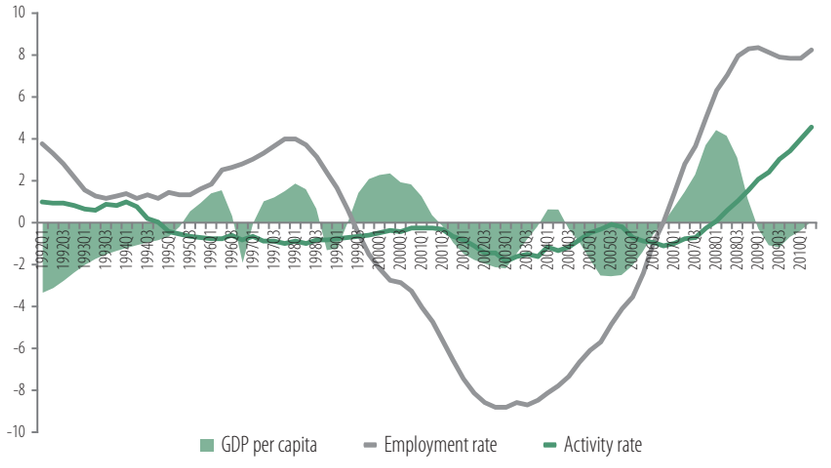
At the same time, during the period between 1995 and 2008 the activity rate stayed below the trend (see Figure I.14). It is worth pointing out that the medium-term trend of activity rate in Poland was negative, and this gradual decline reflected a number of structural and institutional factors thoroughly analysed in previous editions of *Employment in Poland*. However, a more significant decline in labour supply during the downturn in 2002-2004 contributed to a stronger impact of the recession (decrease of employment and increase in unemployment) than might have been expected, should the labour supply have developed steadily. Figures I.13-I.14 indicate that the increase of economic activity rate recorded from the fourth quarter of 2007 (by 2.2 percentage points until the second quarter of 2010), facilitated the maintenance of employment levels that exceeded the mid-term, trend. That remained true even when the economic growth in early 2009 slowed down significantly.

Figure I.13. Deviations from the trend in GDP per capita, employment and unemployment rates in Poland between 1992 and the second quarter of 2010 (in percent).



Source: Own calculations based on Eurostat and OECD data.

Figure I.14. Deviations from the trend of GDP per capita, employment and activity rates in Poland between 1992 and the second quarter of 2010 (in percent).



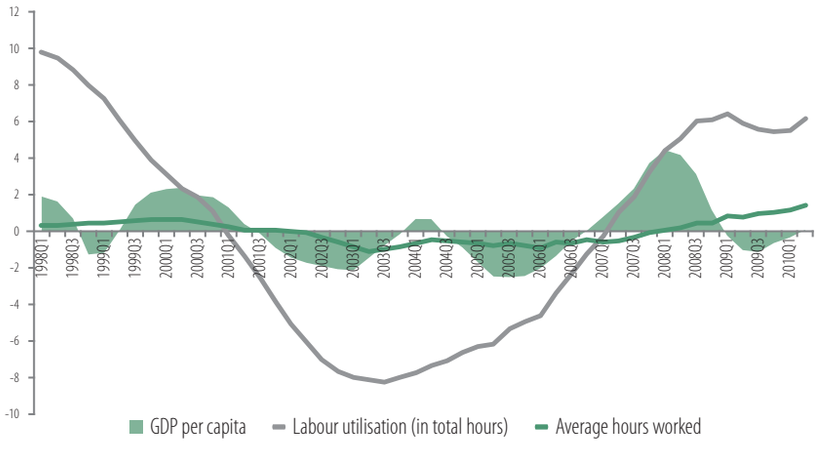
Source: Own calculations based on Eurostat and OECD data.

It is worth pointing out that the average hours worked in Poland developed pro-cyclically since 1998 (see Figure I.15).[12] This caused fluctuations of the total labour utilisation (expressed in total hours worked) being relatively greater than these of employment. This in turn indicates that Polish companies have to some extend tried to buffer employment during downturns by adjustments on intensive margin (hours) and wages, and when it is impossible they reduce the number of employees. Ability to adapt flexibly to fluctuations on demand for goods through the adjustment of working hours mitigates the effect on demand for labour on extensive

[12] The length of analysed period is based on data availability on the average weekly working hours.

margin (number of workers) and thus also on the cyclical variability of unemployment. However, as it is showed in the following sections of this chapter, as regards the absorption of labour demand shocks in the past fifteen years, the abovementioned channel played a relatively small role in Poland.

Figure I.15. Deviations from the trend of GDP trend per capita, total labour utilisation and average hours worked in Poland between 1998 and the second quarter of 2010 (in percent).



Source: Own calculations based on Eurostat and OECD data.

The fluctuations in the Polish labour market should be considered significant (see Table I.5) when related to fluctuations of GDP growth recorded between 1992 and 2010. In comparison with other NMS, Poland experienced relatively stable growth dynamics – the standard deviation of cyclical component of GDP per capita was lower than 2 percent, which is closer to the average value for the EU15 countries (1.7 percent) than NMS countries (3.1 percent). Moreover, the relative variability of labour market aggregates (relative to the variability of output per capita), was one of the highest in Europe. The standard deviation of fluctuations in the employment rate around the trend was more than 2.5 times higher than the standard deviation of cyclical component of GDP, whereas in the case of the unemployment rate – 14 times higher. The respective figures for the remaining NMS countries were significantly lower. Some of them experienced relatively more noticeable fluctuations in employment and unemployment than Poland, but they were caused by much larger flucutations in the dynamics of economic growth.[13] In the last two decades, Spain was the only country where a higher relative (in relation to the standard deviation of the cyclical component of GDP) variability of both rates was recorded. It should be noted, however, that several of the EU15 labour markets recorded a similar, if not higher, variability of unemployment in relation to the fluctuations in the output as Poland. These countries were either the ones that experienced during the analysed period significant oscillations of the dynamics of growth (such as Ireland, Sweden and the United Kingdom) or else the Southern European countries characterised by the dual labour market (Spain),[14] or significantly mismatches of supply and demand for labour (Portugal, see Blanchard, 2007).

The labour supply in Poland on the other hand, dominated by a strong downward trend, was characterised by a moderate variability in the business cycle, lower than average recorded in the NMS and the EU15 countries. However, it is worth noting that if Hungary was excluded from the sample, as in Hungary the variability of labour supply was even higher there than the variability of employment, then Poland would stand out in the region due to large fluctuations in activity rate. Among the remaining NMS, the relative fluctuations in economic activity rate in the business cycle were 50% smaller than in Poland. Considering that, among the EU15 countries the most significant fluctuations in labour supply were recorded in such countries as Sweden, Spain, Portugal, Germany, it seems that this phenomenon is associated with the welfare model adopted by these countries. All of them redistribute a high proportion of GDP to the working age population, via unemployment benefits system and other social transfers.

Finally, the pro-cyclical evolution of the hours worked in Poland – which, as mentioned in the previous chapter, was associated primarily with changes in the average overtime hours – meant that the relative fluctuations of the total hours worked were greater than the fluctuations of employment rate. The standard deviation of the average hours worked in Poland amounted to about 6 percent, but when compared with the fluctuations of employment, the adjustment of hours worked in Poland was not a crucial channel of adjustments of overall labour utilisation. Standard deviation of average hours worked differences from trend was eight times lower than the similar measure for employment rate. Table I.5 shows that in countries such as Austria, Holland, France the variability of average hours worked fluctuations reached two thirds of employment variability, and even exceeded it in Belgium.

[13] Higher variability of employment and unemployment was particularly experienced by Baltic States. The amplitude of fluctuations in GDP was, however, three-fold higher than in Poland.
[14] The phenomenon of dual labour market is presented thoroughly in *Employment in Poland 2007*.

Table I.5. Cyclical variability of GDP, employment, unemployment, labour supply and hours worked in European countries between 1992 and the second quarter of 2010.

	Output variability	Relative variability of employment	Relative variability of unemployment	Relative variability of labour supply	Relative variability of hours worked	Relative variability of total hours worked
Bulgaria	2.59	1.14	10.35	1.15	0.17	1.24
Czech Republic	2.51	0.69	10.11	0.25	0.27	0.57
Estonia	6.95	0.64	4.83	0.35	0.27	0.71
Lithuania	5.29	0.68	6.93	0.26	0.13	0.83
Latvia	8.01	0.53	3.67	0.32	0.18	0.59
Poland	**1.95**	**2.62**	**14.14**	**0.65**	**0.13**	**2.98**
Romania	3.76	0.73	2.42	0.63	0.09	0.70
Slovakia	3.95	0.97	5.73	0.37	0.22	0.67
Slovenia	3.83	0.38	2.98	0.37	0.33	0.44
Hungary	2.20	1.50	10.62	1.79	0.59	0.71
NMS10	**3.09**	**1.10**	**7.81**	**0.72**	**0.31**	**2.90**
Austria	1.35	0.94	10.06	0.76	0.58	0.89
Belgium	1.14	0.85	8.68	0.75	1.47	1.54
Denmark	1.60	1.03	15.49	0.59	0.23	0.77
Finland	2.67	1.86	10.17	0.57	0.23	0.72
France	1.02	1.70	15.32	0.32	0.66	1.09
Grecece	1.37	0.81	8.72	0.77	0.41	1.04
Spain	1.41	3.72	20.04	1.01	0.05	2.76
Netherlands	1.51	1.29	16.39	0.64	0.62	1.44
Ireland	3.85	1.24	17.07	0.30	0.33	1.46
Germany	1.42	1.97	12.82	1.06	0.23	1.15
Portugal	1.21	1.85	18.03	1.09	0.56	1.48
Sweden	2.05	2.09	14.77	1.28	0.11	0.85
United Kingdom	1.55	1.12	14.79	0.39	0.22	0.71
Italy	1.27	2.48	11.78	1.30	0.14	1.10
EU15	**1.74**	**1.59**	**14.04**	**0.75**	**0.42**	**2.01**

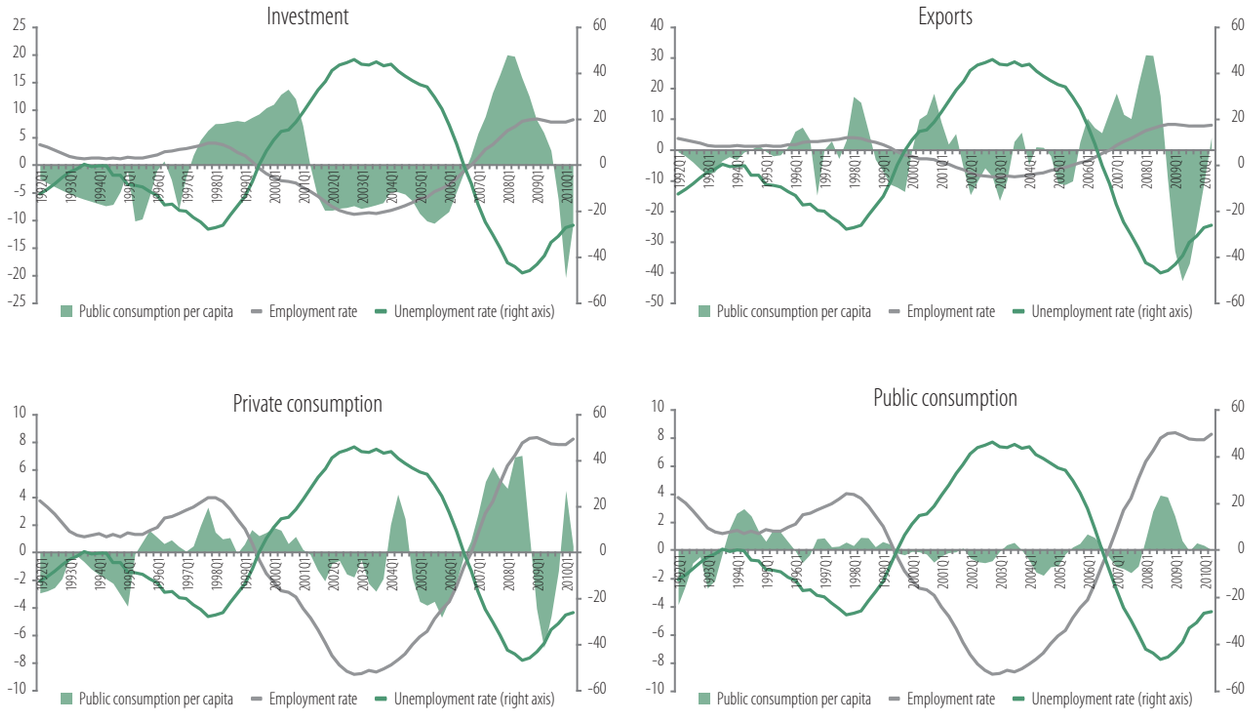
Comments: Output variability – standard deviation of the cyclical component of Gross Domestic Product as specified by HP filter, relative variability of employment (unemployment, labour supply) – the ratio of standard deviation of employment (unemployment, activity) rate from the country-specific deterministic trend to standard deviation of cyclical component of GDP per capita; relative variability of hours worked – the ratio between standard deviation of average weeklyhours worked to standard deviation of employment rate from the country-specific deterministic trend; relative variability of total hours worked – the ratio between standard deviation of total hours worked and standard deviation of cyclical component of GDP per capita. Due to the data availability, the variability of hours worked and total hours worked is calculated for the period between 1998 and the second quarter of 2010.

Source: Own calculations based on Eurostat and OECD data.

Taking into consideration the scale of cyclical fluctuations of output, a large cyclical variability of labour market indicators in Poland may result from (i) powerful transmission of changes in macroeconomic situation into the quantitative adjustment on the labour market, or (ii) the high elasticity of employment and unemployment with respect to the some components of GDP, which are more variable in the cycle than the GDP in general. Figure I.16 presents the fluctuations in employment and unemployment juxtaposed against the fluctuations in GDP components – investment, private and public consumption and exports. In turn, Figure I.17 shows how quickly and strongly the fluctuatnions of these components translated into employment and unemployment changes. In the analysed period, two of these components – exports and investment – were six and four times more volatile than GDP respectively. Interestingly, these values are closer to the ones experienced by the EU15 rather than NMS countries. In the latter group the fluctuations in both investment and exports were substantially more volatile, as the standard deviation of cyclical component of investment and exports in the NMS was, on average, twelve times higher than the analogous indicator for GDP.

In the search for the drivers behind the fluctuations in Polish labour market between 1995 and 2010, it is worth pointing out the reversal of export dynamics that occurred in 1998. Figure I.17 shows that the foreign trade disturbances were (with some delay) reflected in the employment and unemployment rates. At the same time, the impact of fluctuations in exports lagged by 5 to 6 quarters was comparable with the direct influence of changes in the investment level. Such a pattern resulted in a slight time lag between the reversal of export dynamics and the deterioration of the labour market between 1998 and 1999. Exports were also the primary factor to influence growth of the economy in mid-2005, enabling an increase in the employment rate above the trend a year later. Figure I.16 highlights that the systematic deterioration on the labour market in 2001-2002 may have been attributed to the decline in investment rates after a period of over-investment in 1998-2000. Investment slumped then below the trend for a couple of years. Figure I.17 also suggests a relatively strong correlation between changes in fixed capital investment and fluctuations in labour market aggregates. The increase in investment of more than 20 percent above trend in 2008 resulted in significant improvements on the labour market, again slowed down by the collapse in exports and slowdown in investment in 2010. Due to the lead-lag structure (see Figure I.17), the negative impact of these disturbances on the labour market has not yet been fully realised. The fluctuations in consumption over the last two decades were much less significant than the fluctuations in exports and investment, and their correlation with the adjustments on the labour market was much lower. However, between 2000 and 2001, a decrease in domestic consumption may have contributed to compounding the labour market problems.

Figure I.16. Deviation from trend of GDP per capita components, employment and unemployment rates between 1992 and the second quarter of 2010 (in percent).

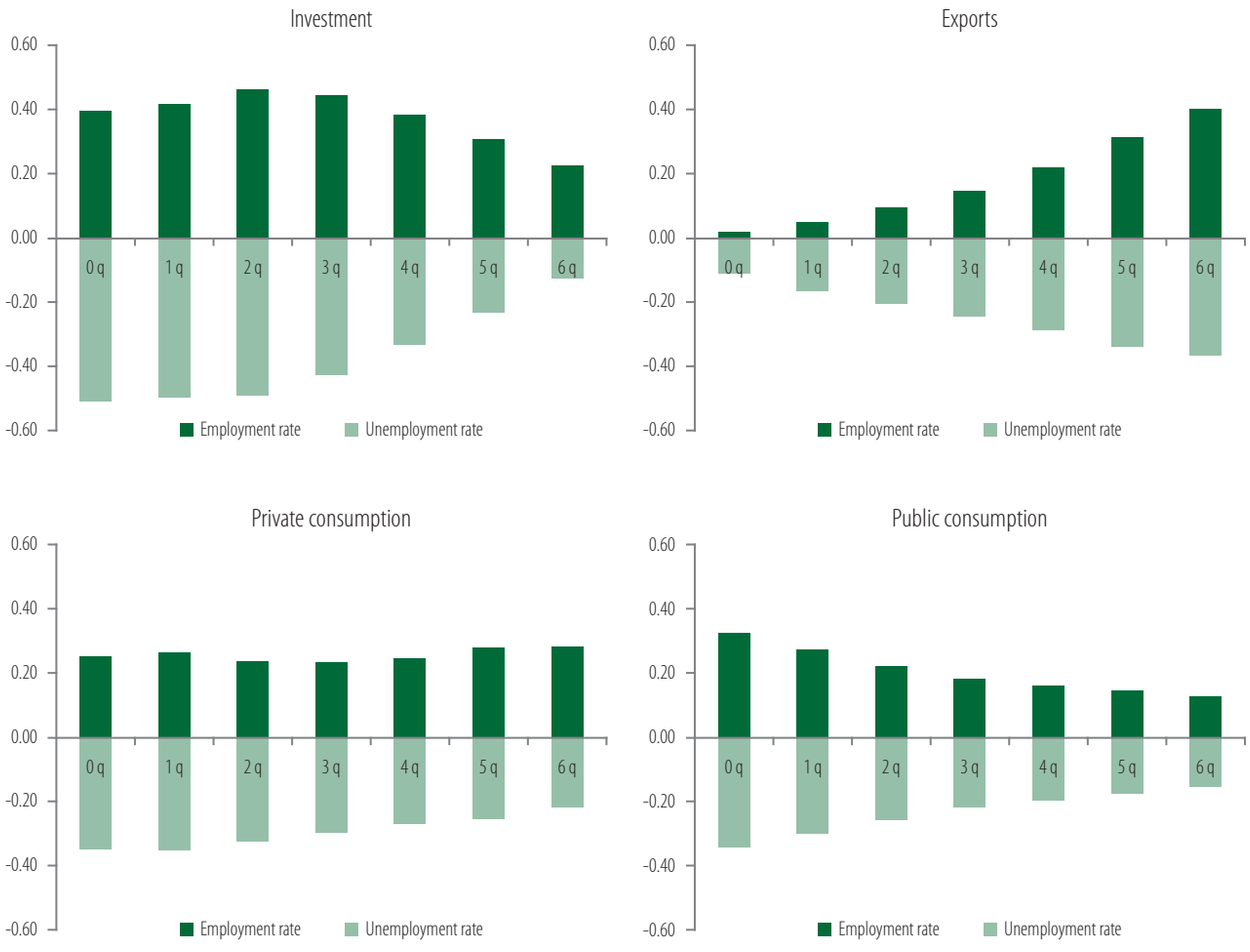


Source: Own calculations based on Eurostat and OECD data.

The lead-lag analysis of a correlations between the changes in the dynamics of economic growth and fluctuations in labour market also facilitates a comparison of patterns that exist in various European countries. According to Figure I.18, the correlation of deviations from trend in the employment and unemployment rate with the cyclical component of GDP in Poland is, in absolute terms, slightly lower than in other countries in the region. [15] In Poland, the strongest statistical relationship occurred between cyclical fluctuations in employment and unemployment and in GDP in the same quarter. At the same time, that relationship was characterised by a visible inertia, i.e. the correlation of labour market indicators with fluctuations in output recorded 5-6 quarters earlier was half as strong as the correlation with current changes in economic growth. In the other countries of the region either some lags in the labour market response to changes in GDP – for example in the Czech Republic height of impact of GDP fluctuations on the labour market occurred approximately with a 3 quarter lag-– or faster expiration of the response of the labour market measures – for example in the Baltic states – were observed. The country most similar to Poland, in terms of the lead-lag structure of correlation between GDP variations and changes in employment and unemployment, was Slovakia.

[15] With the exception of Hungary where the occurrence of correlations is disrupted by the significant changes in activity.

Figure I.17. Lead-lag correlation structure between deviations of employment and unemployment rates from trend and the cyclical component of GDP per capita between 1992 and the second quarter of 2010 in Poland.



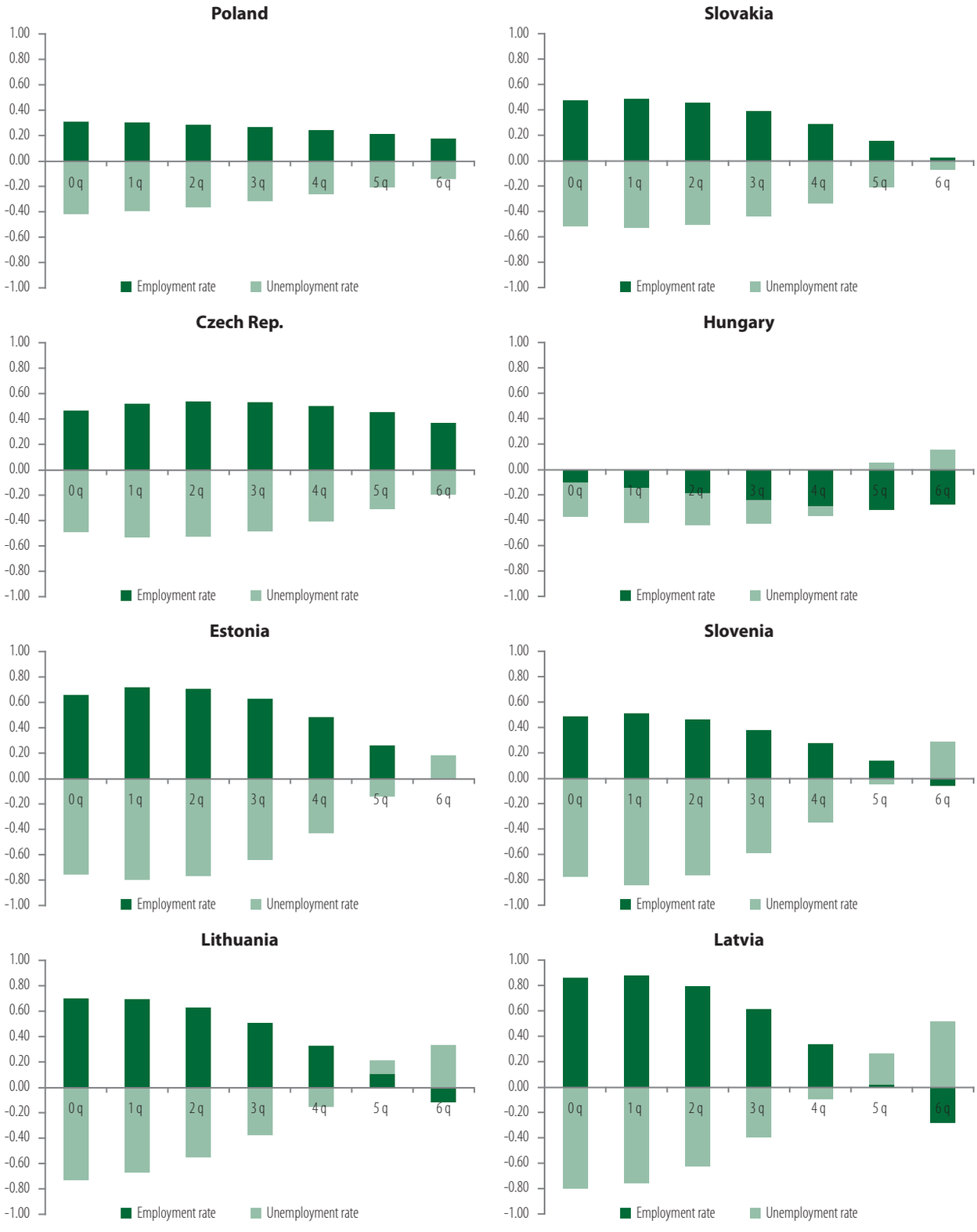
Comments: correlations between the deviations in the employment or unemployment rate at time t and the cyclical component of GDP per capita at time t+i where i=0,1,2,...,6. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

Figure I.19 presents the analogous lead-lag structures for these EU15 countries which are most and least similar to Poland in that regard. Greece and Portugal are rather similar, as significant direct correlations were accompanied by a substantial inertia of the impact of GDP fluctuations on the labour market. On the other hand, Anglo-Saxon countries, as well as the Baltic States, are characterised by a clearly different structure of the transmission of macroeconomic shocks – immediate responses on the labour market were strong but they expired quickly. In the light of previous observations, Spain recorded a surprisingly similar structure to the latter countries. What is also interesting is an unusual pattern of these correlations in Germany, where the GDP fluctuations resulted in labour market reactions but only after a significant delay, as the correlations of changes in employment and unemployment with cyclical movements of GDP which occurred 5-6 quarters earlier were much higher than with those experienced during a given period.

The presented statistical regularities indicate that the moderate scale of fluctuations in GDP, as compared to the experiences of other EU countries, especially NMS, have led to substantial quantitative adjustments on the Polish labour market (namely changes in employment, unemployment and economic activity). Moreover, as correlations of both employment and unemployment with concurrent fluctuations in GDP have been modest, this observation may be attributed to a significant inertia in the impact of changes in the growth dynamics of the labour market, as well as strong influence of changes investment which fluctuated substantially in the analysed period. Pro-cyclical evolution of the labour supply, and in particular, its decline below the medium-term trend, strengthened the impact of the economic slowdown of 1999-2002 on the labour market. Adjustments of the average weekly hours worked occurred cyclically but, in comparison with other European countries, their intensity was moderate. Consequently, the necessity for businesses to adapt to evolving market conditions was realised through employment adjustments and that resulted in significant changes in unemployment. Labour market response to the 2008-2009 slowdown, however, differed from the one experienced a decade earlier, as the decline in investment was sharp, but probably did not last long, and the growth of labour supply above the trend meant that, despite an increase in unemployment, employment increased as well. The next section will present a formal analysis of the factors causing macroeconomic fluctuations in Poland and other countries in the region.

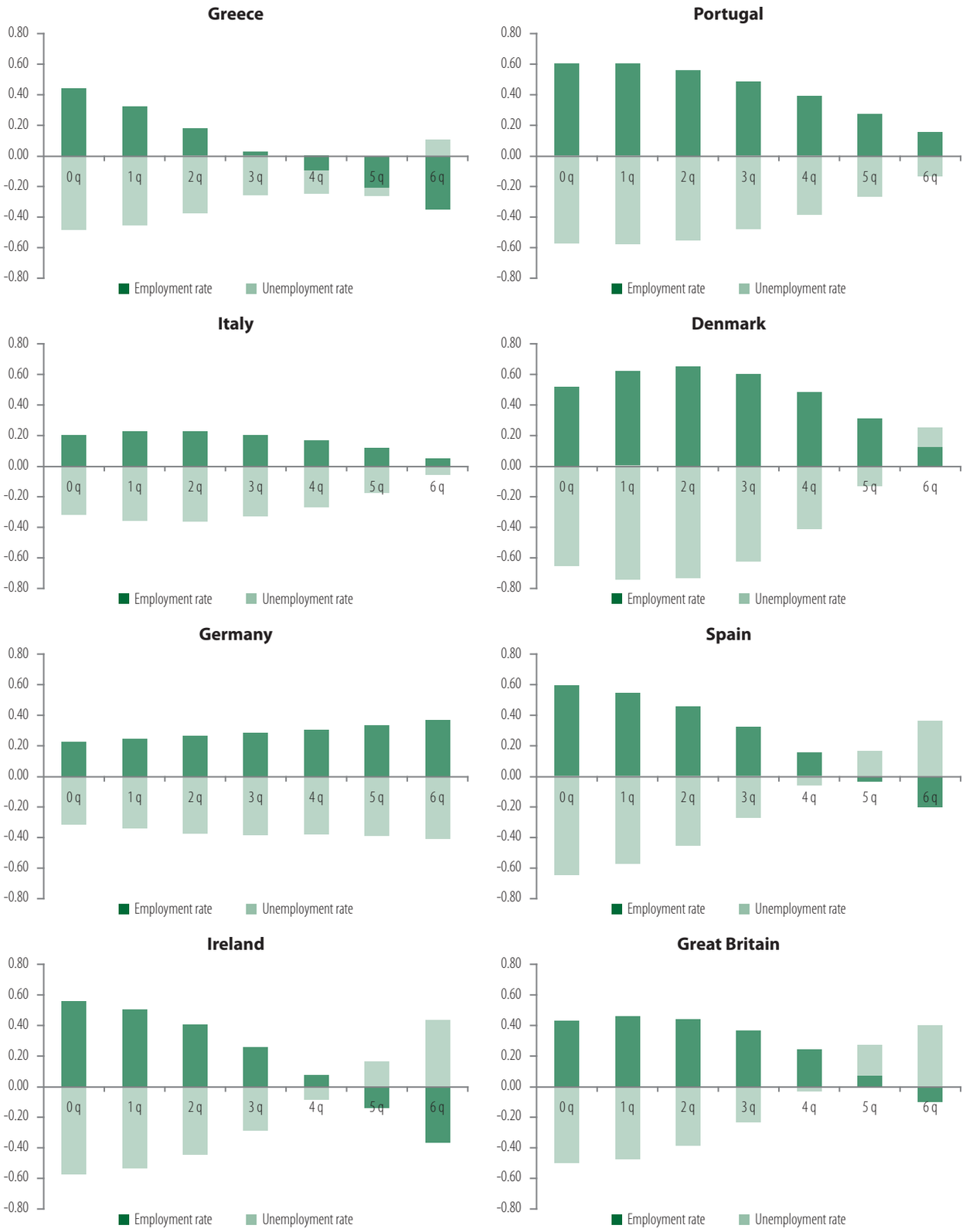
Figure I.18. Lead-lag correlation structure between deviations from trend of employment and unemployment rates and the cyclical component of GDP per capita between 1992 and the second quarter of 2010 in the NMS.



Comments: correlations between the deviations of the employment or unemployment rate from trend at time t and the cyclical component of GDP at time t+i where i=0,1,2,...,6. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

Figure I.19. Lead-lag correlation structure between deviations from trend of employment and unemployment rates and the cyclical component of GDP per capita between 1992 and the second quarter of 2010 in selected EU15 countries.



Comments: correlations between the deviations of the employment or unemployment rate from trend at time t and the cyclical component of GDP at time t+i where i=0,1,2,...,6. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

2.2. Sources of cyclical fluctuations in Poland and NMS8 countries

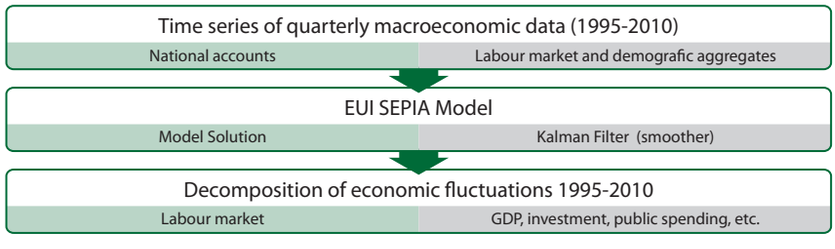
The analysis of dynamic properties of cyclical components of basic macroeconomic time series, should be accompanied by identification of factors behind cyclical fluctuations which have a clear economic interpretation, although cannot be observed directly – so-called aggregate structural shocks. As presented in Box I.2, this can be done in two ways. The first, more traditional approach, was used in *Employment in Poland 2007*. In this section we use a structural macroeconomic model of small open economy (EU-SEPIA – EU Structural Policy and Economic Impact Assessment Model) to elaborate more thoroughly the previous analysis. The model is integrated with the Kalman filter, which is used to identify the main disturbances that shaped economic fluctuations in Poland and other CEE countries between 1995 and 2010.

In particular, following Bukowski, Koloch and Lewandowski (2008) the focus is on the Russian crisis and the economic downturn in Poland and Slovakia of 2001-2003, as well as on acceleration of growth around the EU accession. As far as it is currently possible (as the European countries still suffer from the aftermath of the subprime crisis), we attempt to analyse the reasons for which the crisis of 2008-2009 affected Poland differently than the Baltic States, Slovakia, Hungary and the Czech Republic. The main types of shocks, identified as essential for the fluctuations of economies in the region, are as follows: (1) technological shock, which impacts on the fluctuations in labour and capital productivity, (2) labour supply shock, influencing the size of economically active population, (3) labour demand shock, affecting the intensity of flows between employment and unemployment, (4) preference shock, increasing the preference for imported goods, and finally two fiscal (spending) shocks – (5) public consumption shock and (6) public capital investment shock.

Box I.2. Decomposition of cyclical fluctuations – methodology.

Economics provides two basic types of tools enabling the *ex-post* analysis of the disturbances behind cyclical fluctuations. The first utilises structural vector autoregression or vector error correction models (SVAR or sVECM) which are expanded versions of classic VAR / VECM models, where some relationships between variables included in the model are predefined by constraints that derived indirectly from economic theory. Such model was applied to the NMS economies by Bukowski, Koloch and Lewandowski (2008). The authors estimated panel sVECM model and conducted a counterfactual simulations of evolution of the economies in the region in a period between 1996-2007. It allowed them to identify some shocks responsible for the observed evolution of these economies.

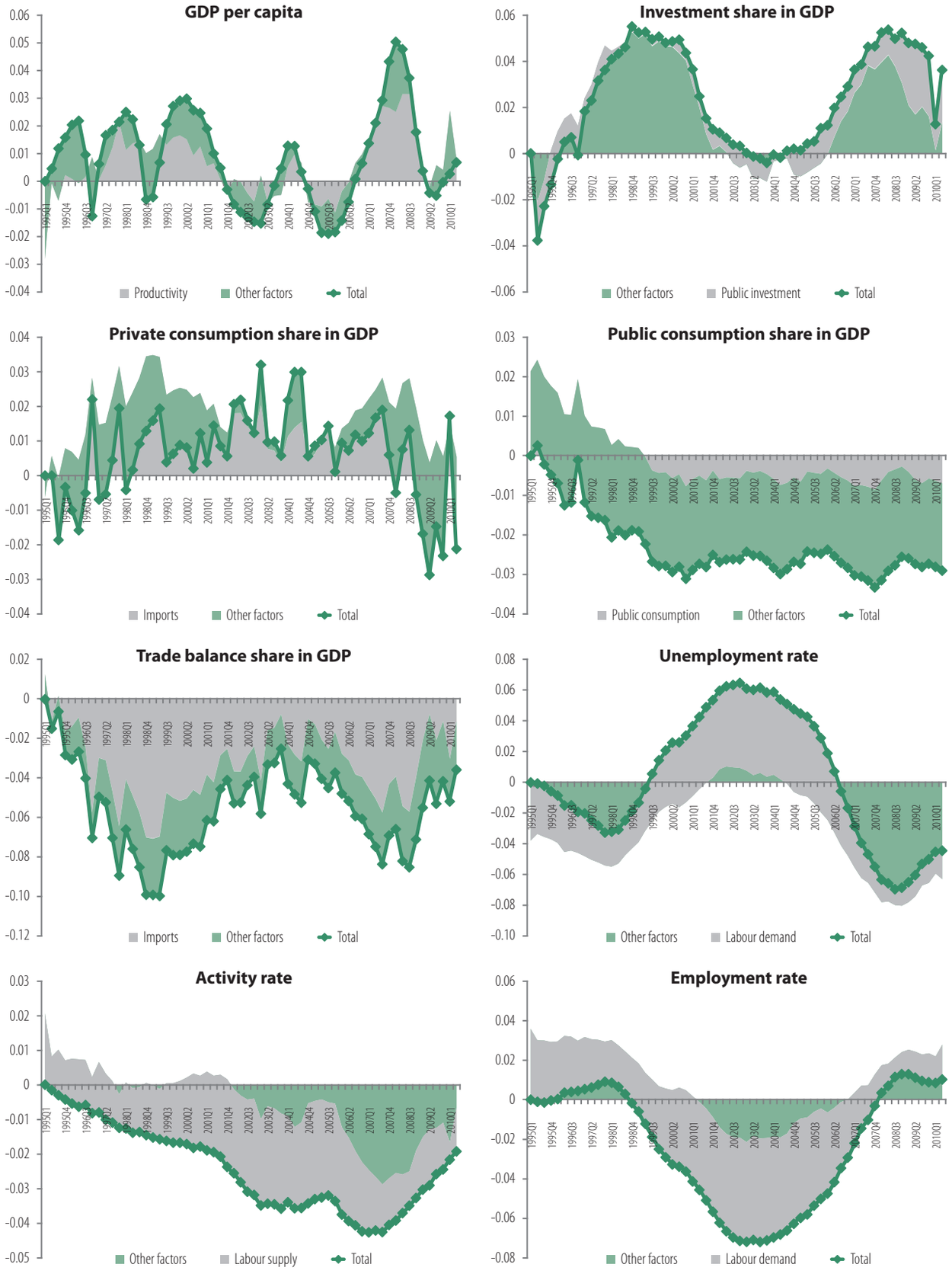
The second type of economic tools facilitating the identification of aggregate shocks experienced by a given economy or a group of economies, and quantifying the response economies to these shocks, are structural,general equilibrium models of the RBC /DSGE class (Dynamic Stochastic General Equilibrium). In contrast to structural VAR models, the causality relationships between specific economic phenomena in such models are set by their internal mathematical structure, so there is no need to use additional restrictions from another class of models. Their structure is much more complicated as compared to SVAR / sVECM models which enables a significant reduction in the number of free parameters in DSGE models, and thus reliable identification of higher number of potential factors behind changes in the economic situation.



In this chapter the DSGE methodology is used, including the simulations of EU-SEPIA model which is a slightly revised version of the EU-ImpactMod III model, which was used in the previous edition of *Employment in Poland*. EU-SEPIA Model is a DSGE model equipped with demographic and labour market blocks. It enables the *ex-post* analysis of impact of several types of demand and supply shocks on various economies (including demographic shocks, shocks to matching technology, shocks changing the bargaining power of employees and employers, labour demand shocks, productivity shocks causing deviations from the convergence trend of given economy, etc.)

Solved and parameterized model in this form facilitates, with the use of recursive procedure (so-called smooth Kalman filter – see Simon, 2006) adapted to this end, to decompose the evolution of historical time series, and in particular their deviation from the long-term trend, into contributions of most important shocks. In the presented simulations, the information set includes all variables – economic activity, employment, unemployment, GDP per capita and investment, public consumption and trade balance shares in GDP (see IBS, 2010a). The application of smooth Kalman filtering procedure enables the identification of shocks that were likely to be experienced by the Polish and other NMS economies, during the pre- and post-accession periods, especially during the global financial crisis, which influenced the emerging markets in Eastern and Central Europe.

Figure I.20. Factors determining cyclical fluctuations in Poland between the first quarter of 1995 and the second quarter of 2010.



Comments: The figures show deviations from the trend (GDP) or from the initial value (other variables) in percentage points (labour market variables) or percent (other variables), in decimal notation, decomposed into the impact of the most significant shocks determining the deviation of a given variable from the specified reference value. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

Figure I.20 shows that, in accordance with the real business cycle theory, this model identifies the productivity shocks as a major source of cyclical fluctuations in the Polish economy. The results obtained suggest that these shocks were responsible for about two thirds of deviations of GDP from long-term.These shocks were also major, although indirect cause of cyclical changes in the level of investment. In case of investment, however, a substantial part of the changes, especially those recorded during the 2001-2002 slowdown and also during the global economic crisis of 2008-2009, remains unexplained by technological disturbances. The decomposition identifies public investment as the factor that alleviated the fluctuations in the economy between 2002 and 2004, and especially in the years 2008-2010. In fact, it may be concluded that, if it hadn't been for the significant increase in public investment in the past two years, Poland would have been affected (with lower growth and employment) by the subprime crisis much more than it actually was.

However, the role of discretionary fiscal policy pursued traditionally (i.e. through public consumption) appears to be marginal – the negative deviation from the initial value of such spending in the analysed period seems to be rather permanent than cyclical. Only a small proportion of these spending changes may be explained by the discretionary shocks, and their impact on the labour market was similarly irrelevant. The situation is different in the case of private consumption shocks. They are crucial for explaining the evolution of consumption and current account balance (both in relation to GDP) in Poland between 1995 and 2010. Other aggregate shocks explain about 20-25 percent of the increase in the share of consumption and associated deterioration of the current account balance in that period. Thus, if these shocks had not occurred, larger savings and lower trade deficit might have followed as a result.

The importance of supply shocks for the evolution of economic activity in Poland should also be emphasised. A significant decline in activity rates over the years, which, as mentioned in the previous section, influenced the changes in employment and unemployment, cannot be explained by neither deviations of productivity from trend, nor by labour demand, public spending shocks, nor by any other factor to a degree comparable with the disturbances in the supply of labour. This observation is congruent with the conclusions of previous editions of *Employment in Poland* (see Ministry of Economy and Labour 2005, CRZL / IBS 2010) which stressed that the increase in consumption of leisure (mostly by people over 45 years of age), induced by the availability of social transfers, was responsible for this situation. However, according to the results of the shock filtration, in the last few years this process was visibly halted, and the supply factor has put a relatively much weaker downward pressure on activity than in previous years.

Demand factors underwent a similar evolution. While in the past declines in the demand for labour explained a significant part of the changes on the labour market, including the increase in unemployment and decrease in employment in the period 2000-2005, in the last five years the importance of labour demand shocks was lower. One of the reasons stems from the fact that despite a significant increase in unemployment at the turn of the millennium and the decrease of growth rate by 4 percentage points, only little changes in the labour productivity dynamics followed. This suggests that the slowdown of 2001-2002 had a strong reallocation component, i.e. was associated with a reduction of excess employment in some enterprises and a gradual reallocation (often via unemployment) of workers to other, more productive companies. In the current crisis, when the scale of reallocation in Poland was much lower, this was not necessary.

The simulations presented on Figures I.21-I.23 also reveal that not only the evolution of general macroeconomic situation, but also the primary sources of cyclical fluctuations differed in the NMS. While in Poland and the Baltic States the fluctuations in productivity seemed to be of key importance for deviations of GDP from its medium-and long-term growth trend, in the Czech Republic and Slovakia other disturbances, non-technological in nature, influenced the evolution of output. Technological shocks only intensified the final depth of the recessions experienced by these countries. In turn, fluctuations in demand for labour generally (with the exception of Slovakia) exacerbated the unemployment. In other words, had the labour demand shocks in Poland and most of the NMS been smaller over the course of the analysed period, the unemployment rate would have been lower, and the employment rate – higher.

In this context it is worth emphasising that the activity rate in Poland, the Czech Republic, Lithuania and Slovakia in 1995-2005 remained under strong influence of negative supply shocks. If it had not been for decreases in the households' supply of labour recorded during this period, in 2005 the economic activity rate in Poland would have been by 3.5 percentage points higher than actually recorded. In Slovakia and Czech Rep. it would have been higher by 2 and 1 percentage point respectively. But, in the last five years, the role of labour supply shocks (independent of other phenomena in the economy), in explaining the changes in activity rate, has been decreasing in all these countries. Thus, it seems that all the countries in the region have made some progress in reducing the outflows to economic inactivity as a factor influencing the size of active and working population. However, as the decline in labour supply in the pre-accession period was significant, even considering the recent improvement, only in Slovenia, Latvia and Hungary the economic activity rate as currently recorded is higher than in 1995.[16] Poland stands out among the NMS; in the past years a clear improvement of this rate has occurred, and this could be associated with structural reforms which limited the access to social transfers addressed to people in pre-retirement age. It should not be forgotten that, despite recent progress, the gap between Poland and Western European countries, as well as some countries of the region such as Estonia or the Czech Republic, is still significant. As stated in *Employment in Poland 2008*, this gap will not be reduced without further reforms aiming at increasing participation of groups currently underemployed, such as people under 25, women in the childbearing (25-34) and childrearing age (35-44), men in some professional groups particularly prone to early exit from the labour market and women between 60 and 65/67 years of age.

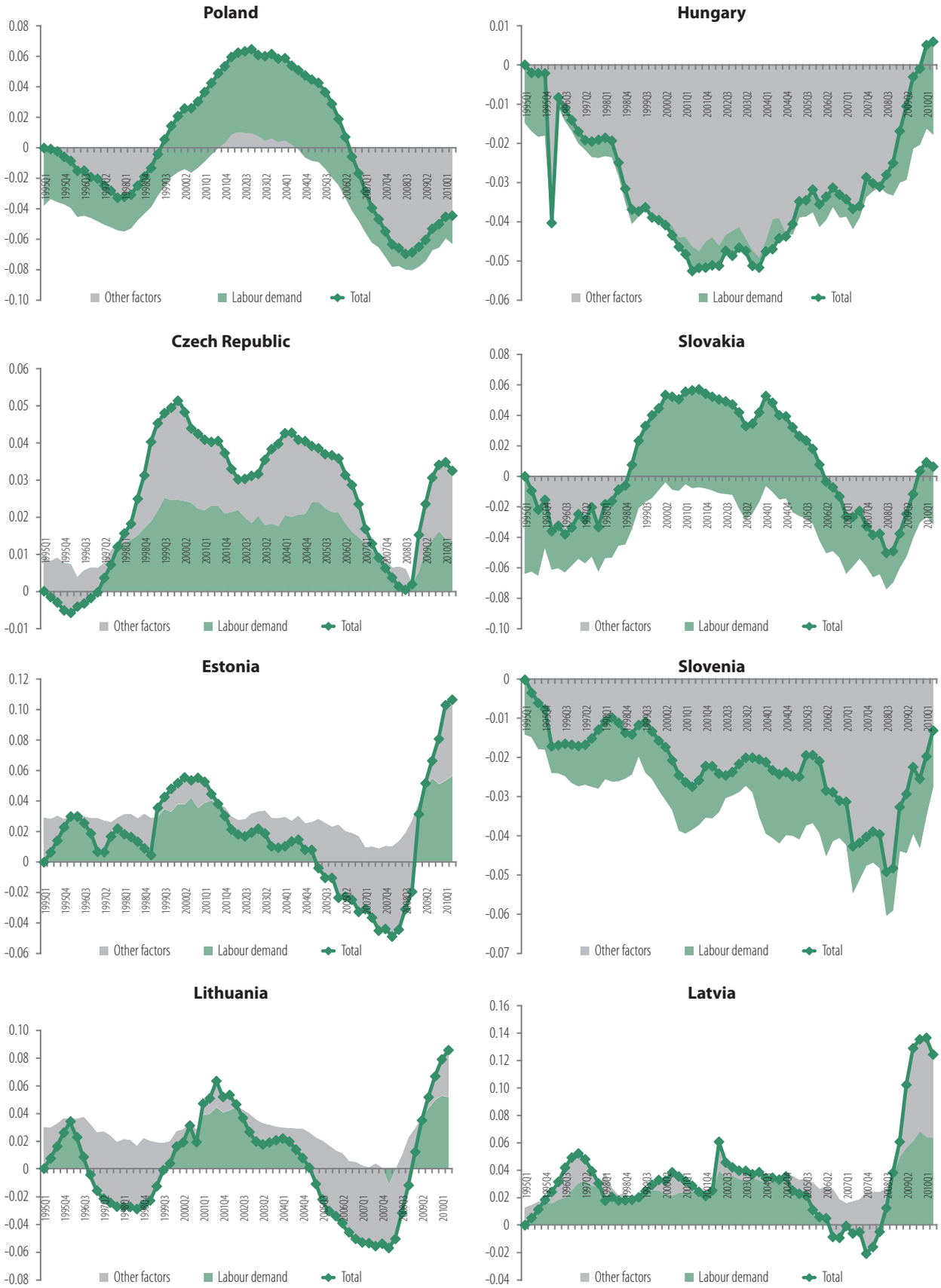
[16] It is the lowest in Hungary and in Poland, and the highest, despite some recent decline – in Estonia and the Czech Republic.

Figure I.21. Fluctuations in GDP per capita in NMS8 vs. changes in productivity (technology shocks) between the first quarter of 1995 and the second quarter of 2010.

Comments: Deviations from trend of GDP, in percent (decimal notation), decomposed into the contributions of productivity shocks and other significant shocks. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

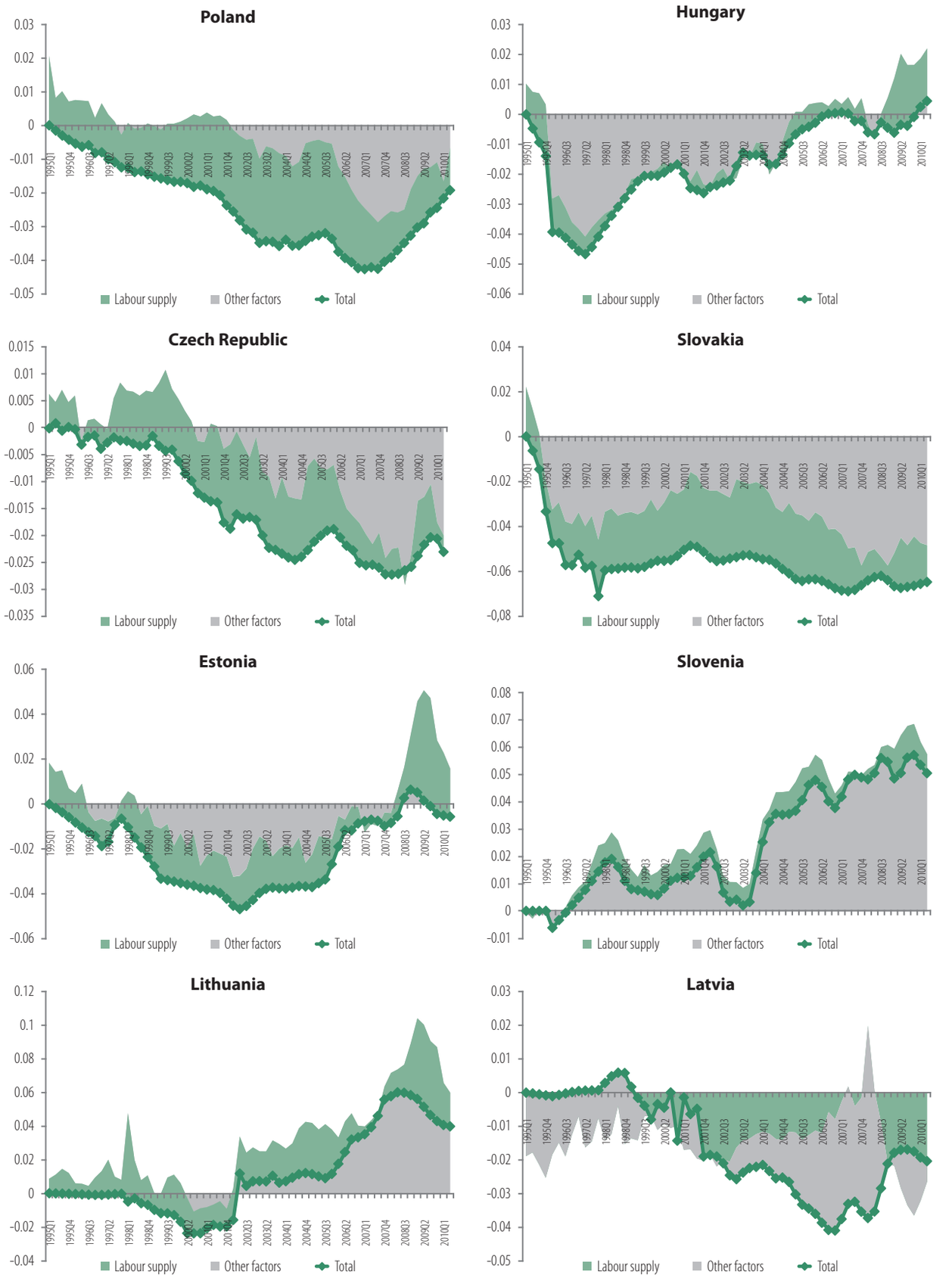
Figure I.22. Fluctuations in the unemployment rate in NMS8 vs. labour demand shocks between the first quarter of 1995 and the second quarter of 2010.



Comments: Deviations from initial value of unemployment rate, in percentage points (decimal notation), decomposed into the impact of labour demand shocks and other significant shocks. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

Figure I.23. Fluctuations in the activity rate in NMS8 vs. labour supply shocks between the first quarter of 1995 and the second quarter of 2010.



Comments: Deviations from initial value of activityt rate, in percentage points (decimal notation), decomposed into the impact of labour supply shocks and other significant shocks. Quarterly data.

Source: Own calculations based on Eurostat and OECD data.

2.3. Institutional determinants of adjustment to macroeconomic shocks

International differences in the size and persistence of the effects of macroeconomic shocks on the labour market are usually attributed to the institutional environment of the product and labour markets. The labour market institutions are discussed in every edition of the *Employment in Poland*. When it comes to the product market, institutions are usually defined as all factors that condition and determine setting up, managing, developing, and closing a business. These institutions can be formal (including legal regulations) and informal, such as the model of social dialogue or the bureaucratic culture. For a long time, researchers studied product market institutions essentially with regard to their impact on long-term growth. In recent years, the literature started to examine them also from the short-term perspective, i.e. examining how regulations affect the adaptability and flexibility of the economy, with three main directions of research (see Shiantarelli, 2005) – (i) plant dynamics, i.e. analyses of formation, growth and decline of enterprises (see for the USA – Olley, Pakes, 1996, for Italy – Bottasso, Sembenelli, 2001; for India – Aghion et al., 2006), (ii) the potential impact of institutions on real and nominal rigidities (Dexter et al., 2004; Lunnemann, Matha, 2005), and (iii) macroeconomic links between the institutional background of the economy and the amplitude and persistence of cyclical fluctuations (Duval et al., 2007) and/or absorption of shocks in the highly and medium-developed economies (Bergoeing et al., 2004), including Poland and other countries in the region (Lewandowski et al., 2008).

The aforementioned research shares a conviction that plant dynamics is lower and reallocation of inputs less effective in countries with e.g. greater barriers to entry into certain markets, higher restrictions on foreign trade and longer, costlier bureaucratic procedures. Consequently, depth and duration of recessions in economies with more restrictive regulations differ from recessions in economies with a 'more friendly' institutional and regulatory model.

This view is supported by empirical studies. Bergoeing et al. (2004), on the basis of cross-sectional analysis of several dozen highly- or medium-developed economies, show that the pace of economies' exit from recession is determined by plant dynamics. Therefore, any regulations that slow down the opening and closing of businesses increase the duration of shock absorption. A slightly different perspective is presented by Duval et al. (2007), who treat the depth and persistence of shocks' impact (deviations of output from the trend, as result of the shock) as two different dimensions of economic fluctuations – related to each other but under the influence of slightly different processes. In their analysis of GDP fluctuations in 20 OECD countries from 1982 to 2003, Duval et al. (2007) distinguish three groups of economies which differ in the responses to shocks. These are (i) the Anglo-Saxon countries, where the amplitude of GDP is high, but shocks are short-lived, (ii) the continental European countries where the initial responses to shocks are not as deep but more persistent than in the U.S. or the UK, and (iii) certain small European countries (Scandinavian countries, the Netherlands), in which low elasticity of GDP to shocks is accompanied by the ability to swiftly return to equilibrium. Duval et al. (2007) show that the different responses to shocks are largely determined by the degree of competition in the product market – countries with more comprehensive and burdensome regulations experience lower amplitude of fluctuations but it takes them significantly longer to absorb them. Restrictive labour market regulations, in particular employment protection legislation (EPL), also extends the time necessary to absorb shocks. Interestingly, the model of the financial system (i.e. the ratio of banks vs. stock market financing of the private sector) is not relevant to the absorption of macroeconomic shocks.

The adverse impact of employment protection legislation on the adaptation of economies to macroeconomic disturbances is confirmed in literature on the labour market. Although more stringent regulations restrict the initial adjustment of employment (as they hinder dismissals), they also lengthen the time needed to adapt to new conditions and return to the equilibrium levels of unemployment and employment (see Baranowska, Lewandowski, 2008). Empirical analyses for OECD countries (OECD, 2006) show that restrictive EPL significantly lengthens the time needed to absorb the shock. The tax wedge has a similar effect. Although Bassanini, Duval (2006) and OECD (2006) show that a high tax wedge reduces the initial impact of shocks on employment and unemployment, this causality may be spurious – in high taxation countries the role of automatic stabilisers is automatically stronger than in low taxation countries. Several studies indicate that the importance of the tax wedge increases with wage rigidity, for example when collective bargaining is performed at a sectoral level (Elmeskov et al., 1998), when trade union density increases (IMF, 2003), or when the coordination of bargaining is smaller (Nickell et al., 2005). In general, empirical results for various countries (see extensive review of the literature in Aidt, Tzannatos, 2005) do not provide conclusive evidence on the impact of unions on the labour market. Bassanini, Duval (2006) argue that the relative strength of unions, measured by the coverage of collective agreements significantly (though moderately) lengthen the time of shock absorption, whereas high coordination and the ability of the parties to achieve consensus contribute to shorter recovery (OECD, 2006).

Minimum wage is related to the aforementioned factors through the resultant downward wage rigidity. When the productivity of a group of workers is (or turns) lower than the level corresponding to the statutory minimum wage, then it may intensify the quantitative adjustment on the labour market, i.e. decline in employment following an adverse shock. In last 10-25 years, in most developed countries minimum wage has been rather modest and concerned a relatively small group of workers, so the overall impact of this instrument on employment and unemployment has been insignificant. However, Blanchard, Wolfers (2000) show that the effects of higher unemployment in the aftermath of the shock are often most acute for youth and people with little work experience. Therefore, the higher the minimum wage, the greater the likelihood of dismissals affecting this and other groups with low productivity,

and the stronger the adjustment of employment and unemployment. Similarly, as we show in Part III, a high minimum wage may make it more difficult for the unemployed to find a job (decrease the probability of finding one), and ultimately increase the inertia of the shock.

The adaptation of the labour market to external shocks depends crucially on the fast re-employment of people who lost jobs and/or on the acquisition of new skills to enhance it. Micro-econometric studies indicate that the generosity of the benefit system increases the average duration of unemployment, and consequently, due to the decline in productivity and the depreciation of human capital, reduces the likelihood of a swift re-employment (Blanchard, Wolfers 2000; Bassanini, Duval, 2006). Empirical studies (OECD, 2006) show that on aggregate level, high replacement rate of unemployment benefit increases the initial impact of a shock on unemployment, and also extends the period of absorption.

This effect may be compensated for by active labour market policies aimed at increasing the likelihood of finding stable job by the unemployed and reducing the cost of job search. Although the impact of ALMPs on employment and unemployment in equilibrium is limited, due to external effects that have been widely discussed in the literature (Martin, 2000, Betcherman et al., 2004, Ministry of Labour and Social Policy, 2007), 'properly' designed and performed ALMPs may facilitate absorption of shocks, thanks to a greater adaptability of workers to economic change and increased reallocation of labour, also between sectors. Both Blanchard, Wolfers (2000) and Bassanini, Duval (2006) present empirical support for the argument that higher spending on ALMPs is accompanied by faster absorption of shocks on the labour market.

Table I.6. Labour market institutions and their impact on the depth and persistence of labour market shocks.

Policies and institutions	Direct impact	Persistence
Replacement rate	+	insignificant
Tax wedge	-	insignificant
Unions	insignificant	insignificant
Stringency of Employment Protection Legislation	-	+
Scope of product market regulation	-	+
Centralised and coordinated collective bargaining	-	(-)
Scope of ALMP	(-)	-
Homeownership	+	(+)

Comments: Brackets indicate that the impact of the institution was identified only in some of the analyses.
Source: OECD (2006).

The impact of labour market institutions on the depth and persistence of disturbances in the labour market is summarised in Table I.6. In the subsequent parts of the study, which focus on structural developments, labour market dynamics and social dialogue, we show how these institutions influence the labour market in Poland and other EU countries.

Summary

The first chapter of this part of report deals with the response of the Polish economy and labour market to the 2008-2009 crisis, in comparison with adjustments in other developed countries, especially in Europe. Given the widespread decline in the number of employed between the early 2008 and mid-2010 (by 2.6 percent in the European Union) and the increase in the number of unemployed (by 43 percent in the EU), the quantitative adjustment of the Polish labour market was mild – unemployment rate increased by 2 percentage points, and the employment rate increased at the same time by 0.5 percentage points. This employment growth, which occurred despite the slowdown and increase in unemployment, was possible thanks to (i) rising activity rate and (ii) increasing employment in services, which offset the drop in manufacturing employment. Sectoral analyses are elaborated futher in the second part of the report. We also show that the modest impact of the crisis on employment and unemployment was accompanied by reductions in hours worked – as the decline in average weekly hours worked was in relative terms slightly bigger than the increase in employment, the total number of hours worked in Poland fell by 0.4 percent between the first quarter of 2008 and first quarter of 2010.

Compared with the consequences of the Russian crisis a decade ago and the economic slowdown of 2000-2002, the response of the Polish labour market to the global financial crisis of 2008-2009 has been positive. Aggregate changes have so far been much shallower and the risk of long-term unemployment has not increased as much as previously. The moderate impact of the crisis on the labour market in Poland has decreased gap in employment rate between Poland and the EU15 by half, in comparison with the period 2002-2005. A gap in economic activity still remains high, although the negative trend in labour supply, dominant in Poland since the 1990s, slightly reversed in 2007. Taking into account the evolution of outflows from the labour market to the pension system and of economic activity of people aged 50+, it appears that, in the light of the reduction in the scope of the early retirement scheme in 2008, the increase in economic activity should be enhanced as early as 2010.

In the second chapter we analyse of cyclical volatility the labour market in Poland over the previous 15 years, using (i) the cyclical components of basic macroeconomic variables and (ii) deviations of labour market variables from their medium-term trends. Although deviations of output from the trend in 1995-2006 evolved symmetrically, with an amplitude of about 2 percent, the boom of 2007-2008 was accompanied by a greater deviation above the trend. The sensitivity of employment and unemployment to output fluctuations in Poland was substantial in comparison to other EU countries, and strengthened by the medium-term decline in economic activity rate, particularly during the downturn of 2001-2002. In the search for factors behind the fluctuations in the labour market aggregates, we draw attention to the reversal in export dynamics in 1998. Export was also the first factor contributing to acceleration of growth in mid-2005. The disturbances in trade affected the employment rate with some delay, although their impact on the unemployment rate was bit faster.

Shifts in the investment level also played a major role in the changes in the labour market. In 2001 investment began to decline for several years, seemingly in the process of adjustment to over-investment in years 1999-2000. In 2008 fixed capital investment increased to a lavel more than 20 percent above the trend, which led to a significant improvement in the labour market. This was halted by the collapse in exports and reduction in investment plans of companies in the aftermath of the global financial crisis. Interestingly, the Russian crisis did not result in Polish companies reducing their investments despite the declining capital productivity, but during the current economic slowdown their reaction was different. In a short-term, it lead to a deterioration in the labour market, but it allowed a significantly faster exit from the economic slowdown, by about four quarters earlier than 8 years before.

In the past, the Polish labour market used to be influenced primarily by changes in labour demand and the negative supply trend. The situation reversed after 2006 and continued during the crisis. The transmission of the crisis to Poland through collapse of international trade has been mitigated by the positive impact of public investment, financed from EU structural funds. Without it the drop in investment would have been deeper and probably followed by more pronounced deterioration in the labour market. Since at the moment Poland appears to be successfully coming out of the crisis, further progress in the employment rate seems to depend on regulatory and institutional factors that would on the one hand facilitate the economic activity of age groups that so far have been on the margin of the labour market (people after 55 and before 25 years of age), and on the other, reduce the costs of recruiting and employing workers in the open market and lessen the barriers to entry, so that adverse and persistent demand shocks do not affect the Polish labour market again.

Part II. Quality of working life – traditional and modern sectors of the economy

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Introduction

In the second part of this report we present changes in the sectoral structure of employment in Poland and their consequences. Our analysis starts with the traditional approach, focused on productivity. Then we also examine the broader phenomenon of quality of working life, with particular emphasis on employment stability.

The objectives of the Lisbon Strategy, an action and development plan for the economy of the European Union between 2000 and 2010, included improvement of the European labour market both in quantitative terms (creating more jobs) and with respect to quality (improving the quality of working life). In the traditional approach to labour economics, better jobs are those that exhibit greater productivity. As is clear from several studies, the productivity of the Polish economy is low, largely due to an insufficiently modern employment structure, significantly different from those in the EU15. In particular, we need to point out the dominant position of the industrial sector and the relatively large proportion of people employed in agriculture. It seems that despite the 'service revolution', there is still ample room for structural convergence. In this respect, the most promising are financial and business services. However, although one could get an impression that the service sector is a possible direction of flow of labour from traditional sections and especially from agriculture, such structural changes are not taking place.

Structural changes in the economy, with particular emphasis on the labour market, are not insensitive to changes in the quality of working life and involve a whole range of issues. These dimensions include health and safety at work, autonomy in the workplace, psychosocial needs (e.g. need for self-fulfilment), and the work-life balance. It is worth noting that in recent years these aspects have been gaining importance in public discourse, mainly as a result of the confrontation between traditional European values and the challenges of the modernisation and ageing of populations.

1. Structural changes in the Polish economy

This chapter covers a range of issues associated with structural changes in the Polish economy, examined both in spatial and temporal cross-sections. First, we focus on the size and directions of changes in the Polish sectoral structure against EU15 (convergence objective) and NMS (economies with similar initial levels). Based on this knowledge, we endeavour to determine the relationship between the industrial structure of the economy and its productivity. Then we analyze the reduction of the productivity gap between Poland and Western Europe. A question arises as to what extent this process is due to reallocation of labour and to what extent it is due to internal industry convergence. In the second section of this chapter we endeavour to determine whether Polish agriculture, manufacturing and services differ in a qualitative way with respect to labour market flows and changes in productivity. Finally, we look at gross flows of labour, in order to assess the potential mobility of those employed in the sectors, and the openness of sectors to new employees.

1.1. Size and directions of changes in the sectoral structure of the Polish economy

Changes in the sectoral structure are an integral part of economic modernisation. In the early stages, human activity was long focused on agriculture and farming. The inventions of the 18th, 19th and early 20th centuries, i.e. steam machines, electricity and the internal combustion engine, transferred the process of development from agriculture to manufacturing. Then, in the 1950s and 1960s, most developed countries began to gradually move to the stage of 'service economy', with more than half of the workforce employed outside agriculture and manufacturing (Fuchs 1968). Assuming that the development of post-socialist economies will proceed according to the path traced out earlier by the United States and Western Europe, it could be expected that in a dozen or so years the economic structure of the new EU Member States, including Poland, will have had a noticeably higher share of services than today (both in the structure of value added and employment), a much smaller role for agriculture and a significantly lower role for manufacturing. At the same time, one could expect the reallocation of labour within services and manufacturing.

Table II.1. Share of economic sectors in employment in 2007 and employment changes in 2000-2007 in the European Union (in percent).

	EU15		NMS7		Poland	
	percentage share 2007	changes in 2000-2007	percentage share 2007	changes in 2000-2007	percentage share 2007	changes 2000-2007
Agriculture	3.2	-12.5	5.3	-27.5	14.0	-14.6
Manufacturing	26.5	0.0	36.1	9.0	31.1	4.1
Market services	39.0	15.6	34.0	15.0	32.1	19.9
Non-market services	31.3	15.8	24.6	7.0	22.8	7.0

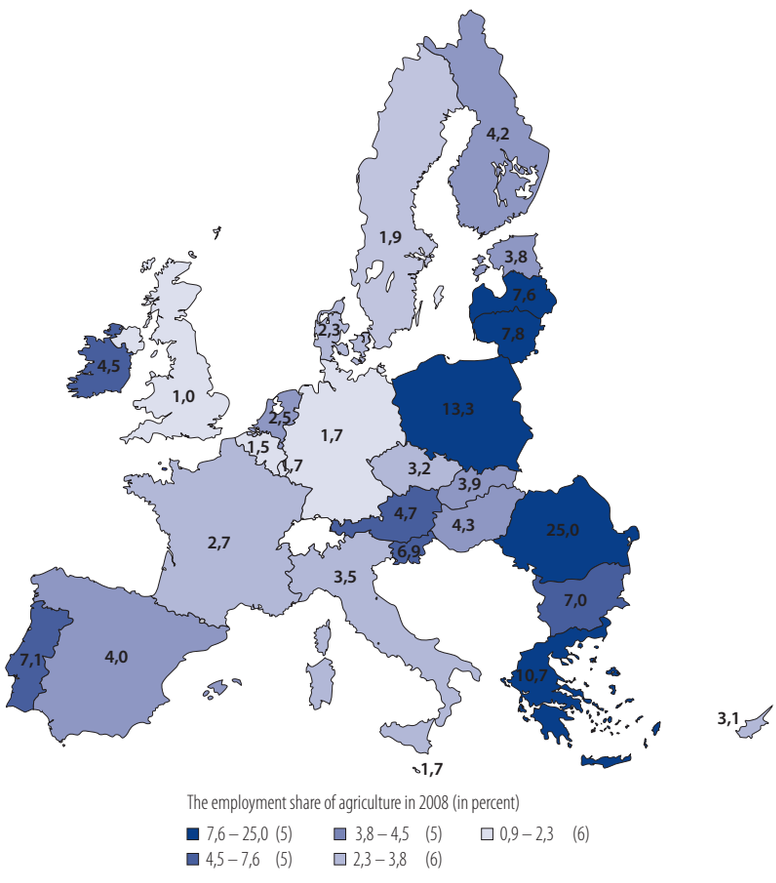
Note: NMS7- accession countries in 2004, excluding Poland, Malta and Cyprus.
Note 2: Data for later years, due to the introduction of NACE Rev.2 classification, do not guarantee full comparability, and therefore the time series has been limited to years 2000-2007.
Source: Own calculations based on Eurostat data.

It should be emphasized that the modernisation processes in each country were different in scale. While in all the European countries agriculture had the smallest and services the greatest share of employment (see Table II.1), the actual numbers were very different among the EU countries. For example, the Polish economy has one of the most traditional economic structures in the EU27. The share of Polish agriculture in employment in 2007 was approximately four times larger than in the EU15, and nearly three times greater than in the NMS7 (14 percent against respectively 3.2 percent and 5.3 percent). At the same time, a strong downward trend in the proportion of those employed in agriculture was common for all the NMS8. The accession countries had a higher employment in manufacturing than the 'old EU'- in Poland this difference was 4.7 percentage points and in the remaining NMS7 the average difference was 9.7 percentage points. The logical consequence is a far higher share of services in total employment in the EU15 – in 2007 it amounted to more than 70 percent (in the NMS7 – 58.5 percent, Poland – 54.9 percent). At the same time, however, differences in relative employment in market services were much lower, which means that the relatively greater role of services in employment in the EU15 was due to more complex public services. In Poland, both the direction and dynamics of changes in employment structure indicate a gradual convergence to the EU15 – the fastest is the employment growth in market services, while manufacturing employment remained essentially constant and in agriculture it was decreasing.

Box II.1. Agriculture in Europe and Poland.

In Poland, unlike most European countries, the number of employed in agriculture is an important quantitative category of the labour market. While in 2008 the EU15 population segment aged 15-64 was more than 9.8 times greater than in Poland, the proportion of those employed in agriculture was only about 2.4 to 1. In most Western European countries the share of agriculture in employment in 2008 did not exceed 3 percent; whereas in Poland it was 13.3 percent (see Map II.1.). What distinguishes agriculture from the remaining sectors is the unique factor of land, a high sensitivity to climate and weather conditions, the cyclical nature of production, a strong regulation of agricultural production and a high level of state intervention. It is therefore difficult to compare this sector with any other. As these problems to a similar degree affect all farmers across Europe, there must be other factors that determine the relative disadvantage of Polish agriculture compared to Western Europe.

Map II.1. Share of agriculture in employment in EU27 in 2008.



Source: Own calculations based on Eurostat data.

Source: Own elaboration based on KPP (2007).

Literature provides a number of explanations concerning the growing importance of services in developed countries. The first group of concepts relates to demand factors. The most traditional explanation suggests that services are luxury goods, so that in their case the income elasticity of demand is greater than 1 (Fisher 1935 and Clark 1940). In this approach the demand for services grows faster than disposable income. In the case of services for households, this view is connected with the theories of hierarchy of human needs (e.g. Maslow's famous pyramid), according to which the satisfaction of material needs (food, durable goods) takes precedence over the satisfaction of intangible needs (services). Another explanation is based on the 'marketisation' of activities that were previously performed by households (Fuchs 1980). In this perspective, the expansion of the services sector would be a side effect of changes in the division of responsibilities within the family and the emancipation of women. In Western countries, this phenomenon coincided with the increased activity of women in the labour market. However, in post-socialist countries development of the services sector since the beginning of the 1990s must have had a different cause, as the economic activity of women had already been high. A third explanation of the growing importance of services in developed countries relates to business activities and is associated with *outsourcing*, i.e. have external entities perform services that previously had been provided in-house (Raa, Wolff 1995, Fixler, Siegel 1999).

The second group of concepts explaining the increased role of the third sector in creating employment and value added are supply-side explanations. Baumol (1967) formulated the hypothesis of *cost disease,* in which the structure of real demand remains the same, and where extensive development of the service sector is due to the relatively lower pace of technological progress. The increase in the reallocation of hours of work to services resulted directly from a relative reduction in labour productivity in services, measured by the ratio between value added in constant prices to the number of hours worked. A reduction in the costs of manufactured goods resulting from faster technological progress in manufacturing induced, in turn, a decline in their relative prices. This meant their subsequent growth in the services sector. That hypothesis, however, requires the effective inelasticity of sector demand for the products of any industry. Both income elasticity and mixed price elasticity should be low, the latter meaning low substitutability between goods and services. A second supply-side explanation is the deindustrialisation of developed countries (Freeman 1995, Wood 1995), and hence the reallocation of labour-intensive manufacturing sectors to the second or third world. The resulting achieved surplus of labour would be reallocated to services.

Empirical arguments do not unambiguously support any of the aforementioned groups of hypotheses. They suggest, however, the low significance of outsourcing and deindustrialisation, or the growing marketisation of household production (Kim 2006, Schettkat 2007, Ricaurte, 2009). Alternative explanations are presented by institutional hypotheses. Ricaurte (2009) formulated a hypothesis according to which both the relative increase in importance of services and international differences may be fully explained by the level of competition in product and labour markets. Imperfect market competition in the manufacturing industry enables more productive workers to seize a part of the monopoly surplus. If the division of surplus needed a bargaining process associated with a fixed cost, fewer high-skilled workers would be employed in the service sector.

In order to evaluate structural changes in the Polish economy against the EU we decomposed changes in the structure of the value added into labour input, real labour productivity and price level (see Figure II.2). In principle, changes in productivity and labour input should be mutually contradictory, but in some circumstances this is not the case.[1] In the last decade this exception could be observed in the Polish manufacturing, mining and energy sectors. In the first mentioned sector, the increase in productivity was accompanied by the inflow of labour, opposite to the situation in the EU15 where the importance of manufacturing was decreasing (both in the value added composition and employment structure). The increase in labour productivity in Polish manufacturing, achieved with a better use of physical capital and technological progress, was so significant that it exceeded the change in the opposite direction induced by increased employment. Thus the perception of manufacturing as a traditional sector as opposed to services is inadequate, because with respect to productivity the Polish manufacturing industry has had a distinct ability to simultaneously increase efficiency and employment. It does not change the fact that in the EU15 and remaining NMS the share of manufacturing in the output structure and value added had been decreasing for many years.

From the perspective of productivity changes and share in the employment structure, especially the mining industry, and the electricity, gas and water supply can be perceived as traditional. In terms of productivity and employment, their economic importance has decreased over the last decade, the significant increase in prices generated by these sectors has increased their share in value added both in the EU15 and the NMS, or at best remained at an unchanged level (in Poland). A significant increase in the international demand for natural resources was accompanied by a real production growth that was much lower than the growth of the total economy and which contributed to the increase in relative prices. This inelasticity of supply can be explained mainly by the high capital intensity, stringent regulations and dependence on the availability of natural resources – making it difficult to adjust production to demand.

Besides manufacturing and financial intermediation, an above-average increase in labour productivity in Europe in 2001-2008 was also observed in 'agriculture, forestry, hunting and fishing', which all experienced a significant decline in employment – both in relative and absolute terms. In Poland, this trend was accompanied by a real growth of value added produced in this sector (albeit slower than the growth of the entire economy). Although Polish agriculture was gradually reducing its excess employment, the process cannot yet be considered complete as the gap between Poland and Western Europe with regard to labour productivity and labour intensity in agricultural production is still high, due also to the small size of farms and low marketability (see Box II.2).

[1] Expansion of employment is accompanied by the 'dispersion' of capital, i.e. diminishing capital per working hour ratio. Another thing is the very mechanism of selection – most productive individuals are hired first.

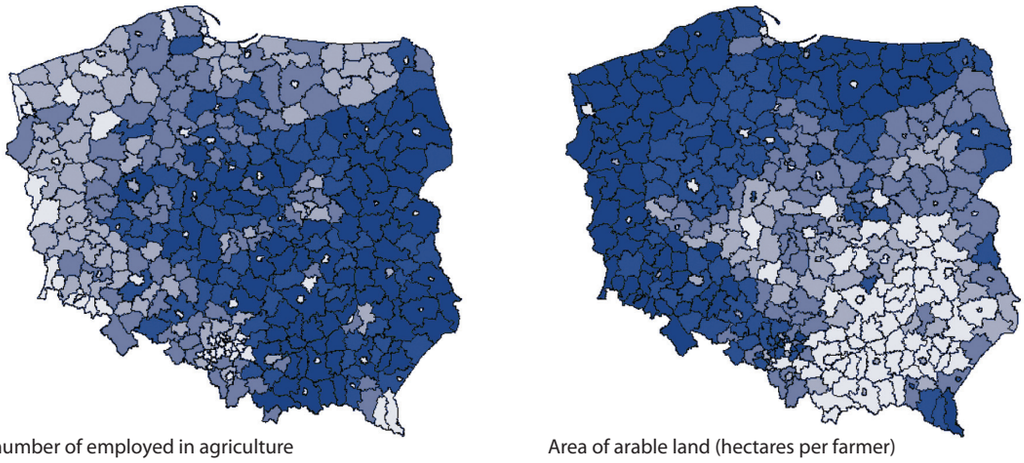
Box II.2. Agriculture in Poland – specific characteristics.

In comparison with the EU27, Poland has a high share of agriculture in employment, also with a disadvantageous demographical and educational structure of this agricultural workforce. A significant percentage of farmers belong to the **prime-age** group (25-44), so that individuals with the highest productivity in their course of life are allocated to the least productive sector, thus affecting the total output. Another problem is the **low marginal ratio of hired workers** in this sector. In Poland, only every tenth agricultural worker was hired (compared with 38.8 percent in the EU15 in 2008), which results in a very limited use of scale effect among Polish agricultural producers. Polish agriculture also has **a disproportionately high percentage of self-employed women** (as compared to hired female workers). In 2008 women constituted about 44 percent of agricultural labour, and 90 percent of them were self-employed. Although this level of feminisation of the workforce is similar to other sectors of the Polish economy, in the most developed countries of the European Union this proportion is much lower. Generally speaking, feminisation of agriculture in the EU15 is up to 30 percentage points lower than overall in their entire economies. This high feminisation of agricultural labour in Poland and a high rate of self-employment among women is connected with the low marketability and small size of farms in Poland, and the **'familial' and non-market nature of the agricultural sector** in Poland.

The high rates of feminisation of employment in agriculture also occur in some poorer countries of the EU15, although at greater marketability and greater average farm sizes than in Poland. This applies especially to Portugal, where the rate of feminisation of agriculture is currently approximately 50 percent (compared to 55 percent in 2000). In this dimension, the Portuguese agricultural sector remains in sharp contrast with the Spanish agricultural sector where the feminisation rate in this period ranged from 25 to 28 percent. At the same time, the ownership structure, size of farms and agricultural production in the two Iberian countries were much more similar to each other than the respective characteristic of agriculture in Poland and Portugal. It seems that the relatively high feminisation of labour in Portuguese agriculture is connected more with the lower development of market services than in Spain (total difference in the structure of employment is 6 percent and for working women – 12 percentage points) than with the specificity of agriculture itself. The underdevelopment of services means fewer opportunities for labour migration of women employed in agriculture. It seems that in Poland the high rate of feminisation of employment in agriculture is connected not only with the structure of production in this sector but also with **limitations of professional migration to other types of jobs**.

Another characteristic feature of Polish agriculture is the already mentioned **small average size of farms**. Even using administrative data (which underestimates employment in agriculture by 5-15 percent in relation to LFS data), only about 22 percent of Polish *powiats* (rough equivalent of counties) there is more than 14.8 ha of arable land per farmer (see Map 2.2). In a similar number of *powiats* this ratio ranges from 0.8 to 5.7 ha, which in extreme cases means a surface area similar to a standard soccer field. The combination of high employment in agriculture and strong fragmentation should be interpreted in three ways. Firstly, a problem of **hidden unemployment**, which means that agricultural employees are often totally unproductive in economic terms. Secondly, as a result of this lack of productivity, the payment for work in agriculture, a sector already inherently less productive than manufacturing and services, is divided among more people, which makes it difficult to obtain income per capita comparable to that in other sectors. Thirdly, the agricultural land fragmentation in Poland makes it difficult to obtain **economies of scale**, even with the more efficient use of agricultural machinery. Lastly, regional analysis shows the **high spatial heterogeneity of Polish agriculture**. As a rule, agricultural employment is higher in southern and eastern Poland which results in a lower area of arable land per farmer. As these patterns are known to have formed in the 19th century, recent data only confirms the ossification in the sector. In the 19th century, the lands under Prussian (German) occupation had the largest average farm size; far greater fragmentation was visible in the lands under the Austrian and Russian occupation. Since then, these differences have not been significantly reduced.

Map II.2. The number of employed in agriculture (left) and arable land per an employed in agriculture (right) by *poviats* in 2005.



The number of employed in agriculture

- 8 900 – 24 900 (77)
- 5 600 – 8 900 (73)
- 3 400 – 5 600 (76)
- 1 500 – 2 400 (74)
- 0 – 1 500 (79)

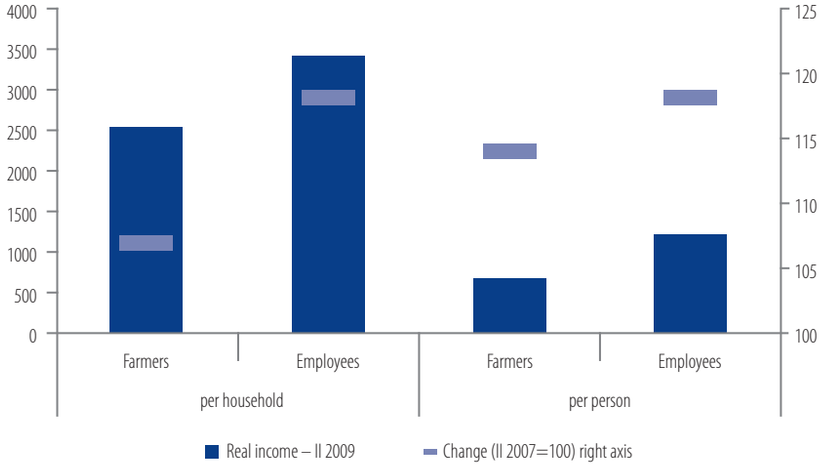
Area of arable land (hectares per farmer)

- 14,8 – 53,2 (84)
- 9,6 – 14,8 (76)
- 7,3 – 9,6 (74)
- 5,7 – 7,3 (58)
- 0,8 – 5,7 (87)

Source: Own calculations based on the data of Central Statistical Office Regional Data Bank.

As a result of the characteristics of the Polish agricultural sector described in Box II.2, the average wage is lower, which, combined with lower productivity than in manufacturing and services, indicates a severe problem of the working poor in Polish agriculture. Both the level of income and its real growth in 2007-2009 were lower among farmers than in other sectors. Even if we take into account the farmers' aspirations with regard to the lowest income, the lowest among the examined socio-economic groups (1033 zlotys per equivalent unit),[2] their earnings are still low and basically there are no signs of significant improvement in the future if the sector does not accelerate the reduction in the labour force.

Figure II.1. Income in agriculture and outside agriculture in Poland in 2009 (in PLN).



Source: Own calculations based on Diagnoza Społeczna 2009 (Social Diagnosis 2009) data.

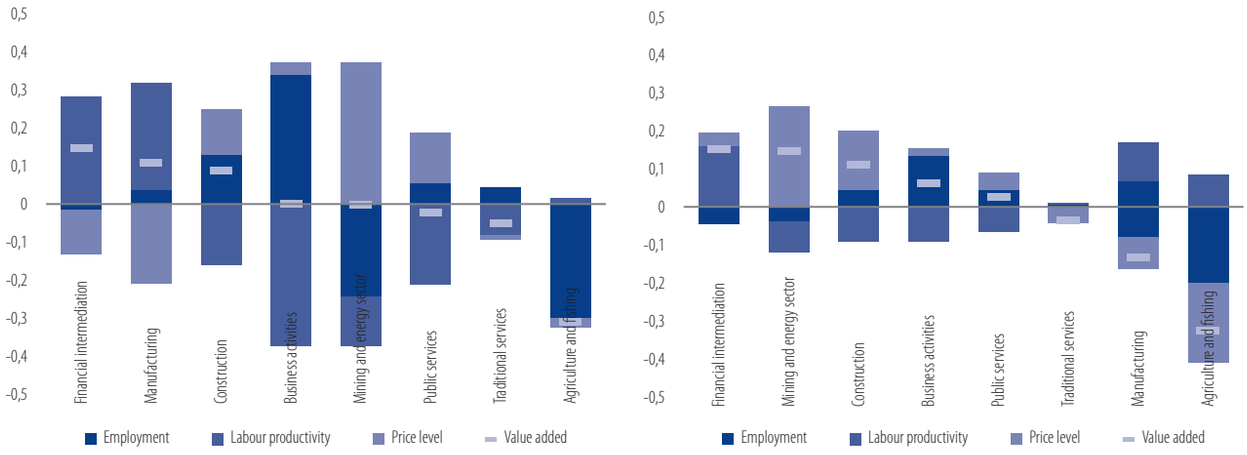
Public services and construction across Europe (including Poland) have experienced the effect of *cost disease*. An increase of the productivity gap, for example in comparison with manufacturing, was accompanied by a relative increase in prices, which translated into increased participation in the output structure and, due to limited price elasticity of real demand, an increased share in the employment structure. Especially with respect to public services, this inelasticity could be attributed to the non-market mechanism of their delivery. After 2004 the Polish construction industry changed significantly – until then, both relative prices and the share in the structure of both employment and value added had been steadily decreasing. Since 2005, all of them were increasing and the latter two categories with increasing pace. This fact can be associated with the intensification of construction projects related to EU accession, the availability of the EU funds, and the credit boom in the private housing market (however, significantly smaller in Poland than for example in the Baltic states, Spain or Ireland).

Financial intermediation, as opposed to public services and construction, had an above-average real growth of value added. A significant increase in the productivity of inputs in this sector was related to moderate changes in employment and a decline in relative prices (or, in the EU15, only a slight increase) that had resulted from an increase in efficiency. During the period, the sector also showed significant innovation. Similar trends could be observed for business activities in the EU. However, they were subject to an expansion of employment, which in Poland was associated with a decrease in productivity, not only in relative terms (Figure II.2.) but also in absolute figures. Thus, financial intermediation is not in decline and, opposite to the construction and public services, the share of this sector in GDP has grown (in the EU15) or remained more or less at the same level (in Poland).

Unlike financial services, the share of traditional services (trade, hotels and restaurants, transport and communication, and other) in the creation of value added has remained rather stable in the EU15. However, in Poland and other NMS, a real demand for these services has been growing more slowly than the overall economy, which can be attributed primarily to fast development in manufacturing and financial intermediation. At the same time, however, traditional services increased their share in employment, with at best limited (except communication) increases in labour productivity. This means that the increase in production in this sector in Poland and other NMS was possible through employment expansion, at the expense of efficiency.

[2] In a study *Diagnoza Społeczna 2009* (Social Diagnosis 2009), an equivalent unit (household with a equivalence scale equal 1) is a household with a single person aged 30-59 years. This approach is used to allow for different patterns of consumption in various types of households (spending is different between young and old, between parents and people without children), provided that the structure of consumption reflects their real needs. Individual types of households are presented as respective multiplicities of an equivalent unit, based on the estimation of the consumer demand. In the Polish agriculture the real income in the second quarter of 2009 was 1003.11 PLN per capita, and 1638.56 PLN per an employer in other sectors. The increase in two years was respectively 115.45 PLN for agriculture and 124.62 PLN for the remaining sectors.

Figure II.2. Decomposition of changes in the share in the value added in Poland (left) and EU15 (right) in 2001-2008.



Note: Labour input means a change in the share of total hours worked by all employees, labour productivity – change in real value added per hour worked in a given group of sectors in relation to the analogous values for the whole economy, price level – change in the group of sections against the general price index. The changes are presented in a logarithmic scale.
Note 2: 'Farming and fishing' includes agriculture, forestry, hunting and fishing, 'mining and energy sector' – mining and quarrying and the production and supply of electricity, gas and water, 'manufacturing' – industrial manufacturing, 'business services' – real estate, renting and business activities, 'public services' – education, health and social work, public administration and national defence, 'traditional services' – trade, restaurants and hotels, transport and communication, and other social and personal services.
Source: Own elaboration.

To sum up, in the previous decade the most expansive section in the entire EU, including Poland, was business services. The most intensive development could be observed in financial intermediation and manufacturing, albeit in the more developed countries of the EU15 the development of manufacturing was connected with a reduction in employment. Therefore the opposite trend observed in Poland should reverse in the long-term. So far, its strong dynamics can be at least partly attributed to convergence, also through the increased use of physical capital.

Table II.2. Changes in the significance of individual sections – summary.

<table>
<tr><td colspan="2"></td><td colspan="4">CAUSE OF CHANGE</td></tr>
<tr><td rowspan="8">SHARE IN THE ECONOMY</td><td rowspan="3">INCREASING or CONSTANT LEVEL</td><td colspan="2">INCREASED IMPORTANCE ON THE LABOUR MARKET</td><td colspan="2">SIGNIFICANT CHANGES IN PRODUCTIVITY</td></tr>
<tr><td>Business services</td><td>the entire EU, much more visible in NMS, especially in Poland</td><td>Financial intermediation</td><td>the entire EU, especially strong in Poland, and the lowest in the remaining NMS</td></tr>
<tr><td>Manufacturing</td><td>increase in significance in Poland – related to convergence</td></tr>
<tr><td rowspan="3">INCREASING or CONSTANT LEVEL THANKS TO AN INCREASE IN RELATIVE PRICES</td><td colspan="2">OCCURRENCE OF COST DISEASE</td><td colspan="2">QUICKLY INCREASING DEMAND, REFLECTED IN THE INCREASE IN PRICES</td></tr>
<tr><td>Public services</td><td>the entire EU, more pronounced in NMS</td><td>Mining and energy sector</td><td>increasing importance in the EU15 and some NMS, stable in Poland</td></tr>
<tr><td colspan="4">Construction
in the entire EU, smaller in Poland than in the EU15 and the rest of NMS</td></tr>
<tr><td rowspan="3">IN DECLINE</td><td colspan="2">SLOW INCREASE IN PRODUCTIVITY</td><td colspan="2">ABOVE-AVERAGE INCREASE IN PRODUCTIVITY</td></tr>
<tr><td rowspan="2">Traditional services (trade, transport, communication, restaurants and hotels)</td><td rowspan="2">the entire EU, especially visible in the EU15</td><td>Agriculture and fishing</td><td>the entire EU, especially visible in NMS</td></tr>
<tr><td>Manufacturing</td><td>in EU and some NMS – excluding Poland</td></tr>
</table>

Source: Own elaboration.

1.2. Gap and convergence of employment structure

In the previous section we showed that Poland, in comparison with other countries in the region and the EU15, has a relatively outdated sectoral structure, and its economy has been modernizing at a moderate pace. The particular problem is the high share of agriculture in employment, unique in the entire European Union except Romania. In addition, the decrease in the number of employed in Polish agriculture since 2000 has been not as fast as for example in Lithuania, Latvia or Greece. Similarly to other NMS8, employment in manufacturing has remained at a significantly higher level than in Western Europe, and has been lower in services. The limited pace of convergence in the sectoral employment structure is confirmed by the coefficients of between-sector correlations in employment structure, presented in Table II.3.

Table II.3. Correlations of employment structure in EU15 and NMS in 2000 and 2007.

2000/2007	PL	DE	AT	IE	GB	DK	SE	FI	BE	NL	LU	FR	IT	GR	ES	PT
PL		0.76	0.83	0.66	0.55	0.61	0.53	0.70	0.68	0.52	0.29	0.70	0.82	0.84	0.72	0.88
DE	0.69		0.95	0.81	0.87	0.89	0.85	0.94	0.95	0.84	0.60	0.94	0.96	0.68	0.82	0.88
AT	0.79	0.96		0.89	0.86	0.84	0.77	0.88	0.90	0.81	0.58	0.91	0.97	0.85	0.93	0.95
IE	0.78	0.92	0.97		0.88	0.83	0.78	0.83	0.82	0.81	0.67	0.84	0.85	0.78	0.95	0.88
GB	0.55	0.92	0.91	0.89		0.93	0.95	0.91	0.94	0.95	0.80	0.94	0.85	0.66	0.82	0.74
DK	0.59	0.89	0.85	0.83	0.93		0.94	0.96	0.93	0.96	0.67	0.93	0.80	0.61	0.71	0.73
SE	0.50	0.84	0.77	0.77	0.91	0.98		0.95	0.90	0.96	0.68	0.90	0.78	0.52	0.68	0.65
FI	0.71	0.92	0.90	0.89	0.92	0.96	0.95		0.92	0.93	0.59	0.93	0.88	0.61	0.77	0.79
BE	0.60	0.94	0.90	0.85	0.95	0.93	0.90	0.91		0.90	0.76	0.98	0.89	0.69	0.79	0.81
NL	0.52	0.85	0.83	0.83	0.96	0.95	0.94	0.90	0.92		0.74	0.93	0.77	0.60	0.71	0.66
LU	0.40	0.75	0.75	0.72	0.79	0.70	0.61	0.62	0.83	0.76		0.76	0.55	0.48	0.58	0.47
FR	0.68	0.96	0.93	0.90	0.95	0.92	0.89	0.95	0.98	0.92	0.79		0.89	0.73	0.81	0.82
IT	0.78	0.97	0.98	0.93	0.88	0.80	0.73	0.87	0.91	0.79	0.75	0.95		0.78	0.91	0.94
GR	0.90	0.59	0.75	0.77	0.53	0.50	0.39	0.59	0.55	0.53	0.49	0.62	0.73		0.84	0.88
ES	0.78	0.90	0.97	0.97	0.84	0.74	0.66	0.81	0.82	0.76	0.72	0.87	0.94	0.81		0.94
PT	0.86	0.89	0.94	0.94	0.75	0.70	0.61	0.79	0.77	0.66	0.64	0.83	0.94	0.81	0.96	

2000/2007	PL	EU15	CZ	SK	HU	LT	LV	EE	SI
PL		0.75	0.84	0.85	0.88	0.93	0.88	0.84	0.91
EU15	0.72		0.87	0.87	0.93	0.81	0.79	0.88	0.83
CZ	0.79	0.92		1.00	0.97	0.81	0.77	0.94	0.97
SK	0.84	0.91	0.99		0.98	0.85	0.80	0.96	0.97
HU	0.83	0.94	0.98	0.99		0.90	0.87	0.97	0.95
LT	0.96	0.67	0.72	0.79	0.79		0.96	0.91	0.84
LV	0.95	0.79	0.82	0.87	0.89	0.96		0.90	0.77
EE	0.82	0.90	0.97	0.97	0.98	0.77	0.88		0.90
SI	0.84	0.89	0.98	0.98	0.98	0.77	0.85	0.96	

Note: Data on the structure of employment uses NACE 1.1 classification into 30 sections and subsections.
Note 2: The bottom left portions present correlations for 2000, and the upper right – for 2007. Correlation coefficients indicate the similarity of employment structures between individual countries and groups of countries. The value of a coefficient belongs to the interval [0;1], 1 signifying the identity of given structures, and 0.8 denoting a high similarity. Bear in mind that the presented correlations only show concurrence and do not justify any conclusions about the causal relations. For greater clarity we used a scale of colours in which low values are assigned a light background and high values a dark background.
Source: Own calculations based on EU-Klems data.

The data confirm that despite convergence (a slow increase in correlation coefficient from 0.72 in 2000 to 0.75 in 2007), the structure of the Polish economy still significantly differs from the EU15. At the same time in 2007, NMS economies were showing a clear similarity (interval 0.79-0.96). An even greater similarity in sectoral structure can be observed among the countries of Northern Europe (Scandinavia and the United Kingdom), the Netherlands and Belgium, clearly different from CEE countries. The sectoral structure of NMS is closer to the countries of Southern Europe, Germany and Austria. Significant correlations with Poland can be found for Portugal (0.88), Greece (0.84), Austria (0.83), Italy (0.82) and Germany (0.76). Although these countries differ strongly in the level and dynamics of development, high values of correlations confirm that such a selection of countries is not accidental, for example, correlations between Austria and Portugal and between Austria and Poland. Hence, conclusions on the level of development in a given economy cannot be based solely on data about its sectoral composition. It is neither the only, nor the main factor that determines productivity.

Box II.3. NACE classification.

NACE (*Nomenclature statistique des Activités économiques dans la Communauté Européenne*) is the statistical classification of economic activities in the European Community established in 1990. It is mainly used in business registers, national and regional accounts, structural business statistics, short-term statistics, labour market statistics and statistics of transport, energy and waste.

Its objective is to standardize the categories of economic activities, thereby achieving greater transparency of data among member states. The establishment of a unified classification helps to improve management and prevents against distortions of competition. Until the end of 2007, NACE Rev. 1 (or 1.1) classification was in force, then upgraded to a NACE Rev. 2 in order to reflect technological developments and structural changes in the economies.

Codes in NACE Rev.2 are structured as follows:

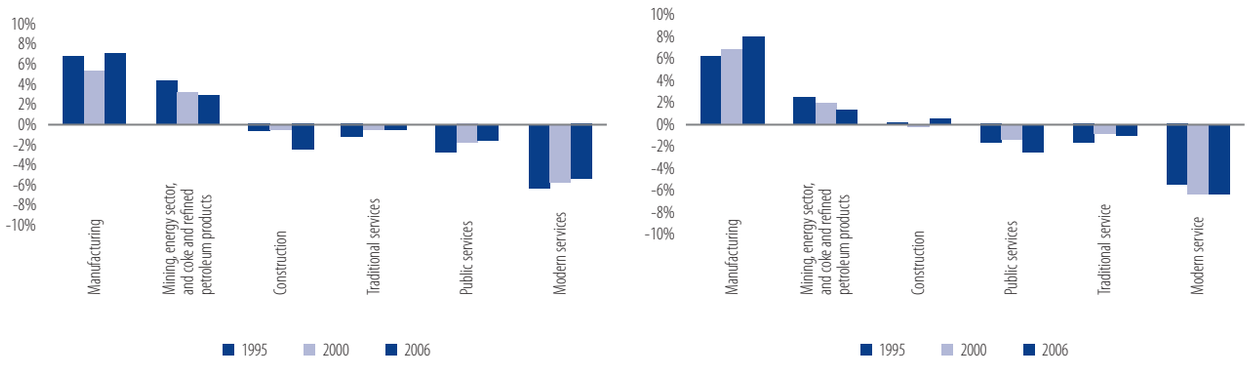
Level	Name (number)	Code	Identification
I	sections (21)	1-character alphabetical code	A to U
II	divisions (88)	2-digit numerical code	01 to 99
III	groups (272)	3-digit numerical code	01.1 to 99.0
IV	classes (615)	4-digit numerical code	01.11 to 99.00

Revision 1.1 also included an intermediate level between I and II (sub-sections), with a 2-character alphabetical code.

Member State statistics are compiled using NACE or a NACE-based national classification (in Poland – Polish Classification of Activity, PKD), national versions may contain additional groupings. NACE classification is compatible with ISIC, established by the UN (NACE Rev. 2 is an equivalent of ISIC rev.4).

Source: Council Regulation (EEC) No 3037/90 of 9 October 1990, Regulation (EC) no 1893/2006 of the European Parliament and European Council of 20 December 2006.

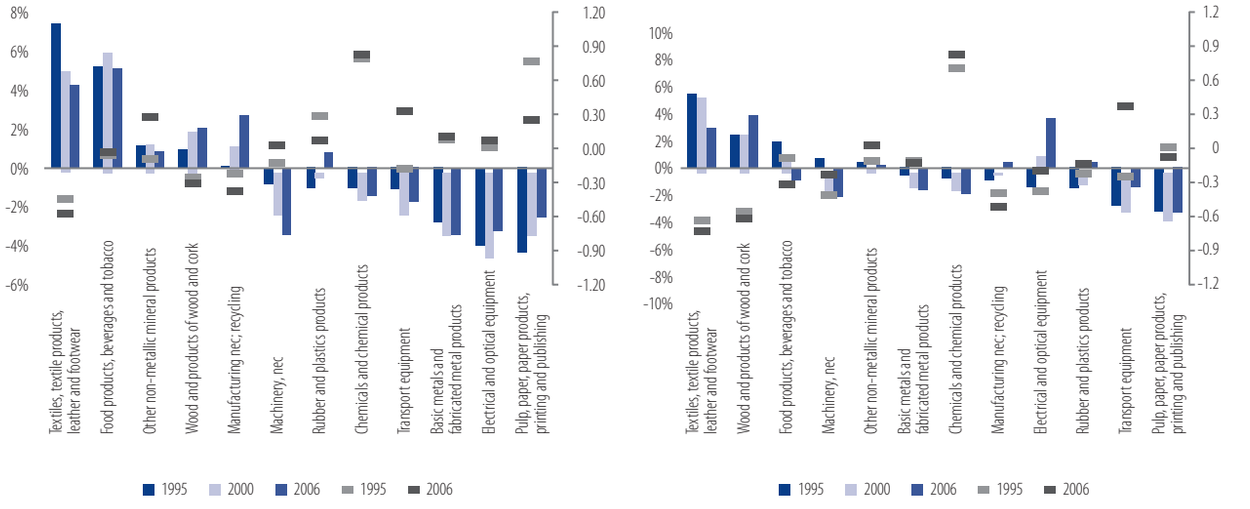
Figure II.3. Gaps in the sectoral structure of the labour market between Poland and EU15 (left), and between NMS7 and EU15 (right).



Note: The presented gaps signifies a difference in sectoral structure of hours worked in Poland (left) and NMS7 (right) in relation to EU15, excluding from the total working time agriculture, forestry, hunting and fishing, and activities of households.
Source: Own calculations based on EU-Klems data.

In addition to the limited reduction in the role of agriculture, the convergence of the Polish employment structure to the EU15 has been implemented through a reduction of employment in the mining and energy sectors, and by reducing the gap in all services groups. Similarly to other NMS, the gap in manufacturing was increasing, accompanied by a marked trend towards reallocation of labour to relatively less productive sectors, such as the manufacture of wood and wood products. The positive relationship between the sectoral gap and labour productivity decreased in 1995-2006. In Poland, the reduction in the gap occurred mainly in modern services. Other NMS had a stronger reallocation of labour to manufacturing, especially of electrical, optical and transport equipment, and was accompanied by a strong increase in their labour productivity (Figure II.4).

Figure II.4. Differences in industrial employment between Poland and EU15 (left), and between NMS7 and EU15 (right), versus labour productivity.



Note: The left axis is used to describe the difference in employment structure, i.e. the difference in employment share of various divisions. Productivity of labour in individual divisions (described by horizontal lines and denoted on the right axis) is compared with labour productivity in the Polish economy (left) or in NMS7 (right). Zero percent would mean that the level of productivity in a given section is equal to that in the entire economy).
Source: Own calculations based on EU-Klems data.

In order to evaluate the importance of structural changes for the real convergence in the NMS, we performed a simulation involving the cancellation of causal relationships between changes in employment and sectoral productivity. To this end, we analysed hypothetical economies with productivity of industries equal to those in the Polish economy and a sectoral structure reflecting the structure of each of the three examined countries. This approach allows us to verify the strength of the impact of structural changes on the increase in overall productivity. The simulations indicate that structural changes in the Czech economy in 1995-2006 supported labour productivity to a greater extent than changes in Poland and Slovakia (see Figure II.5).

Differences in the annual mean change of the created value added per hour worked in the three hypothetical economies did not exceed 0.5 percent. (See Note to Figure II.5). However in the long term these small differences in dynamics resulted in quite significant differences. After ten years, the hypothetical Polish economy with a Czech production structure (PL-Czech Republic) would develop by more than 4 percent above the level observed in Poland in 1996-2006.

It seems that Poland has a less desirable output structure than its southern neighbours. In particular, the two hypothetical economies – 'PL-Czech Republic' and 'PL-Slovakia' – with labour productivity equal to that in the Polish economy, but with different sectoral structure (respectively, Czech or Slovak) – would be by over 25 percent more productive than the 'real' Polish economy in 2009. The loss of potential growth in labour productivity by 25 percent can therefore be largely attributed to the relatively more archaic sectoral structure of the Polish economy in comparison with the Czech Republic and Slovakia.

The different changes in productivity and GDP at the aggregate level are significantly influenced by relatively few, and also most productive, processing industries, primarily chemical, machinery, electrical power and automotive industries. Contrary to common intuition, growth in labour productivity at the aggregate level has depended much less on sections such as business services. The reallocation of labour in the Czech Republic to the aforementioned highly productive sections has been very important for the widening of the gap between Poland and the Czech Republic. At the same time, this effect was not neutralized by a faster growth in labour productivity in the Polish economy as a whole (i.e. in other branches). The increasing importance of these manufacturing industries in Polish employment was not sufficient to achieve the productivity growth observed in the Czech Republic. It is also confirmed by the Slovakian case, where these highly productive branches contributed to the total development to a degree similar to that observed in the Czech economy (see Figure II.6).

Figure II.5. Effect of changes in sectoral structure of employment on changes in total labour productivity – comparison of the Polish economy with the hypothetical economies, with Polish productivity and Czech and Slovakian structures of employment.

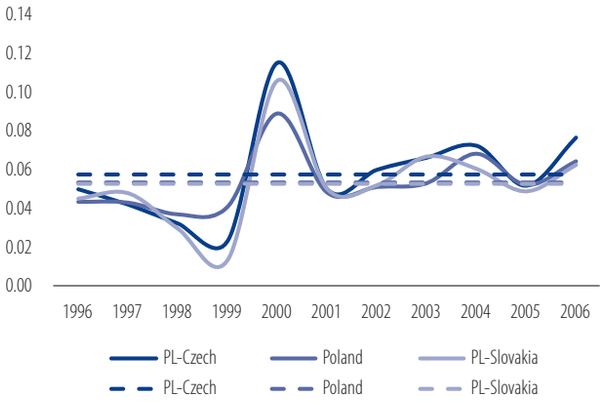
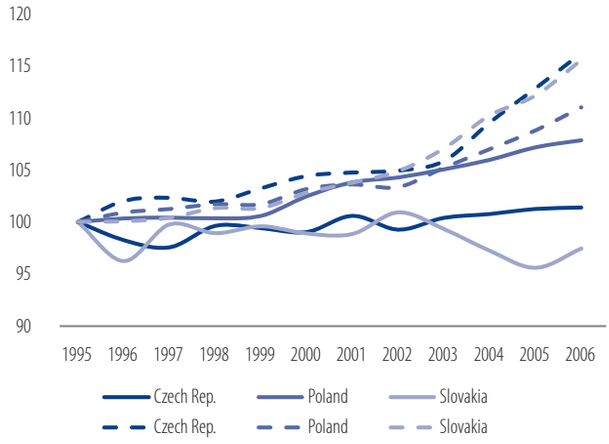


Figure II.6. Importance of structural changes in Poland in comparison with the Czech Republic and Slovakia – an example of the modern services and chemical, machinery, electrical, optical and transport equipment manufacturing.



Note (Figure II.5): The presented values are the rates of changes in labour productivity. 'PL-Slovakia' and 'PL-Czech Republic' are hypothetical economies with the actual composition of hours worked in Slovakia and the Czech Republic, but the productivity of labour in individual sections equal to the levels in the Polish economy. This means that the resulting differences in the dynamics of labour productivity to 'Poland' can be interpreted as the result of different structural changes. The dashed lines indicate the average annual growth rate of labour productivity in 1996-2006.

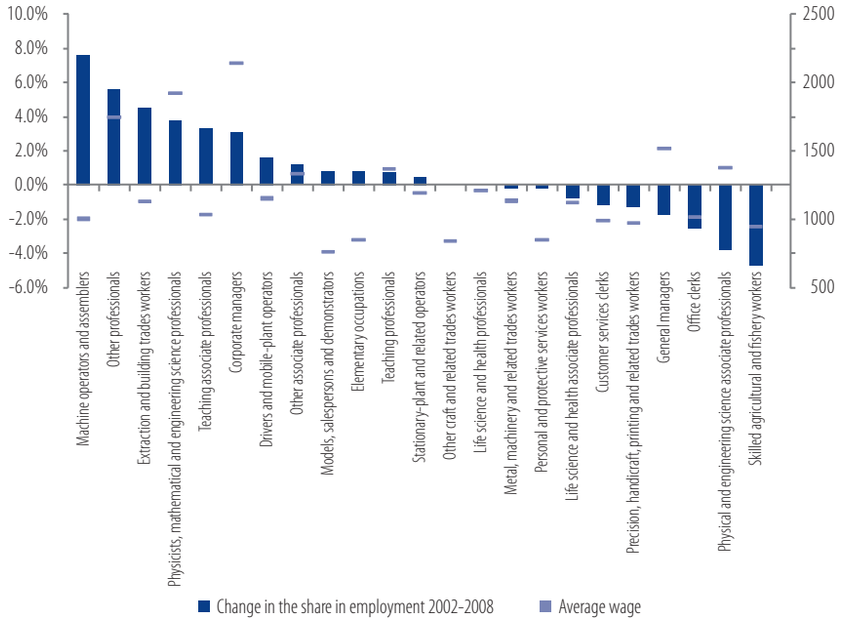
Note (Figure II.6): Solid lines denote the hypothetical values of overall labour productivity in the hypothetical economies – Czech, Polish and Slovak, assuming historical changes in the structure of hours worked and real changes in productivity in modern services, but with a constant structure and productivity in other sectors. The dashed lines represent analogous hypothetical economies with a focus on chemical, machinery, electrical, optical and transport manufacturing.

Source: Own calculations based on EU-Klems data. Data on employment composition using disaggregation into 28 sections and sub-sections NACE 1.1. – excluding agriculture and households.

Additional insight into the consequences of structural changes in Poland is provided by a flow analysis by occupations (see Figure II.7). A characteristic feature of the labour market in the United States and Western Europe is a gradual decline in the importance of occupations with average wages and an increased share of low- and high-income earners (e.g. Autor, Levy, Murnane 2003, Autor, Katz, Kearney 2006, 2008, Goos, Manning, Solomons 2009, 2010 – referred to as GMS, Michaels, Natra, Van Reenen 2010 – MNVR). This means that the developed world experiences a gradual polarisation of wages between different groups of employees. Literature explains this trend with technological progress (hypothesis of 'routinisation', i.e. the substitution of average jobs that require repetitive actions), globalisation (off-shoring not concerning low-paid occupations, such as those in personal services, security and sales), and an increase in wage inequality (resulting in an increase in demand of rich households for the worst-paid service). Empirical analyses seem to favour the first hypothesis (GMS 2010, MNVR 2010).

Analysis of the Polish labour market shows that the relative decline of employment occurs mainly in occupations with wages lower than average, whereas in most developed countries it does not concern those with lowest wages. At the same time, there has been a slight increase in the share of salespersons and physical workers in the total employed in Poland. A professional group with the greatest reduction in share in employment has been farmers – in this way, Poland follows the pattern of Western European countries in which the de-agriculturisation had been completed before 1990. A similar, though slightly weaker trend, concerned jobs displaced by the automation of labour, i.e. office workers, financial and customer service clerks, physical and engineering science associate professionals.

Figure II.7. Average annual changes in the share of employment vs. average wages in Poland, by occupations.



Source: Own calculations based on LFS data 2001-2008.

On the other hand, in addition to highly paid professionals, the strongest relative growth in employment can be observed among machine operators and assemblers, and extraction and building trades workers. These professional groups, both in terms of relative wages and the nature of tasks, belong to routine groups that have decreased their share in the labour market structure in Western European countries (GMS 2009). While in Poland there has been a clear increase in the significance of professions with the highest incomes, the occupations with low and medium incomes can be divided into those with decreasing and increasing importance. It suggests that the differences between Poland and more developed countries should be explained by hypotheses other than 'routinisation'. In particular, in 2002-2008, developed countries tended to move their production to Poland, which may explain a significant relative increase in demand for machine operators. Automation was the result of a gradual reduction in technological backwardness in Polish manufacturing industries and hence the associated reallocation of labour from precision, handicraft, printing and related trades workers to machine operators and assemblers. The processes of automation of services have been similar in Western Europe and Poland, leading to a relative reduction in the use of office and customer service clerks.

1.3. Gap and convergence in labour productivity

The previously presented comparison of the structure of Polish, Czech and Slovak economies suggests the possible role of structural changes in the different dynamics of growth between these countries. However, our conclusions do not change the fact that increasing the efficiency of the workforce in each sector of the economy is much more important for real convergence. In other words, the productivity gap between the countries of Central and Eastern Europe and Western Europe is less influenced by the differences in the structure of output than by the differences in the productivity of all sectors. In essence, the structures of the economies in NMS and EU15 are similar – the presented simple correlation analysis revealed, for example, a significant similarity between Poland and other large continental countries – Italy, France, Germany and Spain.

The formal confirmation of the relatively small importance of changes in the sectoral structure of employment for growth in overall labour productivity is given by Caselli and Tenreyro (2005). Their analysis of convergence of the 'southern' countries of the European Union (Austria, Greece, Spain, Portugal, Italy) in 1960-2000 includes a comparison of their points of departure with the situation of the 13 potential new EU members in 2000 (countries that could potentially join the EU in 2003 – NMS10, Bulgaria, Romania and Turkey). Their conclusion is that whereas in the 'southern states' the modernisation of the structure of the economy significantly contributed to the reduction in the distance to the country of reference (France),[3] in most of the possible new EU member states this potential was much smaller. The gap of countries in Central and Eastern Europe and Turkey depended mainly on lower labour productivity in different parts of the economy, rather than because of their outdated structure. For example, the differences in the within-industry productivity are responsible for 90 percent of the Polish gap and the difference in between-industry productivity accounts for less than 19 percent.[4] Accordingly, the convergence of labour productivity between the NMS and the EU15 should rely more on productivity growth within sectors rather than on the reallocation of inputs between them.

[3] France was selected as country of reference due to the similarity of its labour market structure to the average level of most developed EU members.

[4] 100 percent of the gap is obtained by using a residual, 'covariance' in the paper of Caselli and Tenreyro (2005). In Poland, similarly to other 'eastern' member states, it assumes a negative value, which may mean that an average productivity gap in sectors with a higher (than in France) share in employment structure is greater than the gap in sectors with a lower (than in France) share in employment.

Box II.4. Measurement of the input productivity.

Productivity of inputs can be measured in many ways. The selection of method should be adapted to the aim of research, and in reality often depends on the availability of data (Growiec 2009).

Table II.4. Types of measurements of the productivity of inputs.

Type of measured output	Type of measured input			
	Labour	Capital	Capital and labour	Capital, labour, intermediate inputs (energy, materials, services)
Gross output	labour productivity (based on gross output)	capital productivity (based on gross output)	multi-factor productivity of capital and labour (based on gross output)	KLEMS multi-factor productivity
Value added	labour productivity (based on value added)	capital productivity (based on value added)	multi-factor productivity of capital and labour (based on value added)	X
	One-factor measures of productivity		Multi-factor measures of productivity	

Labour productivity, when calculated on the basis of gross value added, indicates the efficiency of labour input in the creation of value added. In this approach, changes in productivity reflect the combined effect of changes in capital and changes in technology, organisation and efficiency, the impact of the effect of scale, different use of manufacturing capacities, and measurement error. In contrast to productivity based on gross output, changes in intermediate inputs are not taken into account here. This method only partially reflects the productivity of labour with regards to the intensity of effort or (potential) increase in the production capacity of workers.

The advantage of estimates of labour productivity based on value added is their smaller sensitivity to changes in intermediate inputs, such as *outsourcing* or production for own use instead of buying inputs from external producers. In the context of this Report, the advantage of this measure is its direct relation to living standards and income per capita. Productivity is connected with living standards through changes in working hours, unemployment, share of labour input, and demographic changes. At the same time, the thus defined productivity is closely related to wage bargaining.

Compared with multi-factor measures, labour productivity based on value added per working hour also requires far less data, and gives precise conclusions from the perspective of labour market policy. Hence, it seems that there may be no need to use more sophisticated tools. On one hand, it facilitates applying the data for the most complex classification of sections, and on the other hand it helps find the direct link between the processes of modernisation and the productivity gap (and living standards) between Poland and the EU15.

Source: OECD (2001), Growiec (2009).

In order to extend the analysis of Caselli and Tenreyro, we performed an analogous decomposition using an expanded database. The details of the method used and the database are presented in the Annex.

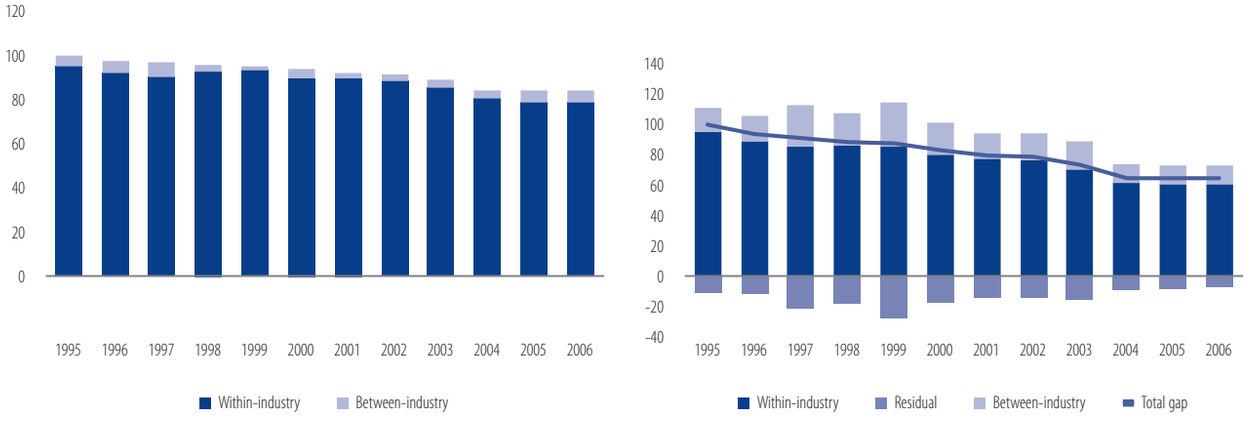
Two-component decomposition (left panel in Figure II.8) shows that between 1995 and 2006 the role of a different structure of employment in the differences in productivity remained low in comparison with the role of low productivity of individual sectors. Since the structural gap was initially even increasing, there is still some room for reduction of the observed difference in labour intensity through the reallocation of labour from less to more efficient branches of the economy (right panel of Figure II.8 – structural variation was 18 percent of the total variation).[5] Two-component decomposition also shows that after hypothetical levelling of the productivity of the Polish sections with their French counterparts, the convergence due to the change in the structure of the economy would be slight (more than 6 percent). A greater significance of the within-industry gap in a three-part decomposition results from allowing for the decomposition residual – greater labour productivity gaps can be observed in traditional sectors,[6] which means additional growth coming from the reallocation of labour to more modern sectors.

[5] Two-component decomposition, presented on the left panel of Figure II.8 denotes a division of the gap into a sum of differences in labour productivities in individual sectors, assuming the sectoral structure characteristic for the Polish economy, and the sum of differences of industries' employment shares in a given economy, with the assumed productivities equal to those in France. The decomposition into three components, presented in the right panel of Figure II.6 is the division of the gap into the within-industry differences (analogous to the left panel), between-industry differences, calculated with the assumption of the productivity of sectors characteristic for the Polish economy and the residual of the decomposition (discussed in the previous footnote). Two-component decomposition, due to the lack of decomposition residual, enables a clearer analysis of the gap division. Three-component decomposition, as it allows for within-industry differences, enables a better assessment of the convergence potential. On the other hand, the comparison of both decompositions guards against the risk of overlooking the (potential) dynamic effect, in which the modernisation process in the converging economy would be accompanied by the converging of labour productivity to the level of the country of reference.

[6] Here it refers precisely to sectors which have a greater share in the structure of employment in Poland than in France.

Importantly, we confirm the major finding of Caselli and Tenreyro (2005) on the limited weight of the structural gap, despite the use of more precise data – the division of the economy into 30 sections, rather than 5. The estimated contribution of the structural gap is a bit greater than in the paper of Caselli and Tenreyro, but the difference is too small to change the overall conclusion stemming from the performed decomposition. It means that the distance between the labour productivity of Polish and French sectors (so also the EU15) should not be explained by a less advantageous employment composition, but first of all by lower productivity of individual sections.

Figure II.8. Two- and three-component decomposition of differences in labour productivity between Poland and France (total gap in 1995 = 100).



Source: Own calculations based on EU-Klems and Eurostat data.

Decomposition of labour productivity of Polish economy convergence to France reinforces this conclusion. The gap in labour productivity of individual sections decreased almost every year (see left panel in Figure II.9.), and the reallocation of labour, except initially, did not contribute significantly to convergence, and in some years even deepened the underdevelopment. In addition, a between-industry divergence could be noticed.

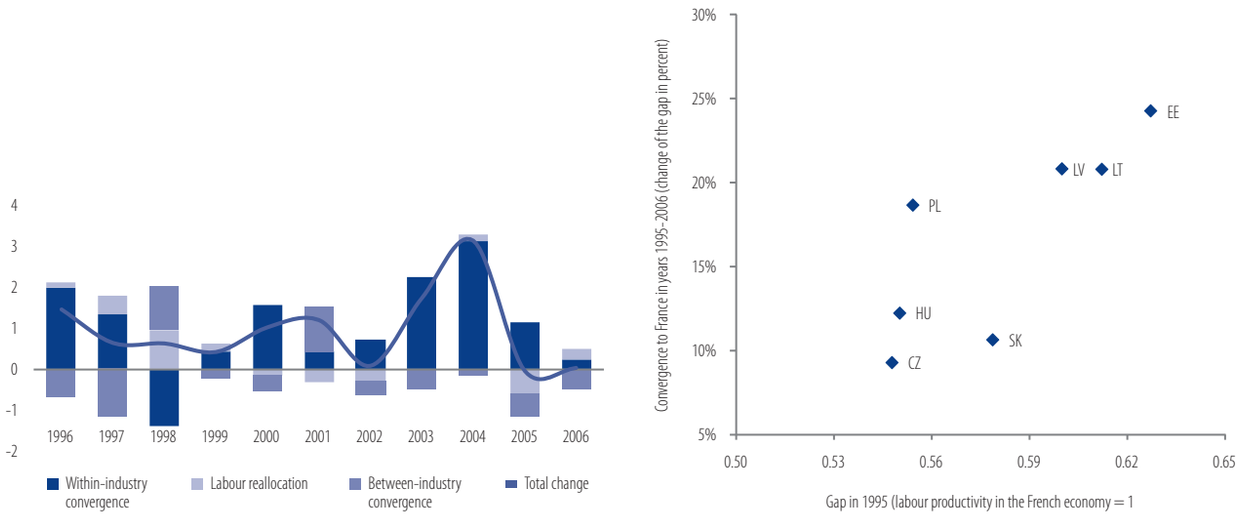
In the entire period 1995-2006 (before the economic crisis of 2008-2009), the convergence of productivity in Poland was faster than in the NMS8 in general. After the exclusion of Slovenia, the least underdeveloped at the beginning, with an atypical economic structure and the fastest pace of convergence, one can observe a positive correlation between the initial distance to France and the relative rate of its reduction (see right panel of Figure II.9.). Poland had a higher pace of convergence in comparison with the slightly more developed (in 1995) Czech Republic and Hungary, and a much smaller initial gap than the slightly faster converging economies of Lithuania and Latvia.

The Slovenian economy was the only NMS in 1995 to have had a significant structural gap accompanied by a low within-industry gap (the lowest in NMS8 – see left panel of Figure II.10). This potential was well used and resulted in a very quick convergence of Slovenian labour productivity in 1996-2000 in relation to France. Indirectly, it confirms the thesis of Caselli and Tenreyro (2005) that a reduction of productivity gap is achieved faster through changes in the structure of the economy than through the within-sector catching up. However, we must remember that Slovenia has been atypical among NMS.

Apart from Slovenia, the reallocation of labour was also an important factor in the convergence of Latvia (20 percent of the total gap reduction) and Hungary (15 percent). In Lithuania and Slovakia it was responsible for an increase in the gap.

Interestingly, whereas in 1996-2000 the differences in the overall pace of convergence in the NMS8 were determined by both the reallocation of labour (Lithuania, Latvia, Estonia and Slovenia) and the reduction of gap in individual sectors, in 2001-2006 it was decided only by the latter. Moreover, the convergence of productivity in individual sectors accelerated and was accompanied by an increase in the structural gap (see the right panel of Figure II.10). The increase was connected with the stagnation of structural changes in the NMS (except Slovenia), and acceleration in the French economy in 2001-2002.

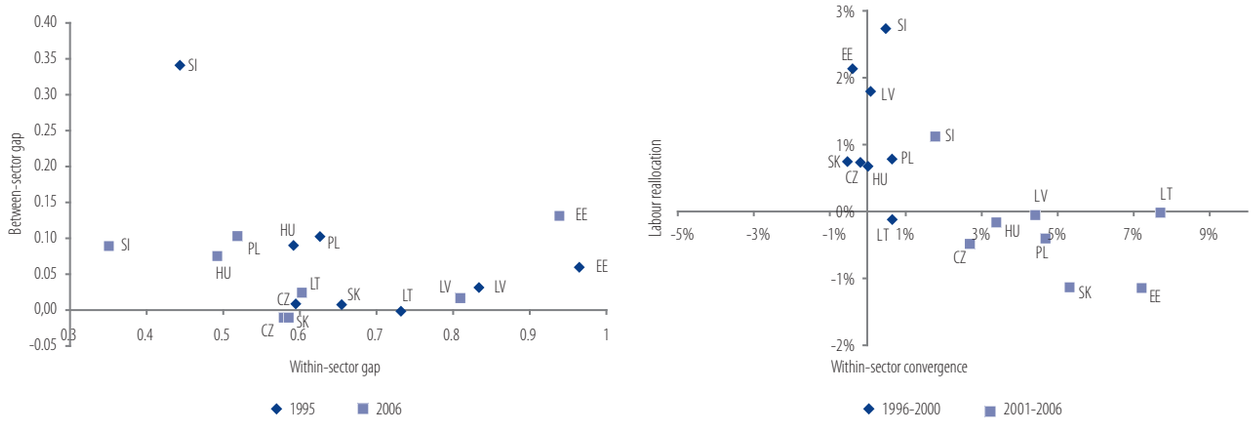
Figure II.9. Convergence of the labour productivity in Poland in relation to France, measured in percentage points (left, French labour productivity in 1995 = 100) and the rate of NMS convergence in relation to the gap in 1995 (right).



Note: The right panel does not include Slovenia, for the sake of clarity.
Source: Own calculations based on EU-Klems and Eurostat data.

The acceleration in the convergence of sectors in NMS depended mostly on the gap reduction in agriculture, chemical and petro-chemical industry, electrical engineering, trade, financial services and educational services. It concerned, to a varying degree, all the examined countries. With the exception of agriculture, the productivity in the sectors also grew in the French economy. The NMS countries caught up with France not because it was stagnant, but thanks to a faster growth rate in the efficiency at the sectoral level. The Figure II.10 should be supplemented with the fact that the between-sector convergence occurred in all analysed countries, except Estonia and Latvia.

Figure II.10. Decomposition of the productivity gap in the NMS8 in 1995 and 2006 (left panel, productivity of the French economy = 1) and decomposition of convergence towards France in years 1996-2000 and 2001-2006 (right panel).



Note: Presented values were calculated by dividing the gap size from a given year by the gap between a given country and France in 1995 (for 1996-2000) and France in 2000 (for years 2001-2006).
Source: Own calculations based on EU-Klems and Eurostat data.

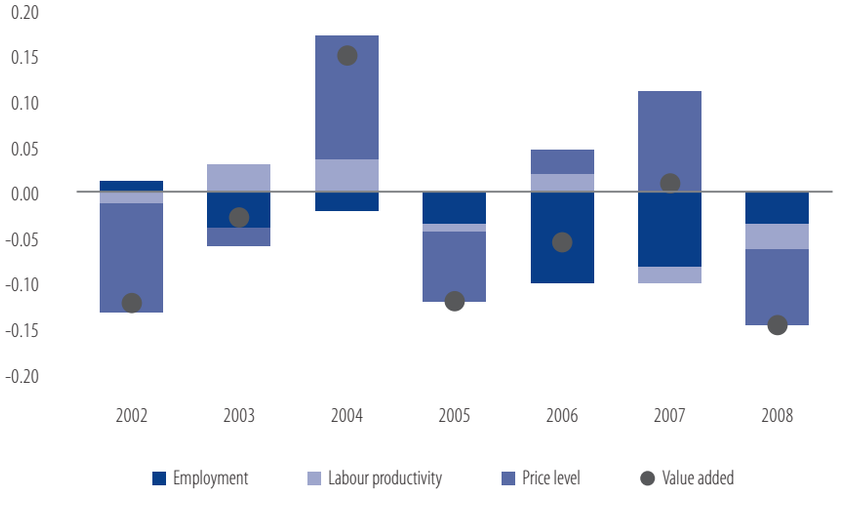
In conclusion, the productivity gap between the NMS and EU15 is connected with the sectoral structure only to a limited extent. More important are differences in the efficiency of individual sections, branches and sectors of the economy. It does not mean that a reallocation of labour to 'modern' industries does not contribute to the growth of labour productivity and hence wages. The low influence at the level of the whole economy is primarily a result of the traditional character of these sectors, i.e. a low efficiency of labour input use.

Moreover, the employment structures both in the NMS and EU15 are similar, as confirmed by the correlations presented earlier. Only in those sectors of the economy in which inputs other than labour are relatively immobile will the outflow of workforce lead to increased productivity of the employed that remain in a given industry. This phenomenon relates especially to sections in which the market price mechanism is highly disturbed, or those with a considerable excess employed, as in agriculture. The Polish economy would especially greatly benefit from a flow of labour from agriculture (see Box II.5).

Box II.5. Agriculture in Poland – transformations in 2001-2008.

In 2001-2008 the importance of agriculture in the Polish economy decreased, both in terms of value added (assuming the constant level of prices) and employment, accompanied by above-average growth in labour productivity and lower relative prices. Interestingly, in 2004 agricultural prices in Poland rapidly increased (more than 12 percent) while in the EU15 they decreased (by nearly 9 percent), which in part can be associated with the expansion of the Union and in part with differences in the yield between different parts of the continent. The accession, however, did not increase the growth of productivity in agriculture – according to EU-Klems in 2004 the growth in Polish agriculture was 7.3 percent and in 2005 and 2006 it was, respectively, -1 and -3 percent. In the same years, agricultural productivity in the EU15 changed by 14 percent, -4 percent and 1.5 percent. After 2004, the outflow of labour from Polish agriculture stopped. The accession seems to have slowed down the process of de-agrarisation of the Polish economy, but was accompanied by an increase in agricultural labour productivity.

Figure II.11. Decomposition of annual changes in the share of agriculture in value added of the Polish economy.



Source: Own calculations based on EU-Klems and Eurostat data.

A key problem in agriculture in Poland is the low efficiency of production measured by the value added/number of employees ratio. It is affected especially by a particularly high share of subsistence farms, visible for example against Slovakia and Hungary. Despite a smaller share of Polish agricultural production in value added (in 2008 3.7 percent, compared to 4.2 in Slovakia and Hungary), the percentage of hours worked is much higher (13.3 percent, compared to 3.7 and 4.8 percent, respectively). These differences cannot be explained by the general level of development of these countries, as the differences in the overall productivity are much smaller between these economies. In a hypothetical situation[7] in which part of the employed in Polish agriculture (roughly corresponding to the difference between the actual and desired level in order to maintain the output level at the productivity similar to the Hungarian and Slovak one) would flow to traditional services, the level of GDP in Poland would increase by approximately 10 percent.

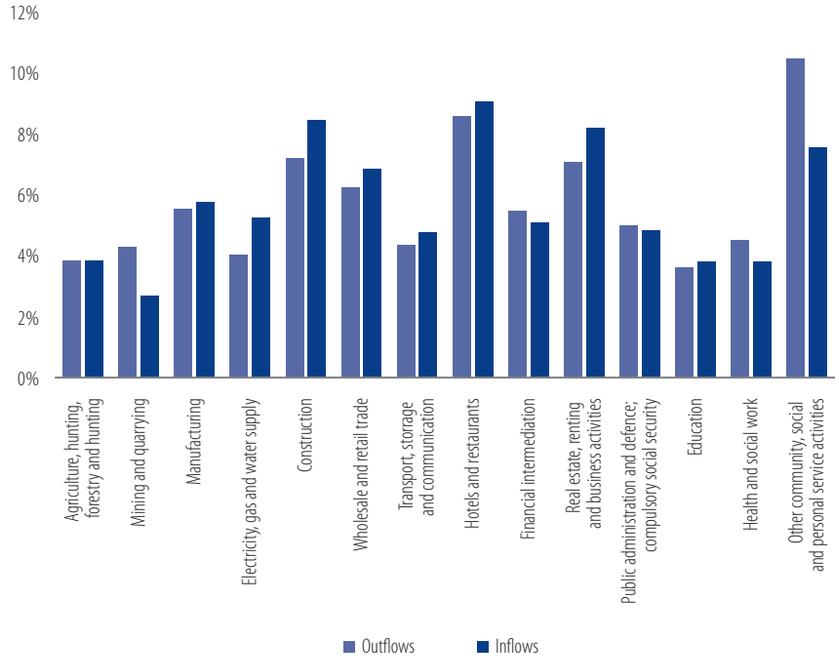
[7] The estimations were obtained using the following equation: $\Delta VA = \left(\frac{L_a}{L} - VA_a \frac{LP^x}{LP^x_a}\right) \frac{LP}{LP_s}$, where VA is value added, L is a number of hours worked and LP is a labour productivity. The 'a' subscript means that a given aggregate concerns agriculture, 's' – traditional services, and no subscript denotes the entire economy. The superscript 'x' is a value for the Slovakian or Hungarian economy, and no superscript – Polish economy.

1.4. Gross flows between sectors in Poland

The assessment of the real possibility of structural change in Poland requires not so much the analysis of net flows (the difference between the influx of workers to the sector and the outflow of its employees) but the analysis of gross flows between sectors. The structure of employment may be constant both with no labour flows between industries and also when these flows are substantial but balanced. Despite the stability of a given sector's share in employment, high flows mean that from the perspective of employees, employment stability is low (although at the same time the stability of the entire economy may be high (see Part III)). Similarly, one should also not unambiguously identify low flows among industries with stable employment at a level of individual companies, because a substantial share of the flows may occur within a sector and thus not be visible at the aggregate level.

Industries with particularly intense outflows and inflows are construction, trade, hotels and restaurants, real estate, renting and business activities, while small flows are characteristic for mining, agriculture, education and health care. The differences in the intensities of flows can more than double.

Figure II.12. Average annual flows into and out of individual sections in Poland in 2001-2008.



Note: The estimates were made using the panel structure of the LFS survey.
Source: Own calculations based on LFS data 2001-2008.

Low flows in public services result from high employment protection. Moreover, traditional services such as hotels and restaurants, trade, construction, although with stable or moderately increasing significance, could be the second best available option of 'escape from agriculture and mining' after the outflow to business services. The high inflows to those sections indicate relatively low entry barriers. However, low outflows from agriculture and mining, suggest that exit barriers are much greater (reinforced by the institutional protection against dismissal in the secondary sector and a relatively low level of professional deactivation in the primary sector). In particular this applies to agriculture, with low salaries and low quality of work.

One of the key barriers to the outflows from traditional branches to services may be a mismatch of qualifications. Apart from the movement of young people to study in cities, one of the possible ways to accelerate de-agriculturisation is lifelong education of the workforce.

The results of the logit model presented in *Employment in Poland 2008* (see CRZL, IBS (2010)) indicate that skilled agricultural, forestry and fishery workers, elementary labourers, craft and related trades workers, plant and machine operators, assemblers, and services and sales workers, are on average two or three times less likely to participate in lifelong learning than technicians and associate

professionals, professionals and managers. Clerical support workers are also less likely to participate in lifelong learning, but this difference is much lower – by only 25 percent. When it comes to the sectoral structure of the economy, a high probability of lifelong training is also characteristic for people working in non-market services.

At the same time, studies conducted in the second part of *Employment in Poland 2008* (IBS/CRZL (2010)) indicate that whereas the participation in lifelong learning has little impact on job retention, it can significantly help in finding a new job. Therefore at least in part this corresponds to the needs for reallocation between sectors.

2. Quality of working life

2.1. Historical outline

The vast majority of available publications on labour economics discuss employment only in quantitative terms. They usually mention aggregates such as measurements of economic activity, unemployment, wages and public spending on social policies, and identify causal dependencies between them. Hence, the basic patterns of labour markets at the macroeconomic level are well known and generally do not give rise to controversy. However, it is different with the quality of working life that, as yet, has remained on the margins of mainstream economics.

Despite the multidimensionality of this field, relatively few reports deal with more than a single narrowly defined dimension. In addition, there is no consensus among researchers about the nature of psychological phenomena, and social and economic determinants of job satisfaction at both the individual and collective level. In the light of the Lisbon Strategy objectives, the qualitative dimension of employment is as important as high employment and low unemployment.[8]

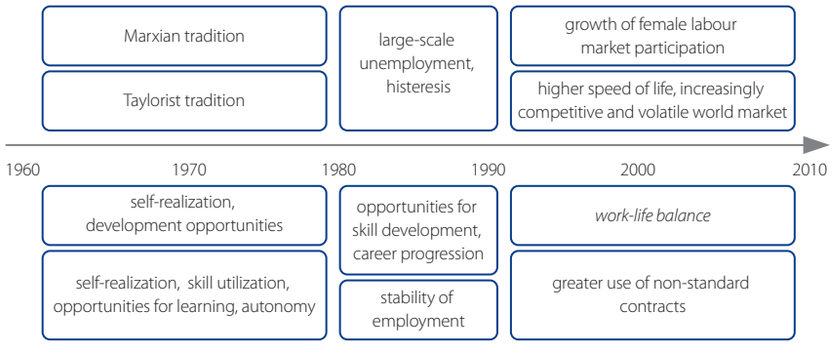
In economic policy, the quality of working life is viewed as a key issue for increasing flows from inactivity to activity and from unemployment to employment. In the former case, special attention is paid to flexible working time, allowing more active participation of groups with a relatively weaker bargaining power (mothers of young children, the elderly and students). In the latter case, the focus is on the opportunity of acquiring knowledge and skills by the unemployed. In fact, quality has much more far-reaching consequences for the labour market than purely quantitative factors. This is confirmed by the observations of Gallie (Gallie, 2005), that the subjective personal sense of satisfaction may translate into higher productivity throughout the economy by stimulating creativity and innovation of employees, and that it also affect the decision to take (or not) a job in a particular industry (thus influencing the sectoral structure of employment).

Perception of the quality of working life has a strong cultural embedding and is based both on objective and subjective factors (objective: e.g. accidents at work, subjective: e.g. violence). This makes it difficult to unify and aggregate data, and is one of the main obstacles to analysis. Nonetheless, there are an increasing number of reports that include the perception of the quality of working life in their examinations of labour markets and labour policies. It is a specific response to changes in European labour markets in recent decades. In the 1980s, the main issue was the stability of employment in the face of rapid growth and the long-term persistence of high unemployment on the continent. After 1990, a gradual increase in female participation in many developed countries highlighted the importance of employment flexibility. The quality of working life and job satisfaction have been brought to the fore by the aging of Western populations and the associated challenges of extending the period of work in the course of life.

In this text we try to analyse the main dimensions of quality of working life starting with the most frequently cited Eurofound classification: (i) career and employment security, (ii) developing skills and competencies, (iii) reconciling the work-life balance, and (iv) maintaining the health and well-being of workers. We also try to isolate issues that in a specific way affect the perception of working conditions – both physical factors and those associated with organisation of work.

[8] The Lisbon European Council – An Agenda of Economic and Social Renewal for Europe (2000).

Diagram II.1. Dimensions of the quality of working life in relation to the observed changes in the labour market.



Source: Own elaboration based on Gallie (2005).

Diagram II.2. Modern understanding of the quality of working life.

Source: Eurofound (2002).

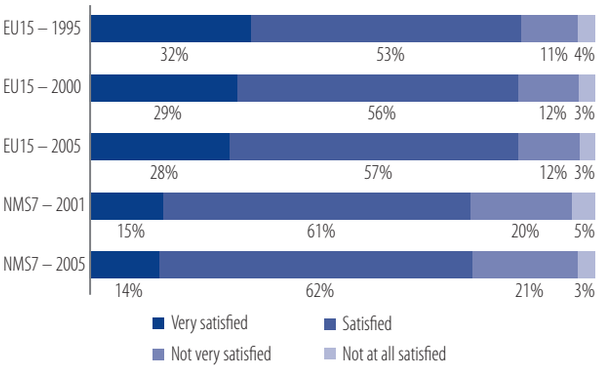
2.2. Job satisfaction in Poland compared to other NMS and EU15

To date, the most complete statistical survey on job satisfaction and changes in the quality of work is the *European Working Condition Survey* by Eurofound. According to the 2005 edition, 85 percent of the EU15 citizens and 76 percent in the NMS10 reported satisfaction or high job satisfaction in their main workplace. In Poland, the average was 79 percent, with 16 percent satisfied in the highest degree. These results place Poland 17th in the EU25 (the corresponding values for Poland in 2001 were 75 percent and 20 percent of very satisfied). It is characteristic that high job satisfaction is rather rare, especially in central and southern Europe. In addition, the structure of satisfaction in the EU15 countries has remained rather constant since 1995,[9] and among the NMS one cannot identify any significant positive or negative trends in the pre-accession period.[10]

In a most elementary division, satisfaction with working conditions is reflected in six areas: job security, fairness of pay (more specifically, the sense that one is well-paid for the work they do), good prospects for career advancement, feeling 'at home' in the organisation, opportunities to learn and grow, and having good friends at work.

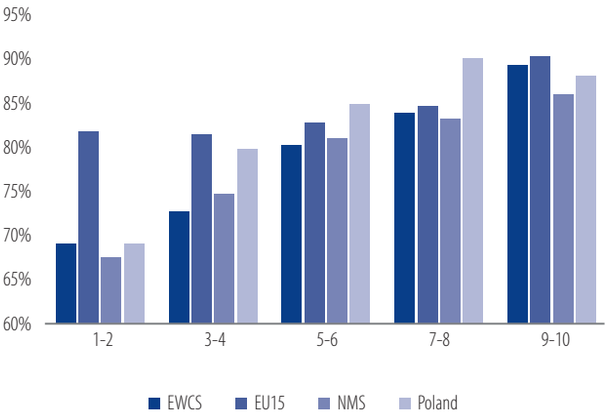
[9] First edition that included the question about general job satisfaction.
[10] In the second half of 2010, i.e. when this report was being written, the EWCS 2005 was the latest available edition of this survey.

Figure II.13. Changes in job satisfaction in consecutive editions of EWCS.



Source: Own calculations based on EWCS 1995, 2000/2001 and 2005 data.

Figure II.14. Job satisfaction by income deciles in each country.



Note: The EWCS group covers 31 countries surveyed in the EWCS, while NMS is NMS10. The Figure shows the percentage of employees declaring satisfaction or high satisfaction with their jobs.

Source: Own calculations based on EWCS 2005 data.

Box II.6. Methodology of the European Working Condition Survey 2005.

European Working Condition Survey is a survey of the quality of working life carried out by the Eurofound's *European Working Conditions Observatory*. The fourth edition (2005) included interviews with 29,860 workers from 31 countries (EU27 plus Norway, Switzerland, Croatia and Turkey). In more populous countries about 1,000 workers were interviewed and in the smallest five – about 600. The sample was representative and included the employee's status and age. The survey used multi-stage cluster sampling, with a random walk procedure for the selection of employees. Responses were weighted according to the European LFS, by gender, age group, region (NTS-2), occupation (ISCO) and sector (NACE). The questionnaire contained over 100 questions on various spheres of professional work – including duration and organisation, dangerous working conditions, experience of violence, wage system and overall satisfaction.

Edition 2005 is the first complete edition that includes the NMS – an earlier study conducted for the NMS in 2001 was a special supplement to the third edition. Although the overall message of questions remained the same, their content underwent some modifications. These differences should be taken into account when comparing the information obtained by these editions of the Survey.

Source: EWCS.

Observation of various aspects of job satisfaction by industry clusters helps illustrate differences between the sections of the economy. To this end, we divided the economy into 4 groups: traditional industries, traditional services, public services and modern services, assigning to them 11 more specific sections (see Table II.5.) The first group includes industries that have been reducing their share in the most developed economies, namely: agriculture, mining and quarrying, manufacturing, construction, and supply electricity, gas and water. The separation of traditional and public services is connected with their very different roles in the economy. As is clear from further analysis, they differ quite significantly in the quality of jobs.

Spatial analysis of the various dimensions of job satisfaction confirms a great dispersion between the EU15 and NMS, although the deviations observed in Poland are small in comparison to other countries in the region. Regardless of the country, the best perceived are spheres left to the employees themselves and those that to a lesser extent depend on external factors, such as the macroeconomic situation. These include the atmosphere at the workplace and relationships with colleagues. In this group, the dispersion among industries and groups of countries is the lowest (about 20 percent). Job security remains highly variable; a significantly higher level of security is declared by workers in the EU15, and those employed in modern and public services.

Across Europe, the relatively greatest satisfaction with wages is observed in modern services (in the EU15 – 59 percent, in the NMS – 40 percent, Poland – 44 percent). In other industries it is much lower; in traditional branches and services and public services it fluctuates around 20-30 percent, with a few exceptions. Interestingly, the subjective perception of income is generally more strongly associated with job satisfaction than the level of wages itself. In Poland, job satisfaction was more influenced by objective income level and less by subjective feeling of job security. Not many respondents indicated prospects of career advancement and opportunity to learn. These two elements are often mentioned by the employed in modern services, where updated qualifications remain the most important for building comparative advantage on the labour market. Improving skills is still far more important for workers in Western Europe.

Table II.5. Clusters of industries in the analysis of job satisfaction.

		Characteristics of duties	
		Remaining	Services
Level of modernisation	Traditional	**traditional sectors** agriculture, hunting, forestry and fishing mining and quarrying manufacturing electricity, water and gas supply construction	**traditional services** hotels and restaurants transport and communication wholesale and retail trade
			public services public administration and national defence education and health care other community, social and personal services
	Modern		**modern services** financial intermediation real estate, renting and business activities

Source: Own elaboration.

Figure II.15. The share of employed declaring positive developments in various aspects of their work.

Source: Own calculations based on EWCS 2005 data.

It seems that the traditional industries and services have poorer working conditions than in other sectors of the economy, regardless of location. In Figure II.15 it is visible in the greater concentration of lines around the centre of hexagons. Paradoxically, it applies much less to wages than training and career advancement, which *de facto* means that in the case of traditional industries we can talk about the relative petrification of the professional situation. In other words, an employee of the restaurant and hotel industry, due to limited prospects of training and flattened hierarchical structure, may have difficulty in advancement, regardless of their motivations. This situation is particularly strongly manifested in traditional services which are not supported by constantly upgraded technologies as in manufacturing.

Employees of modern services in Poland are satisfied with working conditions as much as in the EU15, and significantly more than their counterparts in the NMS. Polish public services offer specific conditions – low wages and the rather unfriendly atmosphere are rewarded with above-average employment stability and very good prospects of training and development compared with other sectors in Poland and in comparison with other European countries. Correlation analysis indicates that most of the overall job satisfaction in Poland is related to satisfaction with wages and atmosphere in the workplace. Interestingly, the subjective perception of income is more associated with job satisfaction than the level of wages. At the same time, the feelings of the Polish employees were more influenced by the objective income level than by the subjective feeling of job security.

Table II.6. Spearman correlation coefficients for job satisfaction, its various aspects and income in 31 European countries and Poland.

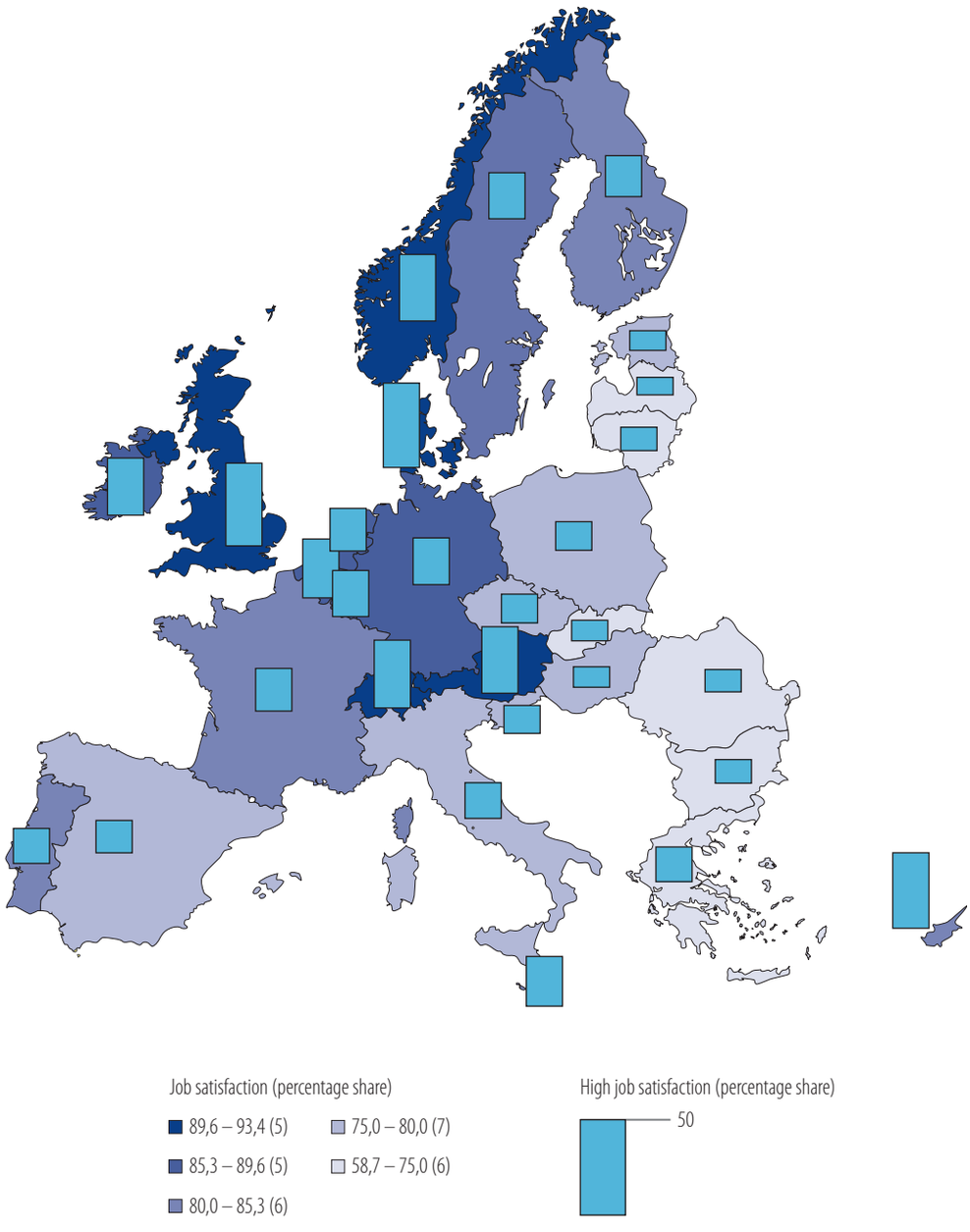
	Income (decile)	Overall satisfaction	Job security	Well-paid for work done	Career prospects	Feel 'at home' at work	Opportunity to learn and grow	Good friends at work
Income (decile in a given country)	x	0.23	0.13	0.29	0.36		0.33	
Overall satisfaction	0.16	X	0.20	0.41	0.36	0.43	0.34	0.20
Job security	0.17	0.26	X	0.09**	0.09**	0.28	0.16	
Well-paid for work done	0.29	0.42	0.17	X	0.42	0.36	0.25	0.16
Career prospects	0.28	0.32	0.11	0.36	X	0.32	0.59	0.15
Feel 'at home' at work	0.11	0.45	0.28	0.32	0.26	X	0.37	0.35
Opportunity to learn and grow	0.27	0.38	0.23	0.31	0.55	0.44	X	0.20
Good friends at work	0.07	0.23	0.16	0.16	0.16	0.38	0.29	x

Note: The correlation coefficient is a measure of symmetry. Italics denote values for Poland. Below the main diagonal of the table are average values for the 31 countries participating in EWCS. Above the main diagonal are correlation coefficients for Poland.
Note 2: No value in the table means that a correlation was not significantly different from zero (for significance levels of 0.05), * denotes significance for a level of significance greater than 0.01 (and less than 0.05), ** – significance for a level of significance greater than 0.001 (and less than 0.01).
Source: Own calculations based on EWCS 2005 data.

Figure II.14 above confirms the discrepancy in the impact of earnings on job satisfaction. It shows that in most developed countries (in the EU15, and analogous situations occur in Norway and Switzerland, not presented in the Figure) only the highest earnings contribute to the remarkable increase in the subjective assessment of quality of working life. In less developed countries (the NMS, including Poland and not represented Bulgaria, Croatia, Romania and Turkey), job satisfaction increases most at the left tail of the income distribution, and the overall relationship is stronger. This indicates that the largest differences in the perceived quality of working life are among the low-paid occupations. In addition, in Poland people with high wages are satisfied with their jobs more often than in the EU15 on average.

The lack of clear differences in job satisfaction in the EU15 may be connected with the effect of compensation related to the possibility of reconciling professional duties with obligations to family and social responsibilities (see Box II.7). In NMS10 this effect does not occur, which may result from the fact that the degree of work-life balance typical for Western Europe has not yet developed in new member states. It is declared by only 1 in 5 people in the NMS, while in the EU15 by a third of employees. Moreover, reports mentioned in Box II.7 suggest indirectly that the occurrence of compensating wages depends in some cases on the bargaining power of workers. In the absence of alternative income opportunities, labour supply is less susceptible to bad working conditions. This situation, in addition to the labour market institutional setup, is also influenced by the level of skills diversity of the workforce. On the other hand, in the NMS a compensatory effect was observed in the case of jobs so demanding that they could lead to difficulty with sleeping or irritation.

Map II.3. Job satisfaction in the main workplace in EU25.



Source: Own calculations based on EWCS 2005 data.

In general, the smaller variation of job satisfaction in low income deciles and the insignificance of work-life balance seem to indicate a greater segmentation in the labour market of the NMS10 than in the EU15 – in the sense that incomes in the countries of Central Europe may depend more on the characteristics of a worker (skills to perform complex tasks, education, experience) and on potential independent factors, than on the worker's decisions to pursue higher job satisfaction, for example at the expense of lower income.

Box II.7. Theory of compensating wages.

The theory of compensating wage is derived from the analysis of Rosen and Thaler (1976) on the effect on wages of a risk of death in the workplace. Potential loss of life obviously makes a job less attractive and results in reduced labour supply. This in turn implies the need to raise salaries. Allowing for the characteristics of employees (including education and age), Rosen and Thaler pointed to significant wage increases with increasing risk of death at work. Subsequent studies indicated that this effect is not only connected with direct risk of loss of life or health (as in Hamermesh, 1990 Wolfe, Cosineau *et al.* 1992, Garcia, Molina 1999, Gundersson, Hyatt 2001, Rao *et al.* 2003) but also with having to work overtime (Hersch, Viscusi 1990 and – only in the case of trade union members and new workers – Ehrenberg, Schuman 1981), carrying heavy objects (Hersch, Viscusi 1990), and the quality of life in the area where the employer is located (Berger *et al.* 2008).

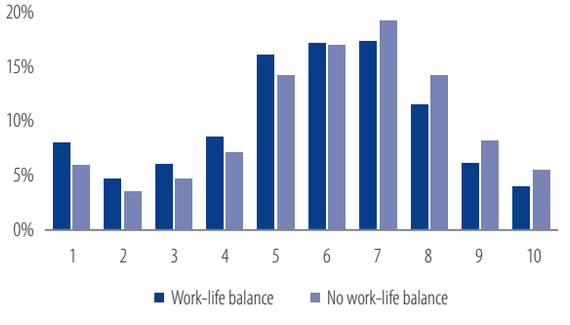
The theory of compensating wages is partly supported by the EWCS. The estimated ordered logit model suggests that in the EU15 the income (controlled by belonging to an income decile in a given country) is negatively affected by the work-life balance. There is a positive correlation between income and the number of minutes spent commuting, although it is rather due to the level of traffic in large cities with the highest median incomes.

In the EU15, a declaration that one's work allows a good or very good fulfillment of family and social commitments is associated with a 40 percent lower chance for wage growth to a higher quartile. At the same time, other variables describing the arduousness of work are either insignificant or (as in monotonous tasks) are associated with lower incomes. In the NMS10, the possibility of reconciling work and private life is not important for explaining income. In contrast to the EU15, the compensatory effect of wages can be observed for jobs that may result in irritability or sleeping problems (with similar strength in both cases), usually associated with a severe psychological burden.

Figure II.16. Distribution of hypothetical probabilities of belonging to income deciles in a EU15 country, depending on reconciling work-life balance.

Figure II.16 „Source: Own calculations based on EWCS 2005 data.

Figure II.17. Distribution of hypothetical probabilities of belonging to individual income deciles in a NMS10 country, depending on the incidence of work-related sleeping problems.



Source: Own calculations based on EWCS 2005 data.

2.3. Socio-demographic determinants of job satisfaction

Even a cursory analysis of Table II.5 shows that earnings and the subjective risk of dismissal are not sufficient to explain differences in job satisfaction. In this section, we discuss the results of logit models of perceived job satisfaction. The models describe the employee perceptions in the EU25 on the basis of EWCS 2005. Our goal was to identify factors associated positively or negatively with perceived job satisfaction. To this end, we divided individual variables into four groups:

1. socio-demographic characteristics of the surveyed individuals,
2. international and between-sector differences, not explained by the studied features,
3. characteristics defining the employment relationship; solutions adopted with regard to the form and time of work and wages,
4. characteristics associated with the quality of working life.

Before an analysis of relationships between the declared job satisfaction and specific characteristics of profession (reported in the fourth group), it is worth examining how job satisfaction is influenced by socio-demographic characteristics of employees, employment regulations, and work in different countries. Their connections to job satisfaction were examined on two levels. Firstly, a model without the fourth group was used, in order to show who had the greatest chance of having a high quality job (see Table II.7.). Then a full model was constructed in which the first three groups act as control variables and explain the differences in satisfaction not connected with the nature of professional duties.

The job satisfaction is more likely with high income (controlled at the level of income quartile in a country and education which serves as an approximation of skills) and occupations in principle requiring higher qualifications (officials, managers, professionals), and less likely for those employed in large institutions. This suggests the importance of professional autonomy (self-employed) and of close relationships (small companies) as factors that increase the sense of personal satisfaction.

In accordance with other reports mentioned in this study, the inhabitants of the EU15 were on average more satisfied with their jobs. Insignificant (or relevant only to a small extent) were factors such as industry or level of education, provided that the statistical analysis took into account contextual factors such as income and occupational group. However, the available data have a relatively low resolution – they divide respondents into only four income groups and ten occupational groups.

It suggests that the impact of the economic structure on job satisfaction is moderate (also see Box II.8). More important is the real income, one of the main reasons for significant differences between the EU15 and NMS in declared job satisfaction – lower income in NMS reduces the average level of satisfaction in comparison with more developed countries. However, it is not the only reason, as demonstrated by the significantly higher declared quality of working life in Poland than in most other NMS8 members. At the same time, as the removal of the 'country' variable does not change the conclusions regarding the influence of sectoral structure and education, their potential effect is not explained in the initial model by international differences. The removal of the 'occupation' variable does not affect the significance of education and only slightly affects the importance of the sector. However, the elimination of the income group from a group of explanatory variables makes education an important correlate of quality of working life – hence it is income rather than education (positively correlated with income) that determines the declared job satisfaction in EWCS 2005.

There was a surprising insignificance of several variables in the survey that could be expected to be key determinants of the perception of professional satisfaction. One example is the number of people working in the household (i.e. the possible effect of increased pressure on 'the only breadwinner'). The statistical insignificance of this and other variables in our study suggests that they are not important determinants of job satisfaction in both EU15 and NMS. It is also interesting to observe the positive impact of apprenticeship in the EU15 (which can be associated with lower stress and greater opportunities to learn) and the worse situation of temporary migrants in the NMS10 than EU15.

In summary, the ability to perform a satisfactory job seems to be primarily connected with skills – the related higher income and the more rewarding nature of jobs requiring high skills. Other potential determinants are at best marginal. The significance of the observed discrepancies between countries suggests that the differences in perceived quality of working life result from dissimilar conditions in various countries, even at similar positions.

Table II.7. Job satisfaction, depending on the socio-demographic characteristics (based on ordered logit model).

Socio-demographic characteristic	Effect of the characteristic on satisfaction	Comment
Country	significant	In the EU15 particularly poor quality of working life was observed in Spain, Italy and Greece and high in Denmark, the UK and Austria. In the NMS10 the highest quality was in Cyprus and Malta, and the lowest in Lithuania and Latvia. Poland had a significantly higher quality of working life than the NMS, except Cyprus, Malta and the Czech Republic (in the last two cases, the differences were insignificant).[11]
Age and sex	significant in EU15	Compared to men aged 20-49 years, a significantly higher quality of working life was perceived by women up to 29 years of age, and (more strongly) by men older than 50.[12]
Education	significant in EU15	In the EU15, in relation to employees with secondary and vocational education (ISCED 3), those with primary education perceive their quality of working life to be significantly lower (ISCED 1). Greater satisfaction can be observed only for people with doctoral degrees (ISCED 6).
Profession	significant	In the EU15, a significantly large proportion of satisfied employees can be found among professionals, technicians (groups 2 and 3 in the classification of professions and specialties), followed by senior officials, managers, clerks, service and sales workers (groups 1, 4, 5). Low satisfaction is common among agricultural, manufacturing, and unskilled workers (group 6, 7 and 9), and the lowest among machine operators (Group 8). In the case of the NMS, the greatest satisfaction is declared by senior officials, managers (group 1), a little lower by professionals and technicians (groups 2 and 3), and is particularly low among machine operators (group 8).
Sector of employment by ownership	insignificant	There were no significant differences in perceptions of quality of working life among employees in the private sector, public, PPP, NGOs and others.
Employer size	significant	In the EU15 the highest perceived quality of working life was observed among self-employed, followed by those working in micro and small enterprises. The NMS are characterized by significantly lower quality of work in companies employing more than 250 people.
Sector	significant	Compared to manufacturing in the EU15, only those employed at hotels and restaurants report significantly lower satisfaction. The only higher satisfaction is reported in financial intermediation. In the NMS, however, a significantly higher quality of work is reported in trade and water, electricity and gas supply, and lower – in construction.
Income (by an income quartile in a given country)	significant	The growing satisfaction with the achieved income is accompanied by increased job satisfaction, while in the EU15 there is a negligible difference between the first two quartiles. In the NMS, the difference is insignificant between the third and the fourth quartile.
Foreign citizenship	significant in NMS	In the NMS significantly lower quality of work is declared by the citizens of other countries, but only those that do not belong to the European Communities (the link is weaker for citizens of candidate states and does not apply to permanent residents).
Form of employment	significant in EU15	Compared with an open-ended contract, significantly higher perceptions of quality of working life is reported by those in apprenticeships and other training schemes, and significantly lower by those without any contract.
Working at more than one workplace	significant in EU15	Compared with those working only in one place, significantly lower quality of work is reported for occasional work (not permanent or seasonal).
Number of working individuals at a household	insignificant	

Note: Table describes the results of a model in which characteristics of the quality of working life are not controlled.

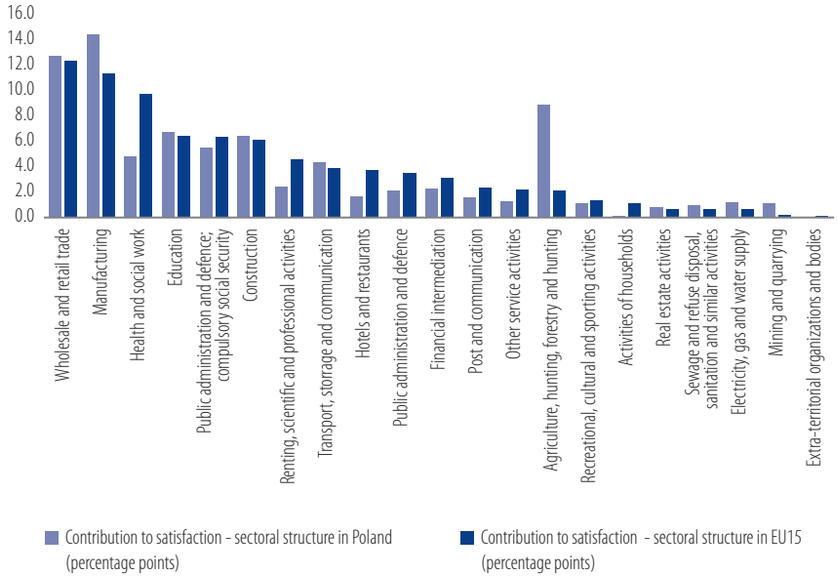
Source: Own calculations based on EWCS 2005 data.

[11] At the same time, the estimation of an analogous model for the entire EU25 shows that all NMS10, except Cyprus and Malta had a significantly lower quality of working life than in EU15.
[12] The result remains valid even when we controlled the number of immediate superiors, i.e. the approximation of the position in the professional hierarchy, positively influencing the perceived quality of working life.

Box II.8. Sectoral structure and job satisfaction.

The level of satisfaction in Poland remains lower than in the EU15, despite the relative improvement compared to the previous EWCS (2001). A question arises to what extent this difference is connected with sectoral structure of the Polish labour market. To answer this question we performed a simulation of the satisfaction level assuming the full convergence of the labour market structure to the EU15 average in 2009. This hypothetical convergence of the employment structure changes the contribution of individual sectors to the overall level of satisfaction. In particular, the reduction concerns the share of sections where respondents declared low satisfaction, such as agriculture (a decline by more than 10 percentage points; 64 percent satisfied employees), for the benefit of modern industries in which workers pointed to the above-average quality of their main workplace (e.g. professional activity). The presented simulation shows a reduction in the satisfaction difference between the EU15 and the Poland by 2 percentage points, to a level of 76.7 percent. It means that the sectoral structure of the labour market, although important, is not wholly responsible for the differences in job satisfaction between the EU15 and NMS. Similar to labour productivity, this conclusion is not surprising in the context of the relatively small differences in the sectoral structure of economies in the European Union.

Figure II.18. Changes in the contributions of individual sections (NACE, Rev. 2) to job satisfaction before and after adjusting sectoral structure of the Polish economy to the EU15.



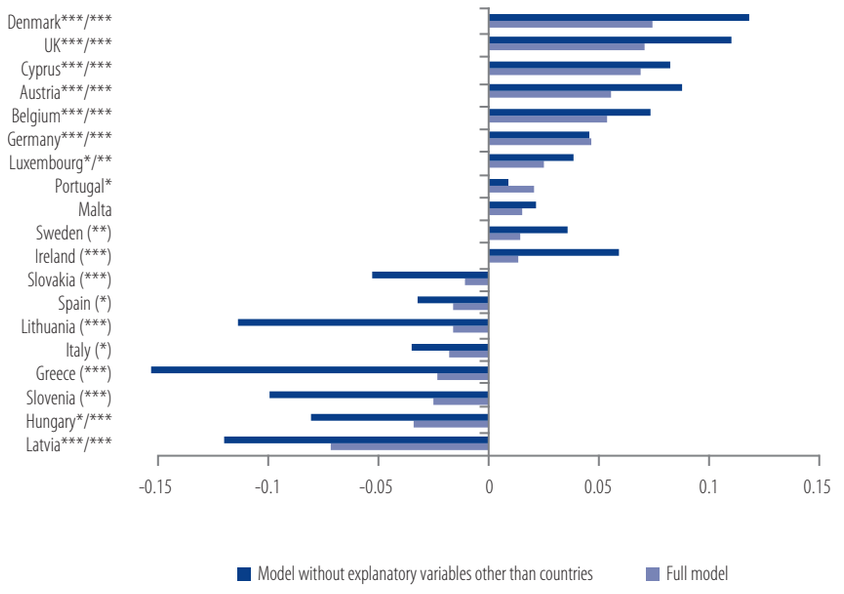
Source: Own calculations based on EWCS 2005 and Eurostat data.

Importantly, outside agriculture (in which the professional satisfaction is lower than in other sectors at a given profile of duties), the difference in the quality of working life between different sections, as well as between groups of professionals, are fully explained by variables describing the working conditions, the subjective perception of work components and the formal features of employment relationship. On the other hand, they are insufficient to explain the differences between countries, especially the most developed. In particular, in a logit model taking into account variables describing various aspects of job quality, the controlled variables do not explain a significantly greater job satisfaction in eight countries – including Denmark, the United Kingdom, Cyprus, Austria, Belgium and Germany. To lesser extent, greater satisfaction than in other EU25 countries is declared by the employed in Luxembourg and Portugal. In addition, in two NMS job satisfaction is lower: in Latvia and in Hungary. Apart from these two cases, the variables used in describing the nature of work and its duties adequately explain the differences between the EU countries of Central and Eastern Europe and the EU15, excluding France, the Netherlands, Spain and Italy.

In particular, the absence of Poland among the countries presented at Figure II.19 means that the level of Polish job satisfaction is not significantly different from the other not shown countries (e.g. Czech Republic, France and Estonia). Moreover, taking into account the characteristics of employment (i.e. in the full logit model) does not change this. It means that the differences in the level of job satisfaction in Poland, Sweden and Ireland, on the one hand, and Slovakia, Lithuania, Greece and Slovenia can be sufficiently explained by the individual job qualities in those countries.

Comparison of theoretical and empirical values shows that socio-demographic characteristics of the population and characteristics of individual aspects of quality of working life practically fully explain the significantly lower job satisfaction in Greece, Lithuania and Slovenia.

Figure II.19. Impact on the conditional likelihood of high or very high job satisfaction for countries that differ most from the EU25 average based on the ordered logit model including the characteristics of the quality of working life.



Note: (***), (**), (*) indicate significance at the levels 0.01, 0.05 and 0.1. When significance occurs in both models, first we present the significance of the full model (including all examined explanatory variables). In the case of significance occurring only in the model without other variables than countries, levels are presented in parentheses.

Source: Own calculations based on EWCS 2005 data.

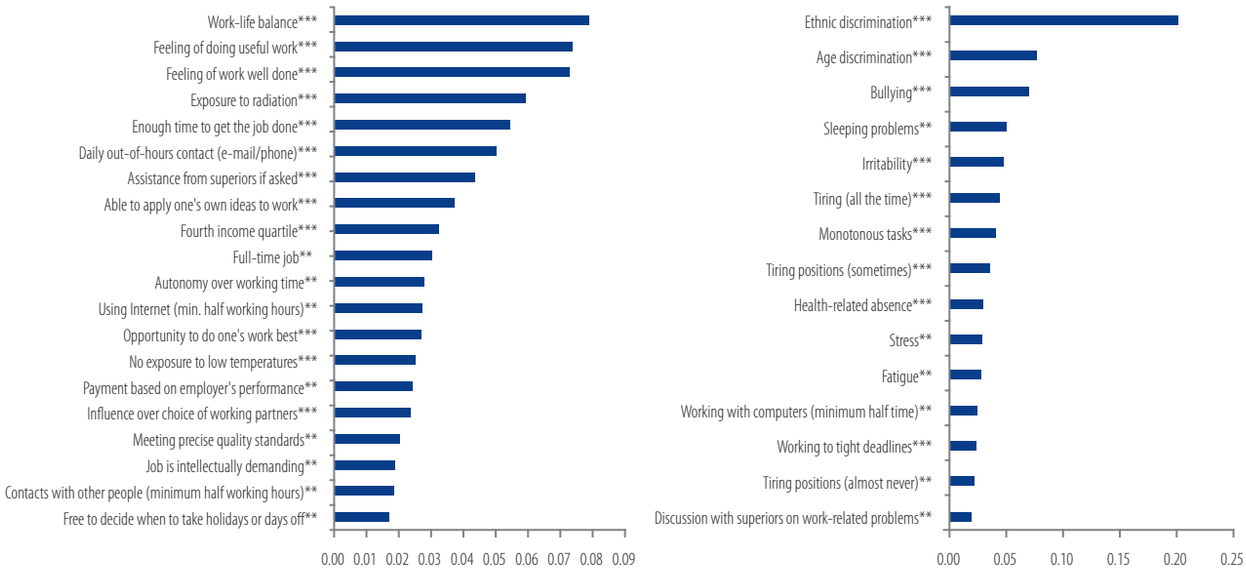
Wages in the third income quartile are only moderately positive determinants of satisfaction. The transition to the fourth quartile, however, strengthens concurrence with high satisfaction. Demographic variables only weakly concur with some levels of individual perception of job quality, with slightly better results among women; in particular those aged 15-49. Education generally does not differentiate the level of satisfaction, with the exception of PhD education. This is not surprising, given the income is divided only into quartiles. A PhD title may significantly increase wages (especially high wages) in each income group (as confirmed by data for the U.S. economy). It is similar with variables that determine the employment relationship – basically, their presence is often accompanied by above-average satisfaction, but the significance of the variables is low. It is consistent with intuition that an increase in job satisfaction exists when an employee can decide about when the work can be done. A lack of contract is more frequently accompanied by low satisfaction, as it signifies instability of employment, lack of social security and potential legal sanctions. Productivity payments, extra payments based on the overall performance of the employer and shares in company promote satisfaction – all three are motivational factors, and directly or indirectly reward increase in productivity. Productivity pay is a reward for good performance of individual employees, whereas the other two reflect the overall efficiency.

Work-life balance was very important for the surveyed employees and was most frequently accompanied by a high perception of working life quality. Paradoxically, out-of-hours contact also correlates with the positive perception of work quality, but this correlation is observed only for daily contact (and not very frequent or sporadic) which suggests a different type of causality. In other words, employees with a low level of job satisfaction talk or write mail on work-related matters less frequently than daily, and those very involved in their work were significantly more satisfied anyway. On the other hand, tight deadlines are accompanied by below-average satisfaction, and having enough time to get the jobs done is characteristic for a high level of job satisfaction.

The empirical results are consistent with general opinion on the importance of professional fulfillment. The feeling of well done and useful work gives a non-material sense to professional activities, which translates into individual satisfaction. A similar although much weaker influence was observed for involvement: opportunity to do one's best and the ability to apply own ideas in one's work. Monotony is perceived as very negative. Learning new things and intellectual demands are weakly positively correlated with job satisfaction; emotional demands have a negative impact. It is interesting that discussion with superiors about problems at work is associated rather with lower satisfaction levels, and the formal assessment of one's achievements increases satisfaction.

Within autonomy at the workplace, a special role is played by the assistance from superiors when asked and an influence over the choice of working partners. However, it is important for these two factors to be always available, and not only incidentally. In the first case, a positive correlation with job satisfaction results from the sense of support from superiors, and a high assessment of the superior's authority. The influence over the choice of new working partners seems to help achieve higher productivity due to a better rapport among employees. A similar interpretation can be used for job satisfaction growing with the autonomy over the working time schedule, although this dependence is weaker. Good job-skills match and training paid by or organized by the employer seem to have a secondary although positive influence. Skills development at work was insignificant. It is an interesting when compared to the analyses by Dębowski and Pogorzelski from the previous edition of *Employment in Poland* (see CRZL, IBS (2010)) who showed that lifelong learning significantly influences only the flow from unemployment to employment and does not increase flows from employment to employment, i.e. a change of job.

Figure II.20. The effect of characteristics of the quality of working life on the change of conditional likelihood of high or very high job satisfaction (left) or on the likelihood of no dissatisfaction or no strong dissatisfaction (right).



Note: All the variables in the right panel are significant at 0.01, in the left panel the significance level is 0.05.
Note 2: Due to technical matters, the presented estimations use a model without 15 insignificant variables that are present in the model in the Appendix. This does not produce any substantial differences in the estimations of the effects of individual factors.
Source: Own calculations based on EWCS 2005 data.

Among the wide range of physical working conditions, only a few seem to have a significant effect on job satisfaction. Highly significant was the exposure to cold, although not to heat. It seems that the reaction to extreme microclimates should be symmetrical, but a deeper analysis shows that avoiding lower temperatures avoids many jobs with intrinsic low levels of satisfaction (e.g. in agriculture). No exposure to low temperatures means that tasks are performed in warm countries or in heated interiors. Furthermore, heat is better tolerated by employees and hence the dissatisfaction is lower.

A specific category is exposure to radiation, which always or almost always only slightly decreases job satisfaction. Exposure to radiation for 25 percent to 75 percent of working time has a significantly positive effect on the perception of work quality. It seems that these results illustrate a relatively small number of employed in such jobs and on the general quality of these jobs. Those working under constant radiation usually perform hard physical work, and less frequent exposure is characteristic for jobs in health care or science that usually have much higher job satisfaction levels. Slightly lower job satisfaction is observed among those working in constant noise, and at least frequent exposure to tobacco smoke.

In accordance with intuition, a strongly negative effect on job satisfaction is exerted by painful or tiring working positions, which is typical for traditional sectors, especially agriculture. The importance of this feature shows that it still remains significant even when it occurs 'almost never' (in comparison with 'never'). There is a positive although weak correlation of higher levels of job satisfaction with working at home, contacts with people other than colleagues, and the use of the Internet and e-mail in performing professional tasks. It seems that such conditions are usually more frequent in modern jobs – those with intellectual demands and a relatively high autonomy at the workplace – and in public services. Working with computers *per se* obtained negative parameters. It is highly probable that if computers are used for purposes other than communication or data searching through the Internet, such work can be simplistic, tiring and tedious.

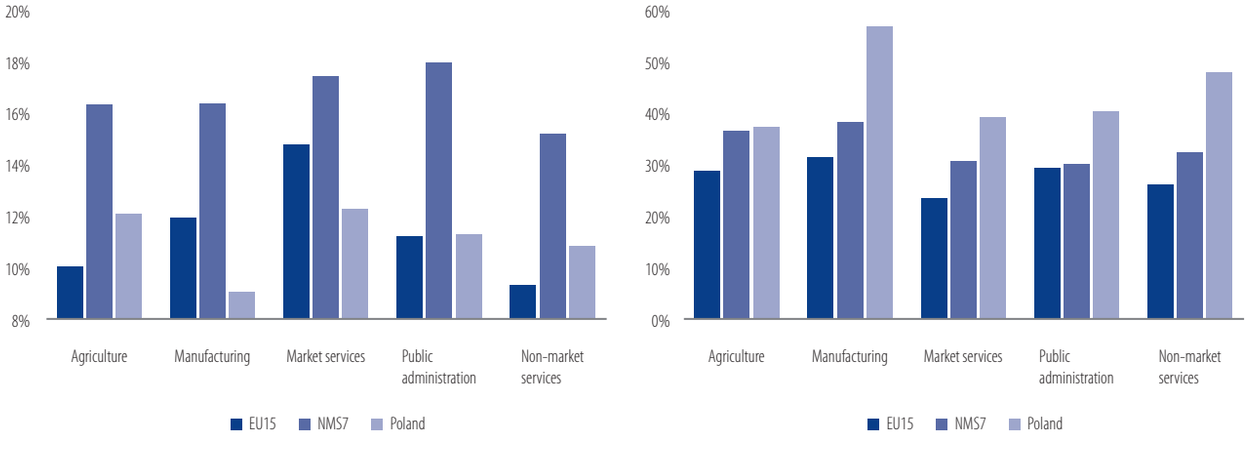
Job satisfaction seems to be unaffected by task rotation, regardless of who decides this, and by the regularity of schedules.

It is not surprising that job satisfaction is low when work is so harmful that the employee needs medical leave to recover. The model includes problems with breathing, sleeping, fatigue and irritability. The stress-related problems are typical for bad atmosphere at work and strong pressure, which usually translate into lower satisfaction. Extreme situations such as nationality and age discrimination, and mobbing are unambiguously negative.

In summary, it seems that job satisfaction depends mainly on issues that are weakly related to sectoral differences. Professional fulfillment and work-life balance depend much more on individual preferences and skills, and also on the specific character of the employer. Other significant factors are also associated with cooperation – the influence over the choice of working partners and assistance from superiors. Physical aspects of work seem to be less important, except ergonomics, i.e. lack of painful or tiring working positions. It is surprising that the modern organisation of work, including task rotation, is insignificant.

Additional information on the perceived difficulty of work is provided by a question on the ability to do same job at the age of 60. In the NMS, including Poland, work is more frequently perceived as hard than in the EU25. The most physically and psychologically demanding jobs are in traditional branches – mining, manufacturing, electricity supply and construction. In these sections and also in market services are the biggest differences between the EU15 and CEEs. Furthermore, according to EWCS, work in agriculture and fishing in CEEs is not worse than in market services.

Figure II.21. Subjective assessment of physical and psychological abilities to do the same job at the age of 60 – percentage of employees who were not interested (left) or thought it was not possible (right).



Note: Due to the number of surveyed employees in a single country, modern services are analysed together with traditional services (as 'market services'). Non-market services include education, health care and social work, and other community, social and personal service activities.
Source: Own calculations based on EWCS 2005 data.

The results of the logit models (for more see Appendix 3) show that between-sector differences in the perceived long-term effect of work on health in general (in the context of being able to perform one's duties) can be explained by the nature of occupation. In general, the jobs of professionals, office clerks and machine operators are perceived as lighter. However, besides the issues of physical discomfort (shown in the significance of factors such as carrying a heavy weight or back aches), the employees emphasize the importance of a work-life balance, intensity of work and psychological strain. The employees in the EU15 are significantly more often convinced that they could do their job at the age of 60, which suggests a lower arduousness of work in those countries. Similarly to the satisfaction with performing one's tasks, very important are the work-life balance and professional fulfillment.

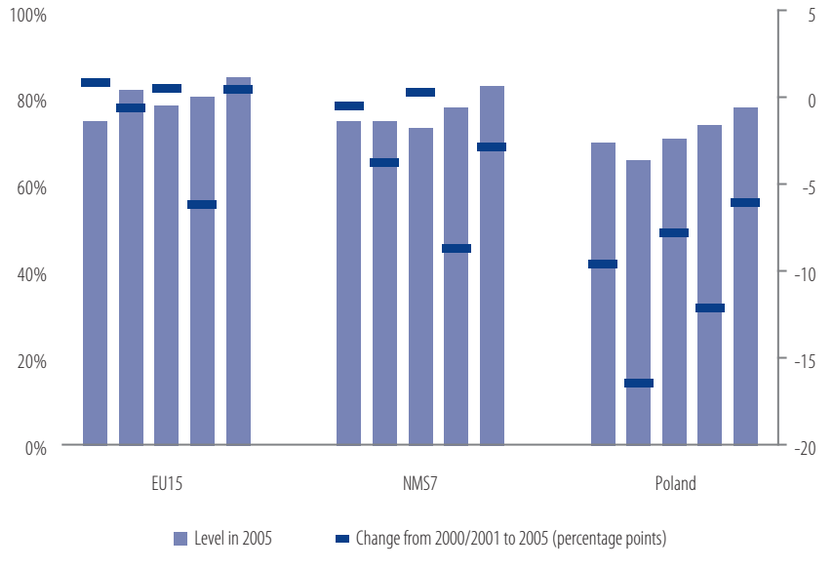
In addition, employees at hotels and restaurants are especially unwilling to continue their work until 60, which indicates that these jobs are perceived as only temporary. It is consistent with the high intensity of outflows and inflows to this sector.

2.4. Evolution of selected aspects of the quality of working life in Poland

Analysis of the job satisfaction level indicates that Poland is above the middle position in the European ranking, better than most of the NMS and even some EU15. It is therefore interesting how individual aspects of job satisfaction evolved in recent years in comparison with the rest of Europe. Despite the short time of coverage by EWCS and a limited number of surveys other than EWCS, we will try here to present changes in the entire Polish economy and its individual sectors. The described changes include mainly the aspects that are most crucial for job satisfaction in our logit model: (i) work-life balance, (ii) autonomy in the workplace (iii), non-standard working hours (iv), stress (v), physical risk and (vi) accident rate.

A hypothesis on the increasing pace of business in the NMS is reflected in increasing difficulty with achieving work-life balance. In 2000-2005 the greatest decrease in this regard, by 16.4 percentage points, was observed in Poland, yet this trend is common for all the NMS – the percentage of reported problems in this regard increased (by up to 9 percentage points) or at best was close to zero. The greatest decreases in work-life balance in the EU were observed in public administration (by 0.5; 8.7 and 12.1 percentage points, in EU15, NMS7 and Poland respectively). Only a slight deterioration and in consequence the highest proportion of workers satisfied with their work-life balance were observed among those employed in non-market services.

Figure II.22. Employees declaring good or very good work-life balance in Poland.

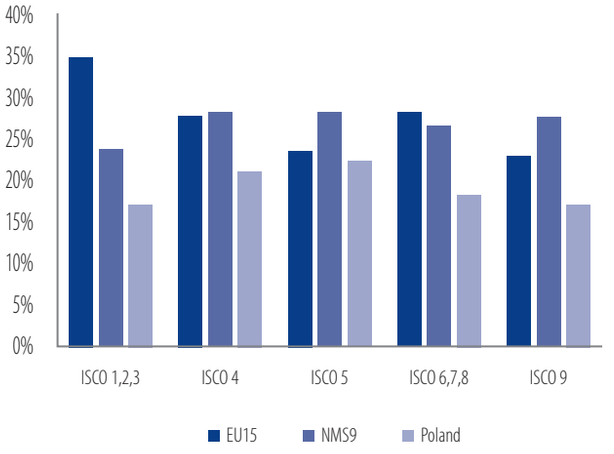


Note: Each country/group of countries is described by 5 columns (left to right): agriculture, manufacturing, market services, public administration and non-market services.

Source: Own calculations based on EWCS 2000/2001 and EWCS 2005 data.

The results of EWCS and Eurostat on work-life balance are seemingly inconsistent. In the Eurostat survey employees in Poland seem to reconcile these two domains relatively better than in the NMS and the EU15 – only 7 percent of Polish employees in 2004 were willing to limit the range of their duties at work in order to spend more time with family (compared to 11 percent in the EU15 and 12 percent in the NMS). The discrepancy between the results may be explained in two ways. First, questions differ in the range of duties mentioned, although in general they seem to share the same concept. The Eurostat survey asks about the need to change the organisation of professional life and family commitments, while EWCS examines the balance between the working hours and family and social commitments after work. One may suppose that in Poland employees spend a lot of time with their families, and in consequence have very little time for other obligations. It is consistent with the observations in *Employment in Poland 2008* – Polish children and the elderly are more often looked after by their families than by institutions. Another explanation – Poles are not involved in their family lives and just lack time for other obligations – is much less probable, especially in the light of low participation of Poles in social organisations.

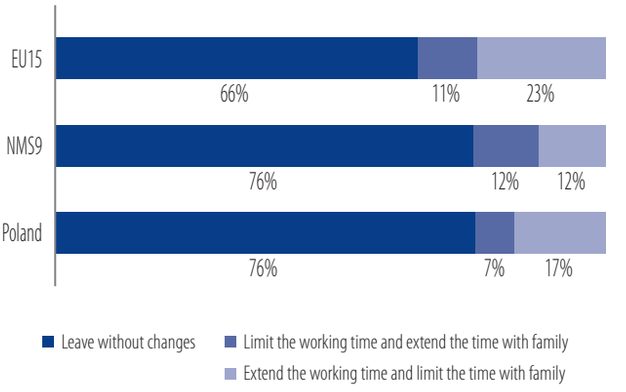
Figure II.23. The proportion of employees declaring inconvenience of work with non-standard working hours with regard to their personal life, by occupation, in 2004.



Note: Non-standard working hours include work at night, in the evenings and weekends.

Source: Own calculations based on Eurostat data (LFS ad-hoc module 2004).

Figure II.24. Declared wish to change the organisation of working life and care responsibilities in the group of 15-64 year olds in 2005.



Source: Own calculations based on Eurostat data (LFS ad-hoc module 2004).

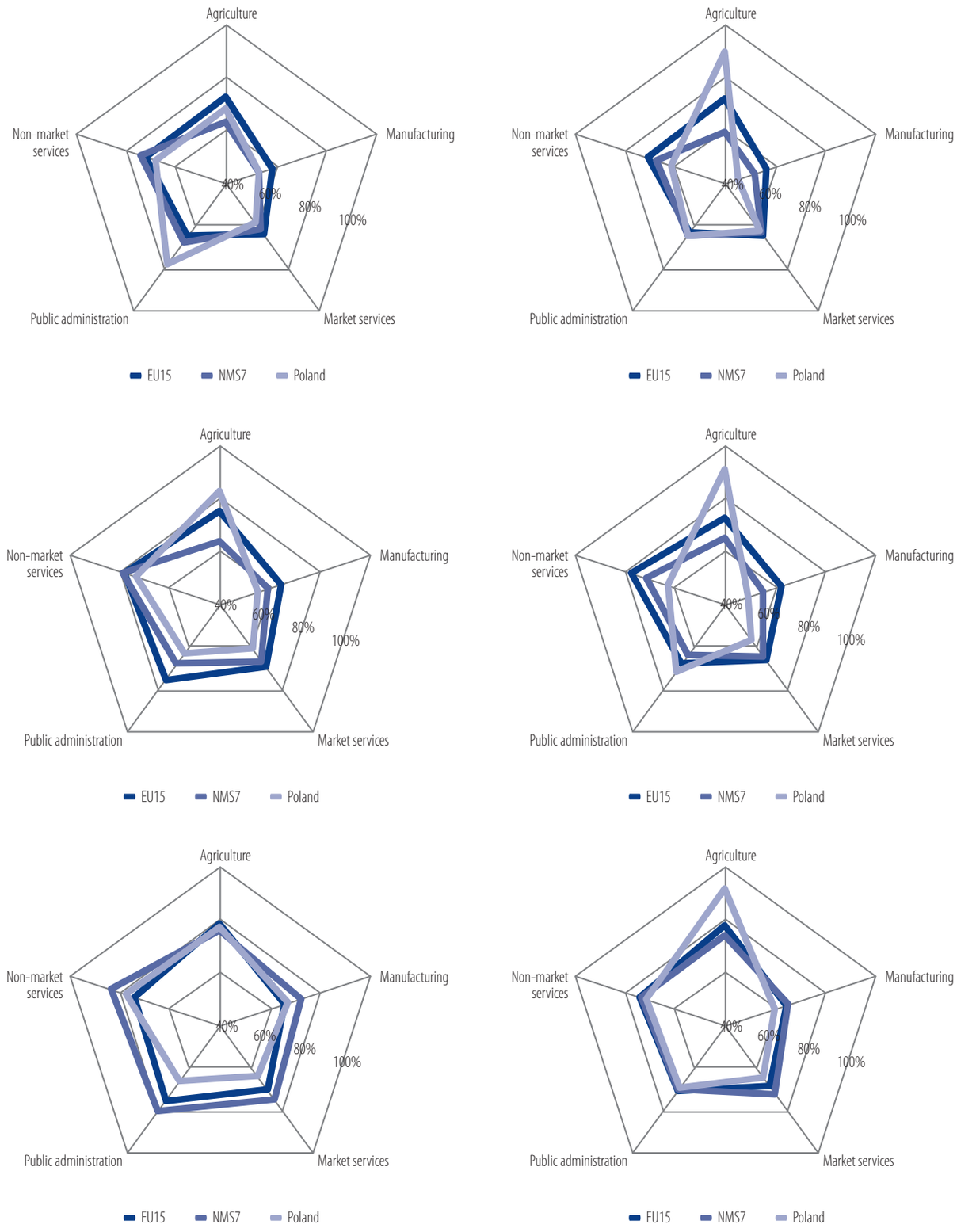
Interesting conclusions can be drawn from the analysis of employees declaring the inconvenience of non-standard working hours with respect to their private life. According to Eurostat (module study LFS 2004), it was most often declared by those employed in services and sales, albeit never exceeding 25 percent. In the rest of the NMS, this proportion ranged between 23 and 27 percent. In the EU15 such inconvenience was declared most among occupations requiring the highest qualifications – managers, professionals, technicians and associate professionals (35 percent of declarations). No similar correlation can be observed in the NMS.

Changes in autonomy in the workplace have an opposite effect. An average level of autonomy reaches 70 percent, but its spatial and sectoral distribution is rather irregular. A particularly high level of autonomy in the workplace in all the examined aspects (order of tasks, methods of work and speed of work) is declared by agricultural workers. The percentage of positive declarations in all the aspects increased significantly between 2001 and 2005, exceeding 90 percent in 2005.

This high proportion of responses is mainly related to the prevalence of self-employment in Polish agriculture. A significant loss in autonomy is visible in public administration, which is alarming and indicates a progressive formalisation of administrative activities; the results are consistent with the conclusions of other surveys (see 'Efficient State' from the report *Poland 2030 – Development Challenges* (ZDS 2009)). In other services and manufacturing there were no changes in the autonomy with respect to the order of tasks and methods of work, and the influence over the speed of work slightly decreased. It seems that besides administration, those employed in the service sector in the EU15 have a greater influence over the organisation of their work than in Poland.

Another factor crucial for the quality of working life is stress, widely believed to be higher in certain sectors. If this hypothesis is confirmed, it would mean a more frequent concurrence with lower job satisfaction levels, but this is not the case. However, this could be a result of coexistence of unobserved job qualities that alleviate the inconvenience of stress. The proportion of those declaring the negative effect of work-related stress on health is different between groups of countries. In the NMS, especially Poland, stress is much more frequently declared than in the EU15 in each sector, excluding agriculture. The differences were even 23 percentage points. In agriculture the differences were atypical, as agricultural workers in the EU15 were more stressed; still, the difference between the EU15 and Poland was only 1.5 percentage points. In Poland, the greatest proportion of workers complaining of stressful work was in manufacturing (44 percent in 2005) and public administration (43 percent), and only slightly lower in non-market services (39 percent).

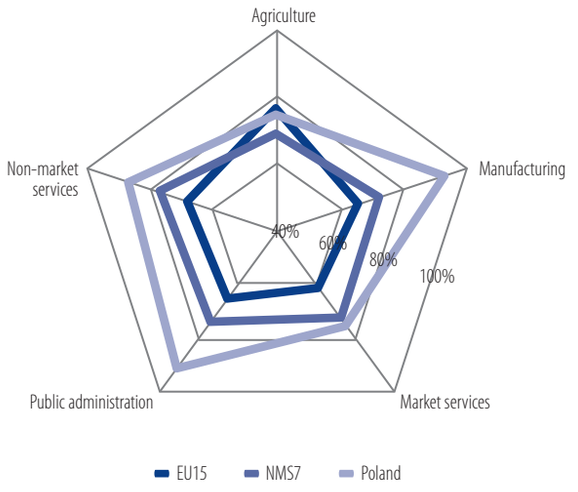
Figure II.25. Comparison of the levels of the autonomy in the workplace in years 2000-2001 (left column) and 2005 (right column), by sector: order of tasks (upper panel), methods of work (middle panel) and speed of work (bottom panel).



Note: The figures present the distribution of response by sector. The values for a particular sector can be read at the angle assigned to that sector. The greater distance of the line from the centre of the pentagon, the higher the percentage of responses.

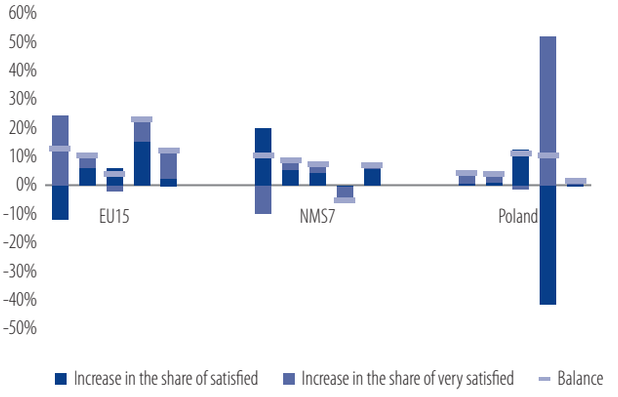
Source: Own calculations based on EWCS 2000/2001 and EWCS 2005 data.

Figure II.26. Share of employees declaring stress at work, by sector.



Source: Own calculations based on EWCS 2005 data.

Figure II.27. Impact of the lack of stress on the declared job satisfaction (measured by changes in the response structure – in percentage points).



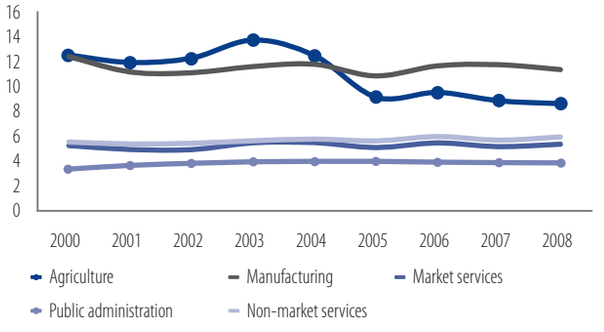
Note: Each country/group of countries is described by 5 columns (left to right) agriculture, manufacturing, market services, public administration, non-market services.

Source: Own calculations based on EWCS 2005 data.

Even a cursory analysis shows that a lack of stress makes work more satisfactory. In almost each case we can observe an increase in the number of satisfied employees, including a rise from average to high satisfaction. However, one should allow for the scale of this trend. In only a few cases the percentage of satisfied increased by more than 10 percentage points. Despite the methodological limitations of this comparison (we do not control other variables), we cannot escape the conclusion that in the NMS where the declared level of stress is higher than in the EU15, there exists a lower sensitivity to the decrease in stress. It is possible that when the level of stress is high, the employees may become somewhat insensitive to stress.

Contrary to expectations, technological progress in Poland over the last 10 years has not resulted in a decrease in the number of accidents in the workplace, although there has been a reduction in this regard. Sectors can still be divided into those with high and low accident rates. The former are agriculture and manufacturing, regularly exceeding 10 accidents per 1000 employees. In recent years it has decreased, especially in agriculture where since 2003 the number of accidents decreased from 13.8 to 8.7. In services, the accident rate remains at a low level – from 3.9 in public administration to 5.7 in non-market services. Except for agriculture, these numbers remain rather constant in time and are subject to slight fluctuations.

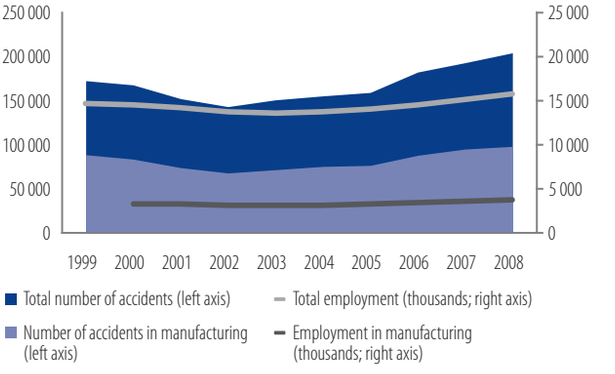
Figure II.28. Accident rate per 1000 employees in Poland, by sector, in 2000-2008.



Note: The accident rate in agriculture is estimated via the accident rate at individual farms.

Source: Own calculations based on National Labour Inspectorate and Eurostat data.

Figure II.29. Accidents at work in the entire economy and in manufacturing in Poland in 1999-2008.



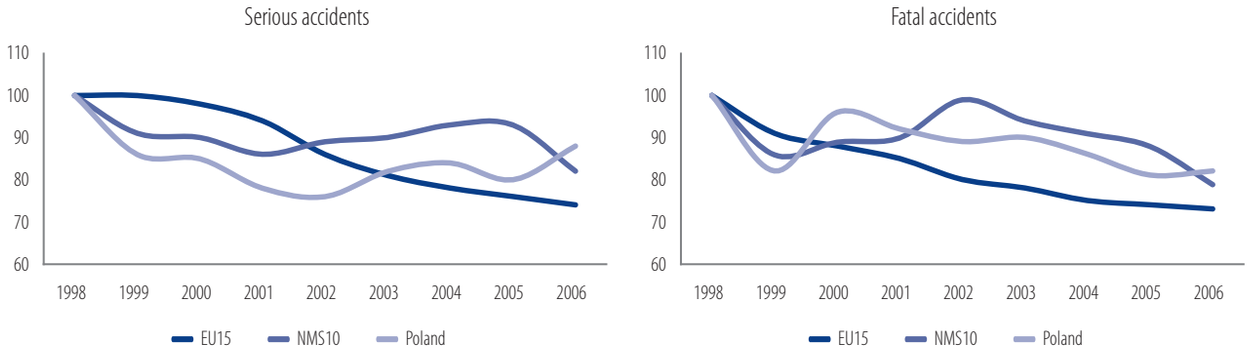
Note: The category of manufacturing includes the sections C, D, E (NACE 1.1) or sections B, C, D, E (NACE 2.0)

Source: Own calculations based on National Labour Inspectorate data.

The analysis of accidents at work makes it necessary to draw a line between absolute and relative values to allow for changes in the number of employed in the economy. From 2002 to 2008 the total number of accidents at work in Poland increased by 43 percent, in manufacturing by 44 percent, which must have been related to the increase in employment. Until 2005 the number of total accidents was (almost) linearly dependent on the number of accidents in manufacturing (the difference was about 80 thousand persons). At present such a correlation does not exist.

A comparative analysis shows that the accident rate in Poland and other EU countries has been decreasing, although in the NMS there is no stable trend. Eurostat data show that the EU15 managed to limit serious and fatal accidents by about 25 percent in 1998-2006. Poland in 2002 reached the level of the EU15 from 2005 (which means a reduction by almost 25 percent compared to 1998), but it turned out to be only temporary and in 2006 the rate increased by 10 percentage points. Fatal accidents were limited by 27 percentage points in 2006, although distance to the EU15 remains to be at the level of 8 percentage points.

Figure II.30. Serious accidents (left panel) and fatal accidents (right panel) per 100,000 employed in years 1998-2006 (1998=100).

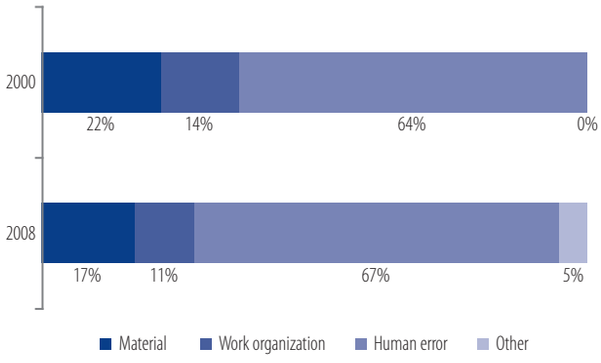


Source: Own calculations based on Eurostat data.

Source: Own calculations based on Eurostat data.

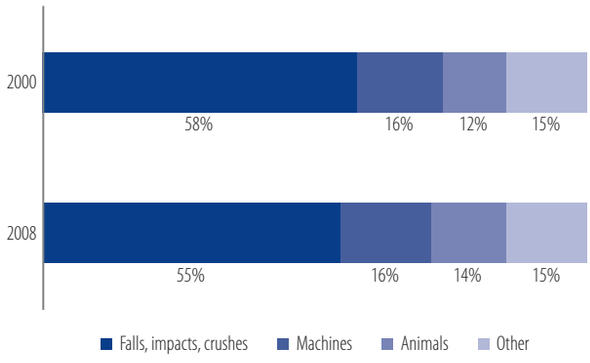
Outside agriculture, accidents are mainly caused by inappropriate behaviour or the psycho-physiological state of employees (an increase from 64 to 67 percent), while the role of material factors and work organisation has been decreasing. At individual farms the types of accidents have changed only slightly, with fewer accidents connected with falls, impacts and crushes, and a slight increase in accidents caused by improper handling of machinery and animals.

Figure II.31. Causes of accidents at work, except individual farms in 2000 and 2008 in Poland.



Source: Own calculations based on National Labour Inspectorate data.

Figure II.32. Causes of accidents at work at individual farms in 2000 and 2008 in Poland.

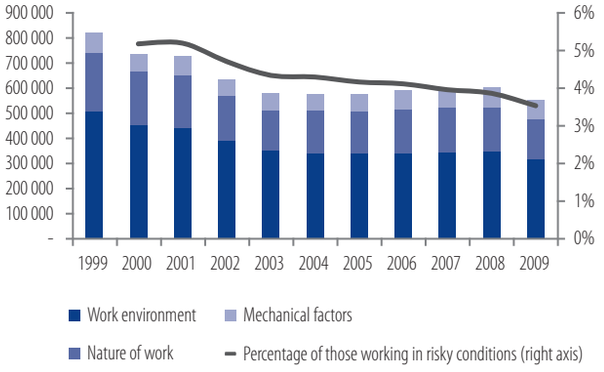


Source: Own calculations based on National Labour Inspectorate data.

Changes in the structure of employment are reflected in occupational risk in the workplace and working conditions. Over the last 10 years, the number of threats has decreased by almost 40 percent, which means that the proportion of employed in hazardous conditions has decreased even more (from 5.2 percent in 1999-2000 to 3.5 in 2009). Significantly, the decrease in absolute values was even across individual hazard groups. In other words, the structure of jobs with respect to various hazards has remained the same (hazards associated with the working environment, arduousness of work and mechanical factors). The working environment is responsible for 60 percent of accidents, and arduousness for about 29 percent. In the former, noise was most frequently indicated (more than 50 percent) as the main risk factor at work. [13] In much fewer cases the risk was associated with dust (13 percent) and insufficient lighting (9 percent). Other types of hazards (microclimates, chemicals, vibrations) were mentioned only sporadically.

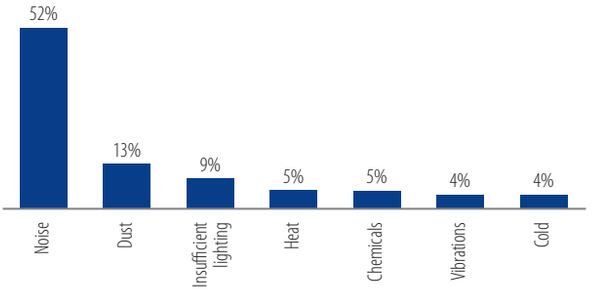
[13] There are differences in the definitions of microclimate, noise, contact with chemical, and vibrations between GUS data (Central Statistical Office in Poland) and EWCS and there are some possible discrepancies in the results.

Figure II.33. Employed in risky conditions and types of hazards in Poland in 1999-2009.



Own calculations based on the data of Central Statistical Office Regional Data Bank.

Figure II.34. Hazards related to the working environment in Poland in 2009.

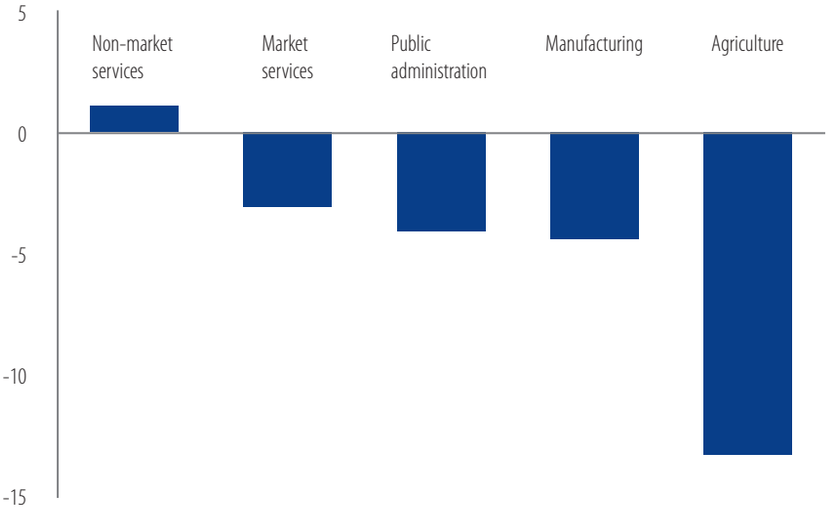


Own calculations based on the data of Central Statistical Office Regional Data Bank.

There has been a decrease in the accident rate in sectors previously considered to be highly hazardous. In manufacturing and agriculture the accident rate has been converging to the levels in the service sector, although the gap is still quite large. The number of accidents related to faulty materials has decreased, but many are still related to negligence.

The increased safety in traditional sectors is accompanied by increased awareness of potential threats in the workplace, as fewer respondents felt very well informed about health and safety risks in the workplace in 2005 compared to 2001. The greatest decreases were observed in agriculture (by 13.2 percentage points) and manufacturing (4.5 percentage points), but they were also observed in other sectors, except non-market services.

Figure II.35. Lack of information on workplace risks in Poland, by sector – change in 2005 in relation to 2001 (in percentage points).



Source: Own calculations based on EWCS 2001 and EWCS 2005 data.

The changes in the quality of work are also reflected in the improvement of physical working conditions: (1) lower exposure to dangerous conditions, (2) improved ergonomics in the workplace and (3) specific characteristics of work and use of technology in the workplace, according to the classification in Diagram II.3. Naturally, these changes are not identical in time and across sectors. In this section we describe factors that seem to be the most crucial for job satisfaction – no exposure to low temperatures, tiring or painful positions, and working with computers and the Internet.

Table II.8. Declarations of no exposure to low temperatures (outdoors and indoors), by sector, in 1995-2005 (in percent).

	EU15			NMS7		Poland	
	1995	2000	2005	2001	2005	2001	2005
Agriculture	25	27	22	35	37	21	31
Manufacturing	49	51	46	55	46	62	55
Market services	62	67	68	65	62	72	64
Public administration	68	70	61	67	69	79	76
Non-market services	68	76	74	73	73	86	76

Note: we included 'never' declarations.

Source: Own calculations based on EWCS 1995, 2000/2001 and 2005 data.

The greatest exposure to low temperatures was declared by agricultural workers. In this group, however, a lack of exposure was declared by not more than 37 percent in any examined group of countries, half the share of those in services. Poland had slightly better results than the NMS. The decrease in positive responses indicates a growing number of employees rarely or very rarely exposed to low temperatures. In the NMS the exception were agricultural workers, but this is rather due to the initial level of exposure to low temperatures.

Diagram II.3. Categories of physical working conditions in the light of the EWCS 2005.

exposure to physical risks

- vibrations
- noise
- high/low temperatures
- breathing in dust, smoke and fumes
- skin contact with dangerous chemical substances
- X ray radition
- breathing in tobacco smoke
- contact with materials that may be infectious (bodily fluids, laboratory materials, waste, etc.)

ergonomics

- tiring or painful positions
- carrying or moving heavy loads
- lifting or moving people
- walking or standing
- repetitive hand or arm movements

duties

- working at company / organisation premise
- working outside company premise
- dealing directly with people other than colleagues (customers, passengers, patients, etc.)
- working with computers
- use of Internet/e-mail for professional purposes
- wearing personal protective clothing or equipment

Source: Own elaboration based on EWCS 2005.

Similar to exposure to low temperatures, agricultural workers are most likely to suffer from painful or tiring positions at work. The frequency of 'always' and 'often' responses distinctly exceeded the results in other sectors, especially in Poland. Problems with ergonomics are least often declared in services. The structure of these declarations has not substantially changed over time.

Table II.9. Tiring or painful positions at work, by sector, in 1991-2005 (in percent).

	EU12	EU15			NMS7		Poland	
	1991	1995	2000	2005	2001	2005	2001	2005
always								
Agriculture	31	35	38	32	27	24	16	22
Manufacturing	18	20	22	19	19	20	25	31
Market services	14	17	16	12	16	14	23	20
Public administration	12	11	12	7	9	12	6	19
Non-market services		14	15	13	12	11	15	14
often								
Agriculture	38	36	39	36	35	36	61	57
Manufacturing	30	28	30	37	28	31	27	28
Market services	22	24	25	26	21	24	26	18
Public administration	24	23	22	27	18	16	34	26
Non-market services		28	29	28	22	20	20	21
almost never								
Agriculture	17	12	10	10	13	18	14	13
Manufacturing	21	22	19	19	18	19	10	14
Market services	21	21	20	21	18	21	11	14
Public administration	22	22	23	24	29	20	12	14
Non-market services		20	19	22	18	21	10	21

Note: We took into account 'always' and 'almost always' responses in the upper panel; 'around ¾ of the time', 'around ½ of the time' and 'around ¼ of the time' in the middle panel; and 'almost never' in the bottom panel.

Source: Own calculations based on EWCS 1991, 1995, 2000/2001 and 2005 data.

Thanks to technological progress, the intense use of computers in the workplace is becoming prevalent, both in the EU15 and service sectors in the NMS (also in the agriculture of the NMS7). A large gap between Poland and the EU15 in computer use concerns only traditional sectors – agriculture and manufacturing.

Table II.10. Working with computers for at least half of the time, by sector, in 1991-2005 (in percent).

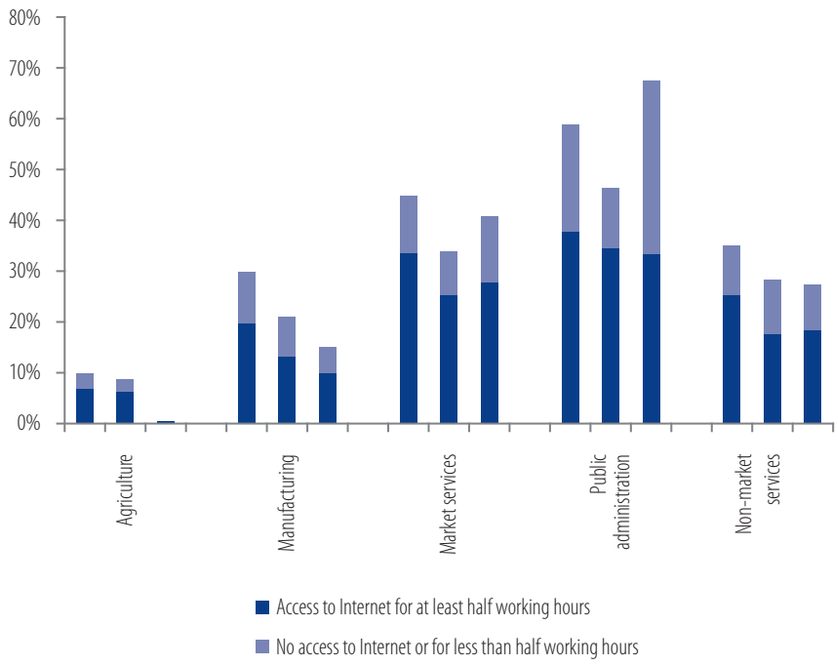
	EU12	EU15			NMS7		Poland	
	1991	1995	2000	2005	2001	2005	2001	2005
Agriculture	5	9	7	10	7	9	2	0
Manufacturing	22	27	27	30	22	21	17	15
Market services	24	33	36	45	32	34	26	41
Public administration	21	34	50	59	44	46	57	68
Non-market services		24	25	35	18	28	12	27

Note: We took into account the responses: 'always', 'almost always', 'around ¾ of the time' and 'around ½ of the time'.

Source: Own calculations based on EWCS 1991, 1995, 2000/2001 and 2005 data.

Additional important information on the type of work comes from the proportion of employees with access to the Internet. Working with computers without Internet access seems to be rather technical or manual in character, such as in manufacturing where computers are used to control production and in public administration that often uses intranets. In general, the differences in Internet access between the NMS and EU15 are not large, mostly due the high level of development in Baltic states. However, the proportion of those working without any access to the Internet will certainly be getting smaller with the planned massive introduction of broadband access.

Figure II.36. Access to Internet at work, by sector, in 2005.



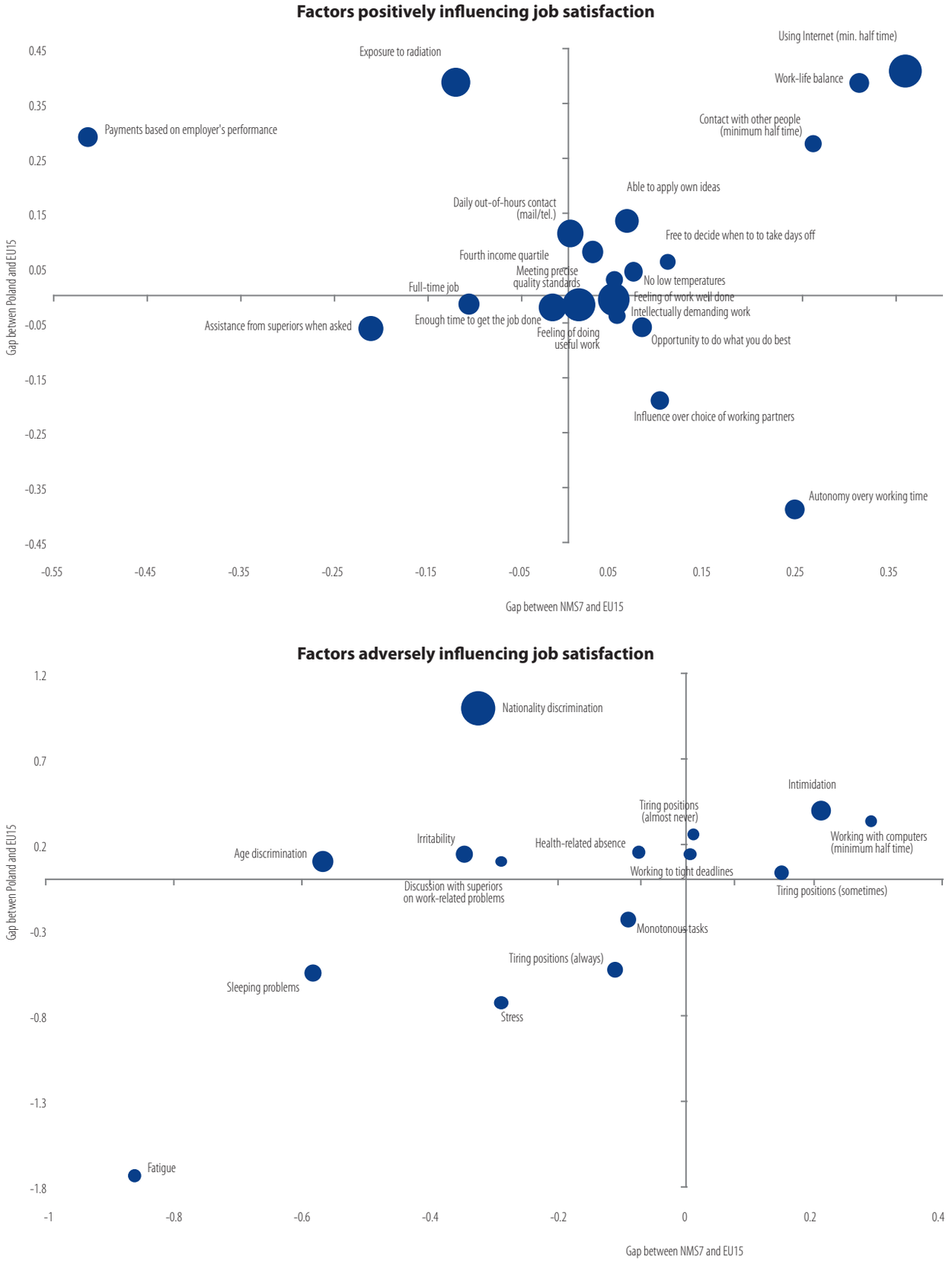
Note: Each sector is described by 3 columns (left to right) which present values for three groups of countries: EU15, NMS7 and Poland.
Source: Own calculations based on EWCS 2005 data.

The nature of work is changing. Although accident rates and physical discomfort have been decreasing, a growing proportion of employees declare problems with work-life balance, and relatively many employees suffer from stress. In some sectors procedures are increasingly standardized, which significantly limits autonomy in the workplace and hence affects job satisfaction. In addition, technological progress does not contribute evenly to improvement in the quality of working life across sectors, similarly to productivity.

To sum up, the main factor responsible for differences in job satisfaction between Poland and the NMS7 is work-life balance (WLB). This is followed by physical and psychological issues (work-related fatigue, sleeping problems, stress, tiring positions) and two factors related to the development of the economy, the use of the Internet at work and interaction with people other than colleagues. Job satisfaction in Poland is also significantly affected by the low frequency of additional payments based on the overall performance level of the employer which, in the context of no significance of extra pay based on individual achievements, shows a relatively low feeling of participation in the increased effectiveness of their companies, sectors and the entire economy.

The most important factors that concur with higher job satisfaction, and more frequent in Poland than in the EU15 and even more than in the NMS7, are a lack of nationality discrimination (which is rather associated with the homogenous ethnic structure of the Polish society) and interestingly, a greater autonomy over working time and influence over the choice of working partners.

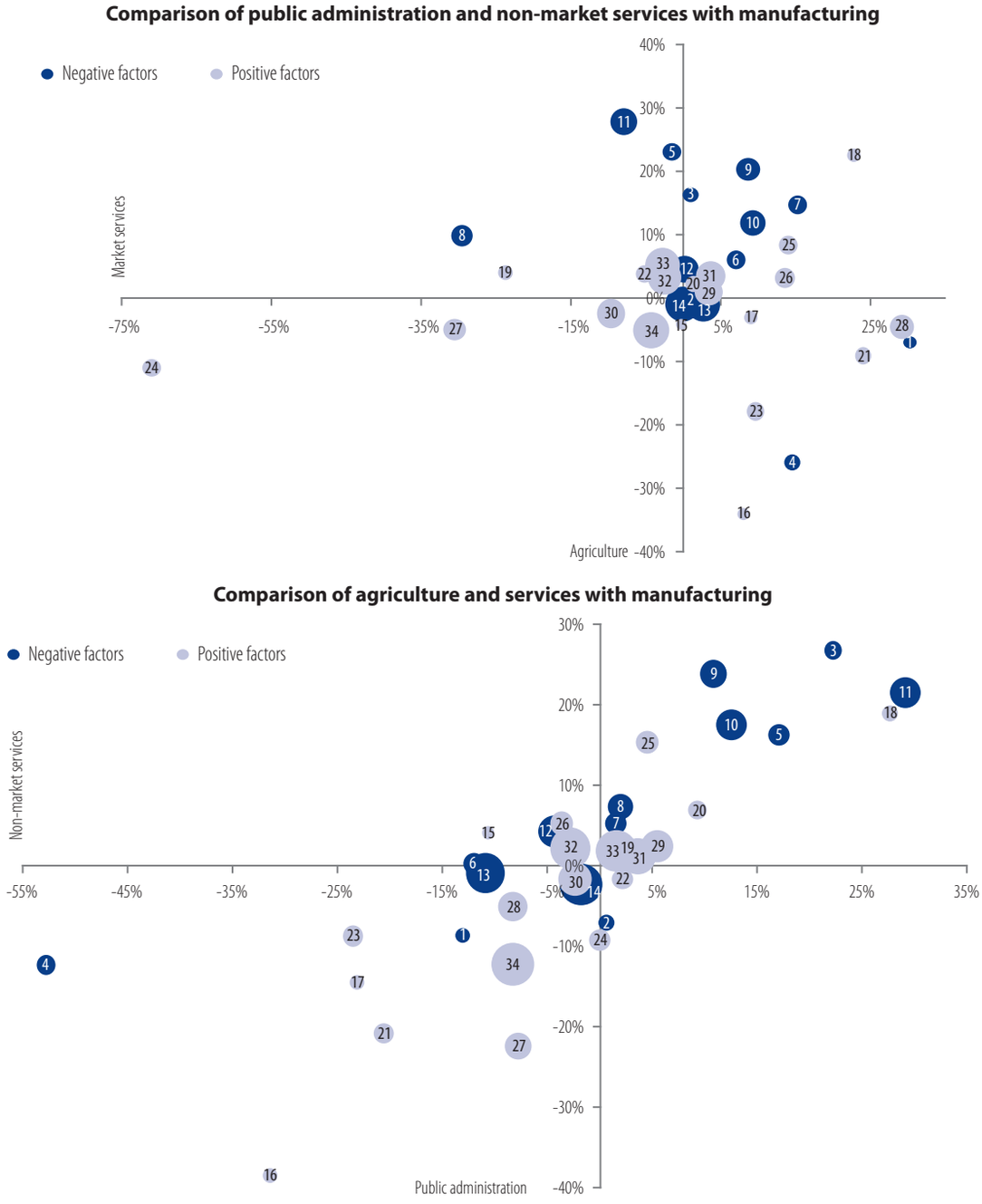
Figure II.37. The impact of individual factors on job satisfaction, and differences between Poland, NMS7 and EU15.



Note: The size of a bubble reflects the strength of a given factor's effect on job satisfaction. A positive gap means a lower frequency of declarations about a given problem/characteristic in Poland/ NMS7 in comparison with the EU15.

Source: Own calculations based on EWCS 2005 data.

Figure II.38. The impact of individual factors on job satisfaction, and differences across sectors of the Polish economy.



Negative factors

1. Discussion with superiors on work-related problems
2. Tiring positions (almost never)
3. Working to tight deadlines
4. Working with computers (minimum half time)
5. Fatigue
6. Health-related absence
7. Stress
8. Tiring positions (sometimes)
9. Monotonous tasks
10. Tiring positions (always)
11. Irritability
12. Sleeping problems
13. Bullying
14. Age discrimination

Positive factors

15. Free to decide when to to take days off
16. Contacts with other people (minimum half working time)
17. Intellectually demanding work
18. Meeting precise quality standards
19. Influence over choice of working partners
20. Payments based on employer's performance
21. No exposure to low temperatures
22. Opportunity to do what you do best
23. Use of Internet (minimum half working hours)
24. Working hours entirely determined by the employee
25. Full-time job
26. High earnings
27. Possibility to apply own ideas to work
28. Assistance from superiors if asked
29. Daily out-of-hours contact (e-mail/phone)
30. Enough time to get the job done
31. Exposure to radiation
32. Feeling of work well done
33. Feeling of doing useful work
34. Work-life balance

Note: The size of a bubble reflects the strength of a given factor's effect on job satisfaction. A positive value means a lower frequency a given phenomenon/problem in a given section in comparison with manufacturing.

Source: Own calculations based on EWCS 2005 data.

The frequency of characteristics associated with professional fulfillment is not very much different across the sections of the Polish economy. Manufacturing has less interesting tasks (monotony, smaller opportunity to apply own ideas), greater problems with work-life balance (especially in comparison with non-market services), and more physically demanding activities (except in comparison with agriculture). Its advantages are open-ended contracts and high wages (except in comparison with administration).

With regard to professional fulfillment there are no clear advantages of market services over agriculture – differences mainly concern obvious intrinsic characteristics, such the more frequent use of the Internet, interaction with people other than colleagues, no exposure to low temperatures, less physically demanding tasks, or assistance from superiors if requested. The level of autonomy in the workplace is lower, which is also not surprising.

Summary

Our analysis shows different patterns of work in Poland and in the EU15. The lower quality of working life in Poland results mainly from lower productivity related to smaller physical capital and its overall lower efficiency. The productivity gap is gradually decreasing, thanks to the intensification of investments and introduction of new technologies. This convergence results not so much from the flow of labour between sectors but from increased labour productivity within sectors. Yet a different pace and direction of changes in employment structure had some impact on the slower convergence of Poland to the EU15, for example compared with the convergence of the Czech Republic and Slovakia. The relatively small impact of labour reallocation in the NMS7 and Poland results from the fact that the structures of the CEE and EU15 economies were already quite similar in the first decade of transformations. Intense convergence through changes in employment structure occurred only in Slovenia due to significant structural differences between Slovenia and the EU15 in 1990s.

Table II.11. The impact of sectoral structure on the quality of working life in Poland.

Category	Dimension	Size
Development gap	Labour productivity distance to France in 2006	Between-industry differences are responsible for 18.5 percent of the gap between Poland and France
	Excess employment in agriculture	Flow of excess hours to traditional services would increase GDP by about 10 percent
Changes in productivity gap	Convergence in 1996-2006	Reallocation was responsible for 5 percent of total reduction
		Reallocation was responsible for the 1 percent reduction of the initial gap
	Slower pace of productivity increase in 1996-2006 than in the Czech Republic and Slovakia	Eliminating the difference could lead to a increase of the productivity level in 2009 by one third
Quality of working life	Impact of sectoral structure on job satisfaction	With the EU15 sectoral structure and the same job satisfaction in individual sectors, the percentage of satisfied with work would increase by 2 percentage points

Source: Own elaboration based on Eurostat, EU-Klems and EWCS 2005 data.

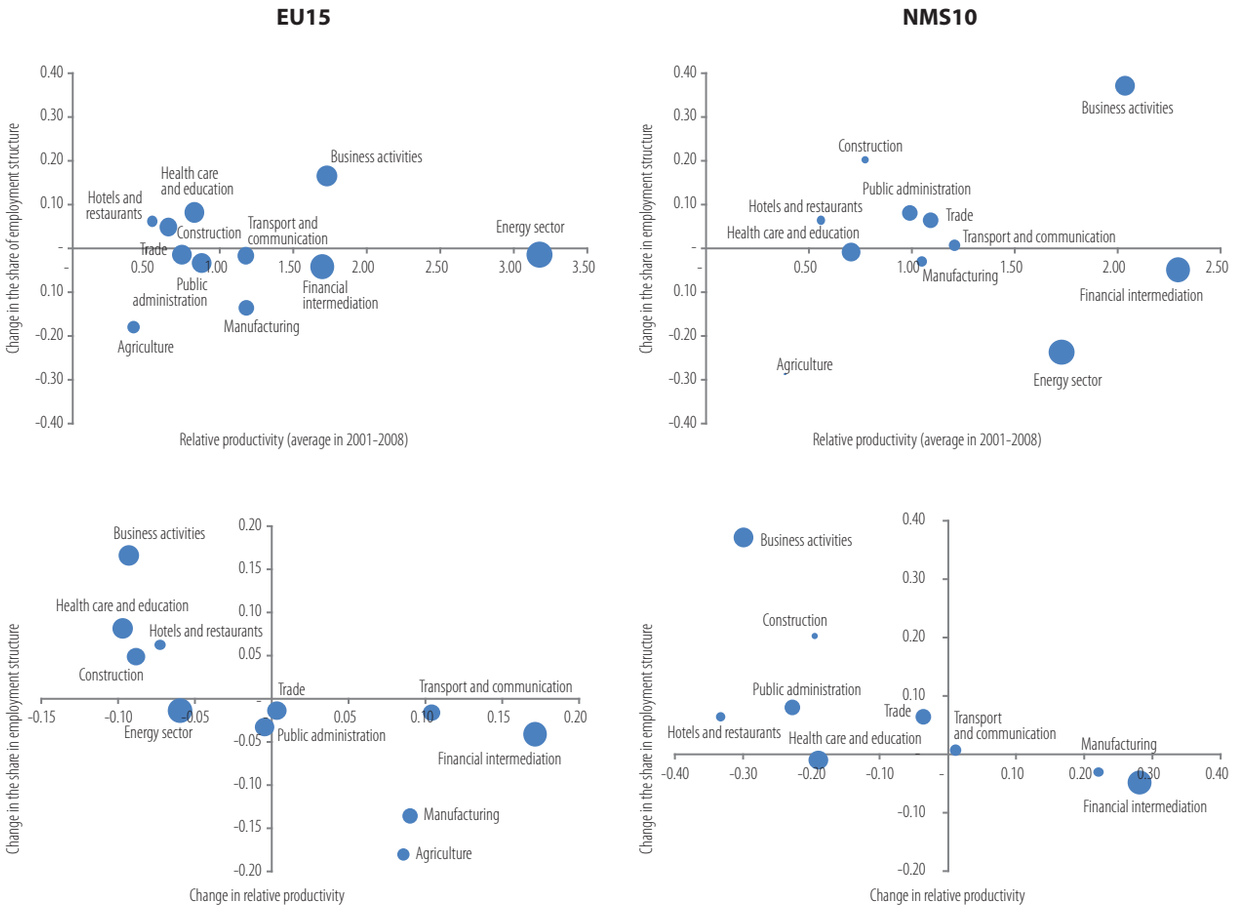
At the sector level, there is a very rare concurrence of intensive (i.e. increase in the relative labour productivity) and extensive development (i.e. increased share in employment structure). The significant exception is manufacturing in Poland in 2000-2008, which confirms that this sector is the most innovative part of the Polish economy. Only financial intermediation has had similar dynamics of labour productivity.

Productivity gap is reflected in the level of wages. Convergence and restructuring in the NMS10 has resulted in decreased stability of employment for part of the workforce. At the same time, the income level and the risk of losing a job are not crucial for the perception of work quality in the workplace. There are many other factors that do play a crucial role for job satisfaction – such as work-life balance, professional fulfillment and physical and psychological burdens.

The average level of the quality of working life in Poland is quite high, especially in comparison with the other NMS. However, besides higher wages and greater sense of job security, work in the EU15 is associated with a better work-life balance. There is also a gap in traditional sectors (including services) with regards to the perceived opportunities to learn and grow and the prospect of career advancement.

The differences in job satisfaction between the NMS and EU15 vary across sectors. In modern services there are practically no differences; they are significant in manufacturing, and the greatest in agriculture and construction. This seems to result from the higher pace of convergence with regards to the nature of work in modern services. An indirect confirmation was provided by the observed potential to decrease accident rates in agriculture and construction. Faster development of a given sector, i.e. increased significance in the employment structure, did not depend on greater job satisfaction or above-average productivity. A comparison of satisfaction with flows in the Polish economy shows a limited motivation to move from sectors such as agriculture to traditional services. Sectors with a much higher quality of working life, including modern services (business activities and financial intermediation), seem to have greater entry barriers for those employed in sectors with much lower quality of work.

Figure II.39. Changes in the share in employment structure, productivity and job satisfaction, by sector.



Note: The size of a bubble reflects job satisfaction in a given section.
Note 2: The productivity is compared to the overall productivity of a given group of economies.
Source: Own calculations based on EU-Klems 2001-2008 and EWCS 2005 data.

The slower pace of reallocation in Poland, leading to an outdated structure of economy, is related to strong segmentation in the labour market. It is not helped by low participation in lifelong training and insufficient short-term incentives for flows, mainly due to the time-consuming acquisition and updating of skills. However, the major factor responsible for the distance between Poland (and the other NMS) and the EU15 is a within-industry gap. This in turn results from the relatively low rate of private investment determining the capital stock level (see *Poland 2030 – Development Challenges* (ZDS 2009)).

Part III. Procedures and regulations – on hirings and dismissals

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Introduction

inactivity can be observed in any economy in the world. In the OECD countries, 30 to 60 percent of the labour force change their status or job every year.[1] The scope of the reallocation varies not only between countries but also across time – business cycle fluctuations affect the probabilities of losing or finding a job, and the willingness to change jobs. On one hand, the patterns of labour market flows interact with labour demand, as greater flows facilitate the recruitment of workers while also increase the risk of termination of employment. From the supply side perspective, intense reallocation helps the unemployed to find jobs, and facilitates the search for better paid and more rewarding jobs, although at the price of higher risk of dismissal and more stress. Understanding the economic nature of these phenomena is crucial not only for scientific analysis of economic life, but also for planning and implementing optimal policy.

To date, studies of labour market flows in Poland have been rather rare and selective in nature (see Bukowski, Lewandowski, 2005a, 2005b, Budnik, 2007). This part of *Employment in Poland 2009* intends to fill this gap in two ways – (i) by estimating labour market flows in Poland and other European countries from macroeconomic data, and (ii) by placing the obtained results in an international institutional context. Accordingly, in the first chapter we estimate the size of inflows into and outflows from unemployment in European countries, and decompose the changes in unemployment rates into the contributions accounted for by changes in hirings and separations.

International differences in labour market flows constitute the starting point of the second chapter, which focuses on labour market institutions and their impact on reallocation. According to literature on the subject, institutions largely shape the dynamics of the labour market. Thus, the second chapter begins with the assessment of the relative influence of institutions and sectoral structure on the intensity of labour reallocation in various economies. Then, using regression models, we identify interdependencies between the institutions and hazard rates of flows to and from unemployment (conditional probabilities of hiring or separation in a given period of time), and interpret them against theoretical and empirical literature. The final section of this chapter discusses recent institutional changes initiated in Poland and their potential impact on the probability of finding jobs by the unemployed. We also propose a classification of European countries according to their institutional models and labour market dynamics. The results of both chapters are briefly discussed in the summary.

[1] The data include flows from employment to unemployment, in the opposite direction, and changes of jobs (known as *churning flows*).

1. Significance of labour market flows

1.1. Why it is important to examine labour market flows

Flows from unemployment to employment, from employment to unemployment, between inactivity and activity, and within employment, are central to every labour market. Although destruction and creation of jobs fluctuate in line with the business cycle, many jobs are simultaneously created and destroyed even in periods of stable growth. OECD (2009) reports that in developed countries on the average about 20 percent jobs appear or disappear each year; and nearly one in three of labour market participants finds, loses or changes job each year. In the macroeconomic framework, reallocation of labour is a key element of restructuring processes. It enables the effective absorption of technological progress and increases productivity through better matching of workers to vacancies and the resulting transfer of labour to the most productive firms (OECD, 2010). Empirical studies (Foster et al., 2001) show that new jobs are more often created by more efficient firms (OECD, 2009), and the entry of new businesses and their job creation are more important for overall productivity growth than new jobs being offered by already existing companies. Also Griliches, Regev (2005) and Bartelsmann et al. (2009) show that the reallocation of resources is conducive to improving the productivity.

From the microeconomic perspective, dynamics of the labour market flows influence the chances of entrants to get a job, duration of job search by the unemployed, but also the likelihood of losing or changing a job. In countries with high intensity of job creation and destruction, spells of unemployment are generally shorter, and long-term unemployment lower than on markets with low flows. On the other hand, high labour market dynamics reduce the average spells of employment at an individual firm, discourage investment in human capital and thus limit ability to increase productivity within a firm. Higher flows are also associated with lower job security and lower psychological comfort of employees, although at the same time they increase the chance of finding a better paid and more rewarding job.

The analysis of the direction and size of flows in a cyclical perspective allows assessing important characteristics of unemployment, in particular to answer the question to what – extent an increase (decrease) of unemployment is caused by smaller (greater) chances of finding jobs, and to what extent it is caused by higher (lower) inflows into the pool of the unemployed. Such knowledge enables a more comprehensive understanding of the labour market problems and helps construct and target policies aimed at reduction of the size and severity of unemployment, and activation policies as well. In other words, a reliable analysis of labour market flows is essential not only for a scientific description and better understanding of economic life, but also for the efficient public intervention in the labour market.

Box III.1. Measuring labour market flows – data sources and methods available.

The dynamics of labour market phenomena render the measurement of flows difficult and often ambiguous. In the literature, three ways of measuring labour market flows are used.

1. **Microeconomic data from labour force surveys**
   The most popular and easiest method of measuring labour market flows is an analysis of microeconomic data on individual labour market participants. These are, for example, Current Population Survey (CPS) in the United States or the Labour Force Survey (LFS) in Europe – (known as BAEL in Poland), which contain data about an individual at several points in time. Based on changes in the labour market status of an individual in consecutive periods, it is possible to approximately determine the size of flows. The disadvantages of this type of research are connected with sample rotation (and thus the limited period in which a single person is examined), relatively little information about employers, inaccurate measurement of job-to-job flows, and spurious scope of flows which occu between the moments of participation in the survey. Moreover, Boeri, Flynn (1997) suggest that nonresponse is generally more frequent among those changing their status in the labour market, and hence the size of flows may be underestimated. LFS data were used to study flows by eg. Jenkins, Chandler (2010); Bell, Smith (2002); Elsby et al. (2009); Boeri, Flynn (1997); and Bukowski, Lewandowski (2005a, 2005b), Budnik (2009) in Poland.

2. **Microeconomic data from establishment surveys**
   Another way to study the size of labour market flows is to analyse the data from establishment surveys. Here, the calculation of labour market flows is performed by comparing the number of employees in a surveyed firm in successive iterations of the survey. The main disadvantage of this approach, common to all databases of this type, is that it does not take into account organizational changes in companies that may lead to the reallocation of labour. Moreover, most of such databases contain data collected only from larger companies (e.g. employing at least 10 workers). This approach is used by Blanchard and Portugal (1998), Gomez Salvador, Messina and Vallanti (2004) and Haltiwanger, Scarpetta, Schweiger (2006). The disadvantage of both the aforementioned methods based on microeconomic data are non-trivial, often large standard errors of the obtained estimates, often ignored by researchers that use these methods.

3. **Estimation based on aggregate data**
   Initiated by Shimer (2007), the method based on aggregate data utilises publicly available data on aggregate employment, unemployment and the number of unemployed who are unemployed for less than 1 month. Labour market flows are estimated using changes of these variables in time and the time structure of unemployment. Elsby et al. (2009) adapted this methodology for European countries where the average duration of unemployment is much higher than in the U.S. and relatively few unemployed are out of work for less than a month. In such case, the use of the standard method would generate distorted estimates. In addition, the Elsby et al. (2009) modification allows the calculation of contribution of inflows to and outflows from unemployment to unemployment changes also when unemployment deviates from steady state (see Ministry of Economy and Labour, 2005). aThe main advantage of estiamation based on aggregated data is the international comparability of the estimates – the number of the unemployed in the OECD / EU countries is measured according to a uniform methodology which ensures the consistency of estimates. In addition, a reliable measurement of labour market flows becomes easier as this method does avoids the problem of standard errors of direct estimates of flows from LFS microdata.

1.2. Empirical regularities in labour force flows

International differences in the size of labour market flows are significant – according to OECD (2009) statistics, the rate of job reallocation [2] in 1997-2004 ranged from about 15% in Sweden to more than 32% in Brazil, while the rate of labour reallocation ranged from 30% in Greece to almost 60% in Turkey (2000-2005). [3] The estimations from macroeconomic data, presented in detail in Chapter 1.3, lead to similar results – flows in 2000-2009 ranged between less than 10% in Portugal to almost 30% of workforce in Finland.

The size of flows into (out of) unemployment is a product of the risk of job loss (probability of taking up employment) and the number of employed (unemployed). Differences in gross flows may therefore result both from differences in the probabilities in question and the size of the groups to which they relate. These probabilities and the factors affecting them are crucial from the perspective of individuals, as well as researchers and policy makers. In this study, we measure these probabilities by the monthly rate of inflow into unemployment and the outflow from it, ie. by the conditional probability that an employed person becomes unemployed within a month, and the conditional probability that an unemployed person finds a job within the same spell of time. This conditional probability will be later called 'the hazard rate', respectively of inflows into unemployment and outflows from unemployment. Appendix III.1 contains formal definitions.

[2] Reallocation defined as the sum of annual hiring and separation rates. The number of hirings was defined by OECD (2010) as the number of employees working in a given company for less than year, based on microeconomic data (LFS in Europe and Canada, CPS in USA). The number of separations is defined as the difference between the change in net employment and the number of hirings. Hiring and separation rates were obtained by dividing the absolute number of persons by average employment in two subsequent years relevant for the flow

[3] Job reallocation rate is a sum of job creation rate and the job destruction rate, and the rate of workforce reallocation is a sum of hirings and dismisals divided by the the total workforce.

Importantly, the intensity of labour market flows per se and the situation in the labour market, measured by total employment and unemployment rates, are not systematically related, neither in the short- or long-term (OECD, 2009, 2010). Also in this study, the cross-section correlations of gross flows and the total unemployment rate are not statistically significant (see Figure III.1-2).[4] However, labour market flows are significantly negatively correlated with long-term unemployment. The lower the outflow hazard rates (i.e. the conditional probability of finding a job in a given period of time – see Appendix III.1), which determine the expected duration of non-working spell of the unemployed, the higher the long-term unemployment (see Figures III. 3-4). There exists a clear negative cross-sectional correlation between the average outflow hazard rates in the years 1975-2009 and long-term unemployment rates in the same period; the correlation coefficient equals -0.74.[5] It means that an increase in hazard rate of outflows from unemployment by 1 percent is associated with more than 1.5 percent lower long-term unemployment.[6] Importantly, a higher frequency of separations does not increase long-term unemployment – and thus, contrary to a low hiring rate, does not result in the severe social problems associated with long-term unemployment. Therefore, it is the difficulties in finding a job that are the major determinant of long-term unemployment and related problems. To sum up – whereas low and high labour market flows may accompany either high or low average unemployment, low outflows from unemployment to employment are unambiguously associated with higher long-term unemployment.

Literature indicates that the most important determinants of the size of flows are the industry characteristics and the labour market institutions in the country (see Gomez-Salvador, Messina, Vallanti 2004, OECD 2009, 2010). In other words, individual industries in various countries exhibit similarly relatively high (or low) flow dynamics, and international differences between flows within given industries, and in entire economies, are largely related to differences in regulatory and institutional environments.[7] Moreover, differences between worker and job flows, known as *churning flows*, exhibit small variation among OECD countries. This means that labour and job reallocation can be treated as substitutes (Bassanini, Mariana, 2009). Accordingly, in this study on flows in Poland and other countries, we concentrate on flows from unemployment to employment and vice versa.

Another factor that influences flows of individuals on the labour market is the demographics of firms. Each year, 5 to 9 percent of jobs in OECD countries are created or destructed due to the emergence or closure of firms (OECD, 2009). Haltiwanger et al. (2006) used establishment-level data from a range of OECD countries, and attributed even 30% to 40% of total annual flows to firms that entered or exited the market. Their study also showed that job rotation in small firms was slightly higher than in large ones. Furthermore, in the OECD countries job creation and destruction in companies' clustered on the basis of industry and size of employment correlated strongly with analogous measures in the United States, which suggests the differences of flows across industries and companies of various sizes are similar in different countries. Hence, these generalizations can be applied for various sectors and market segments, bearing in mind the importance of the age of companies. Young firms usually create more jobs than the established ones, although no significant differences were observed for job destruction.

Several patterns of labour market flows are also visible on the labour supply side. OECD (2009) shows that flows among women are generally higher than among men. Reallocation is also substantially higher among relatively younger and less skilled workers who also exhibit on the average shorter employment spells than well educated, prime-aged individuals. OECD (2009) also points out that structural changes in the labour market, resulting in a decline in demand for low-skilled labour, are reflected in the increase in lay-off rates rather than in a decrease in the hiring rates.

Figure III.5 presents the average gross flows in European labour markets in 1990-1999 and 2000-2009. The size of flows is characterized by considerable inertia and their cross-section variation is quite stable over time. Thus, high or low flows in individual countries are unlikely to be a consequence of idiosyncratic events occurring in any given period (e.g. a decade), but they are rather a reflection of medium-term patterns. These are related to structural and institutional features of individual countries, which change slower than the subsequent periods of economic prosperity and downturn. Over the past two decades, flows of labour in Poland (from employment to unemployment, and vice versa) have been relatively high in comparison with other European Union countries. With regard to the OECD countries, the only countries with a higher proportion of economically active persons changing their labour market status every year were Spain and Finland.[8]

In Poland, the high level of total labour market flows has largely been the result of significant fluctuations in the unemployment level. As observed by Bukowski and Lewandowski (Ministry of Economy and Labour, 2005, Ministry of Labour, 2007), and Bukowski, Koloch and Lewandowski (2008), the transition shock in the first half of the 1990s, the collapse of external trade caused by the Russian crisis, the second wave of restructuring in 1998-2002, and finally the acceleration of growth after 2004, have all led to substantial fluctuations in unemployment. The number of unemployed rose by 500,000 over the years 1992-1993, decreased by 1 million up to 1998, increased by 1.6 million in 1998-2002 and rapidly declined in the years 2004-2008. These changes are reflected in average annual flows of 23.9%

[4] The correlation coefficient was 0.14.
[5] For years 2000-2009 the correlation coefficient is -0.76, and a figure analogous to Figure III.1 presents almost an identical relationship.
[6] The independent variable is a logarithm of the outflow hazard rate, and the dependent variable is a logarithm of long-term unemployment rate.
[7] OECD (2009) shows that one such important institutional factors is for example the prevalence of temporary contracts.
[8] In 1990s, this index was also greater in the UK, which had labour market institutions especially conducive to labour reallocation in comparison with rest of the EU (Bassanini, Duval, 2006).

in the labour force in the 1990s and 24.5% in the 2000s.[9] As gross flows are in fact the product of hazard rates and the pool of unemployed or employed, even the low probability of finding a job may translate into relatively numerous flows to employment, provided number of unemployed is large, which indeed was the fact in Poland for most of the last two decades. Therefore, in both the assessment of changes in the intensity of hirings and separations in Poland, as well as international comparisons, it is better to use hazard rates, which measure the conditional probability of job loss by a working person or the probability of finding a job by an unemployed person over a given period of time.

Figure III.1. Outflow hazard rates versus total unemployment rate in European countries in years 1975-2009.

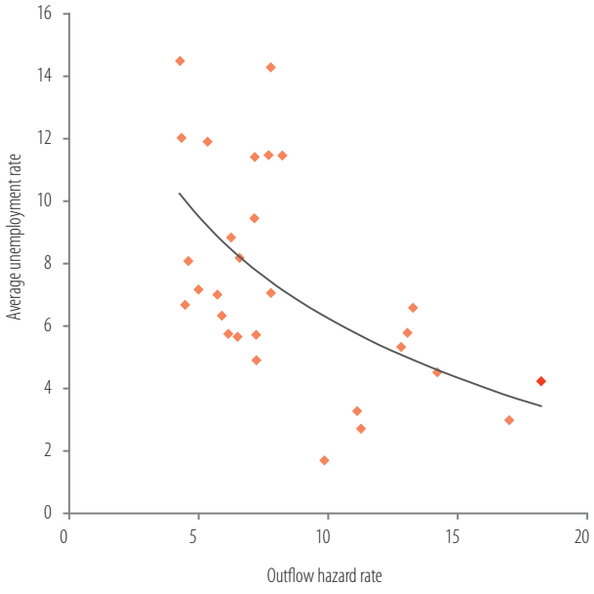


Figure III.2. Inflow hazard rates versus total unemployment rate in European countries in years 1975-2009.

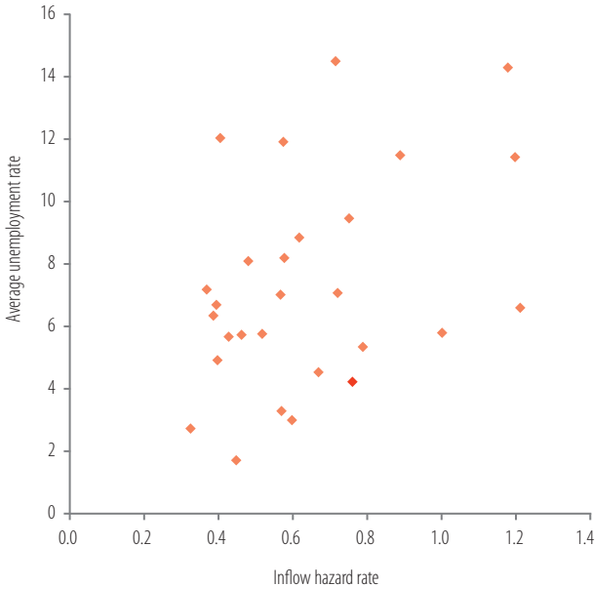


Figure III.3. Outflow hazard rates versus long-term unemployment rate in European countries in years 1975-2009.

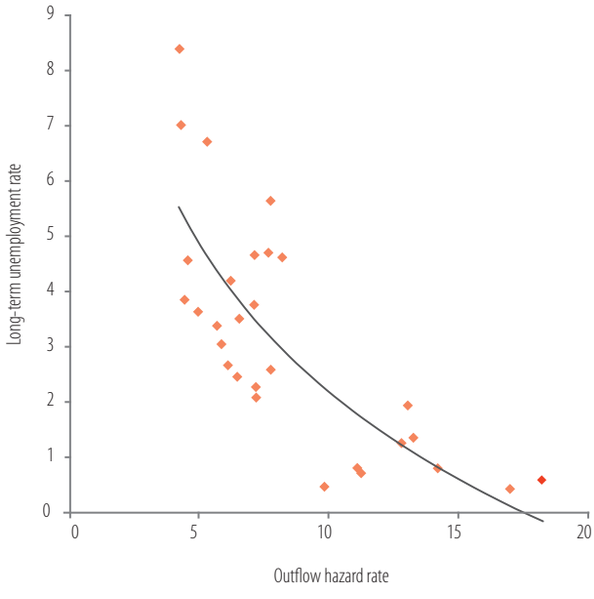
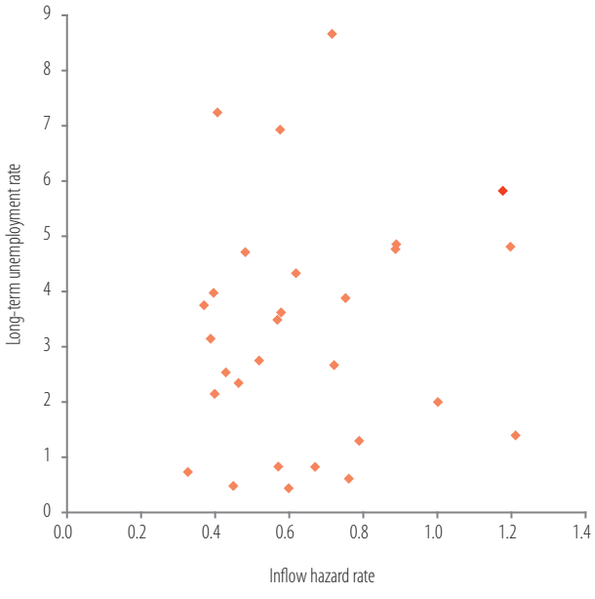


Figure III.4. Inflow hazard rates versus long-term unemployment rate in European countries in years 1975-2009.



Note: Poland is highlighted in red.

Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009).

[9] The availability of data – only since 1992 – makes it impossible to measure the flows in years 1989-1992, i.e. during the early transition stages and restructuring of state-owned companies. However, the persistence of high levels of flows in 2000s indicates that the on average high flows in Poland do not result from changes in 1990s, but are related to the characteristics common to the entire period after 1989.

Figure III.5 presents the conditional probabilities of finding and losing jobs in Poland and other European countries, averaged over 2000-2009. Although the risk of dismissal in Poland was on average quite high, finding a job was still relatively difficult. A similar situation prevailed in 1990s. The probability of outflow from unemployment in Poland was close to the European and CEE average. The figures were similar to those for Italy, France, Lithuania, and Estonia, while more than two times smaller than those for Scandinavian countries. Poland exhibited outflow hazard rates higher than Slovakia, Czech Republic, Germany, Belgium and Greece; however, in all these countries the risk of losing a job was lower than in Poland.

The risk of dismissal in Poland was amongst the highest in Europe – almost two times higher than in the Czech Republic, Slovakia and Hungary. Moreover, in Poland it remained at a relatively high level for two decades, and even increased in the 2000s, unlike most European countries where the hazard rates of finding employment increased and hazard rates of dismissals decreased. Between 1990 and 2010, Spain was most similar to Poland with regard to both flows; its hazard rates of dismissals remained the highest in Europe throughout that period. The high hazards in both countries may have been connected to the relatively frequent flows to unemployment of individuals hired on fixed term contracts.[10] The determinants of international differences in hiring and dismissal rates are analysed in detail in chapter III.2.

Figure III.5. Gross flows in European countries in 1990s and 2000s (sum of hirings and dismissals).

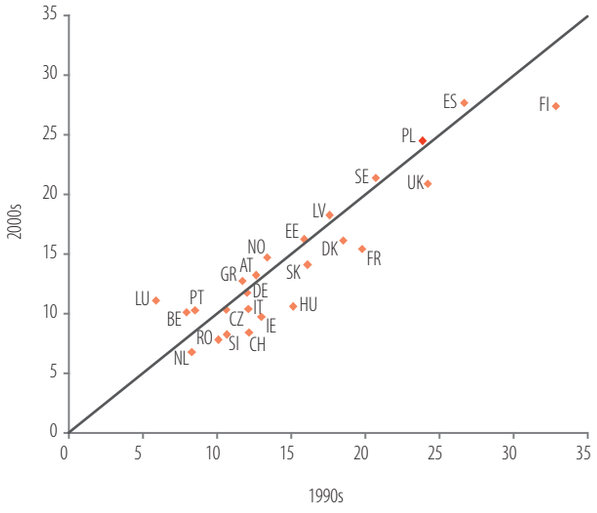


Figure III.6. Inflow hazard rates (probability of dismissal) and out of unemployment (probability of hiring) in European.

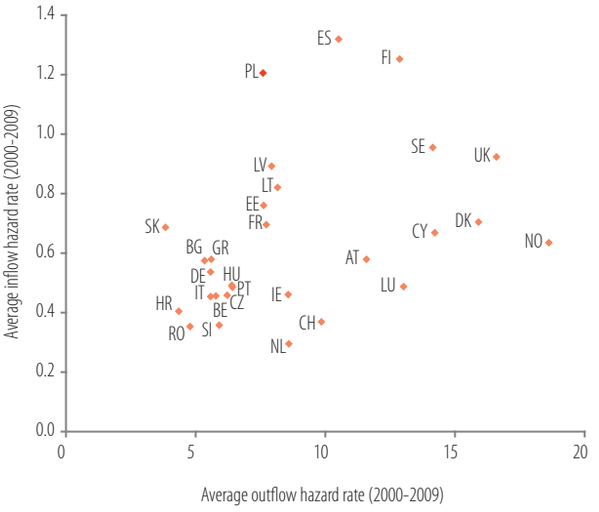


Figure III.7. Outflow hazard rates in European countries in 1990s and 2000s.

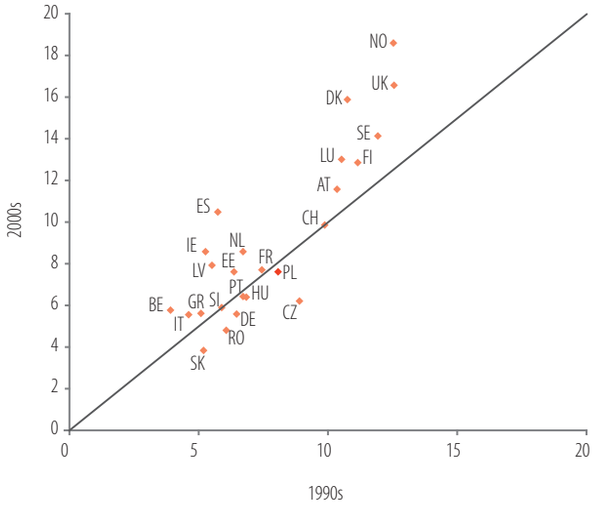
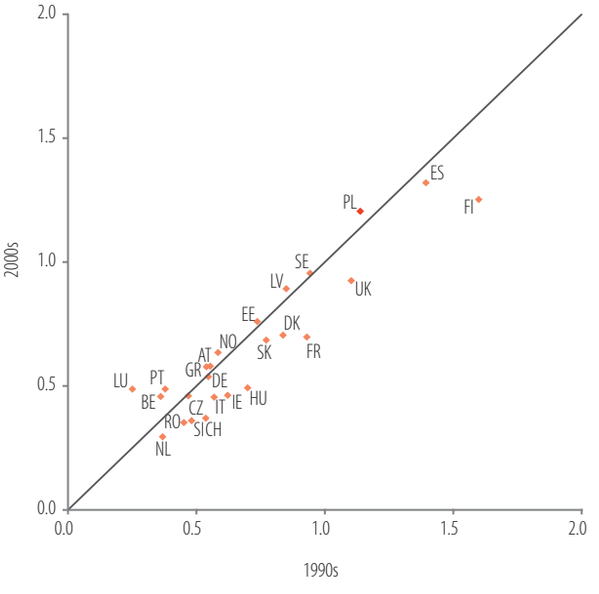


Figure III.8. Inflow hazard rates in European countries in 1990s and 2000s.



Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

[10] In years 2000-2009 the share of this type of contracts among employed was on the average 20.9 percent in Poland and 31.5 percent in Spain (in 2009 it was respectively 26.5 and 25.4 percent) – by far the most in the EU and almost two times greater than the EU average in 2000-2009 of 13.8 percent (13.5 percent in 2009).

Medium-term fluctuations in hazard rates are slightly higher than those in gross flow levels (see Figures III.5-III.8), though this regularity is more pronounced for outflow hazard rates than into unemployment. Although over the past two decades the probability of dismissals decreased in several European countries, this decrease had been distinct only in Finland where a very sharp increase in unemployment in the 1990s was followed by a decade of stability. In comparison with the 1990s, the 2000s hazard rate of employment clearly increased in several European countries (Scandinavia, Great Britain, Spain) and significantly decreased only in the Czech Republic. These differences between the two periods may result from distinct shocks affecting the labour markets in particular decades, but may also be associated to the evolution of institutional environments which influence the odds of finding or losing a job (see OECD, 2010). As shown empirically in chapter III.2, both explanations are empirically relevant. Moreover, some labour market institutions affect labour market flows both through hiring and dismissal rates.

The evolution of hazard rates in selected countries in 1970-2009, shown in Figure III.9, introduces an interesting perspective on evolution of European labour markets. Although such an analysis is possible only for selected EU15 countries, due to data availability, they epitomize different transformations in the European labour markets over this period. Characterized by similarly high employment and low unemployment until the early 1970s, the European labour market started to diverge (Blanchard, 2005). Figure III.9 shows how the medium-term changes in economic conditions and policies affected the chances of losing or finding a job in particular countries.

One characteristic case is Spain. The turn of the 1970s and 1980s saw serious problems in the labour market, reflected in decreasing chances of finding employment and an increasing risk of dismissal. In 1984, in the face of an unemployment rate above 20%, the Labour Code was partly reformed. The restrictive employment protection of traditional contracts was maintained but regulations concerning fixed-term contracts were liberalised (Dolado, Garcia-Serrano, Jimeno, 2001). It resulted in the rapid spread of fixed-term contracts, and the 'dual labour market' emerged (see Ministry of Labour and Social Policy, 2007), reflected in the gradual increases in both hazard rates, accompanied by stable unemployment rate. The gap in the legal protection of both groups of workers was reduced in the 1990s, but it did not stop the mentioned processes, and hazards of dismissals even increased. Only in the first decade of the 21st century did the rapid economic growth and booming housing market contribute to a noticeable increase in hazard rate of hirings, although the risk of lay-offs remained at a very high level.

Similar changes, although on a smaller scale, occurred in France where in 1970-2000 the unemployed found it increasingly difficult to find jobs. Over the last decade, the hazard rate of employment has remained stable and the risk of losing a job has decreased. As a result, the long-term unemployment rate in France in the 2000s was double the rate in Spain, although both countries had similar total unemployment rates.

Between the 1970s and 1990s, a gradual deterioration in prospects for the unemployed was also observed in Scandinavian countries, especially in Sweden. In the 1980s, the country stood out with high hiring and low dismissal hazard rates. That changed in the first half of the 1990s because of severe macroeconomic and financial crisis, difficulties in adapting to evolving conditions in the world economy (e.g. accelerated globalization, increasing competition from emerging markets) and the specific inertia of the welfare state. In recent years, thanks to high spending on active labour market policies and competition-improving product market regulations, there has been some increase in the outflow hazard rate, however not to be followed yet by a decrease in the dismissal rate.

In Finland, a shock in the early 1990s resulted in an increase in unemployment twice that of Sweden, but it largely managed to reverse these changes and overcome the effects of recession in the mid-2000s. Denmark's case is also interesting – in the 1980s and 1990s hazard rates of hirings and layoffs remained close to the European average, which was an exception for Scandinavian countries. Over the past decade the introduction of a *flexicurity* model resulted in a significant increase in outflow hazard rates.

In comparison with other European countries, Germany has exhibited exceptional stability – both hazard rates have changed only slightly, although negatively, over the last 20 years.

A country that clearly stands out in Europe is the United Kingdom where since the 1980s the outflow hazard rate has steadily grown. The economic slowdown in the 1990s can be mainly seen in the increase in hazard rate of dismissals, which was reversed in the next decade of rapid economic growth.

The analysis of hazard rates evolution also provides interesting information about the transition in Central and Eastern European countries. Generally in the 1990s, post-communist states experienced rapid changes, in particular economic transformations and the Russian crisis, which left a significant imprint on their labour markets. The 2000s brought the accession of the CEE countries to the European Union.

Figure III.9. Evolution of average hazard rates out of and into unemployment in selected European countries in years 1970-2009.

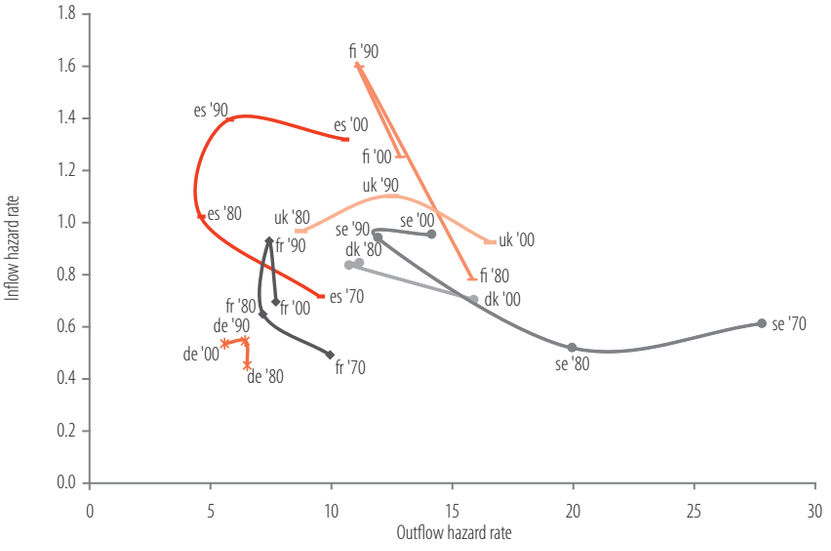
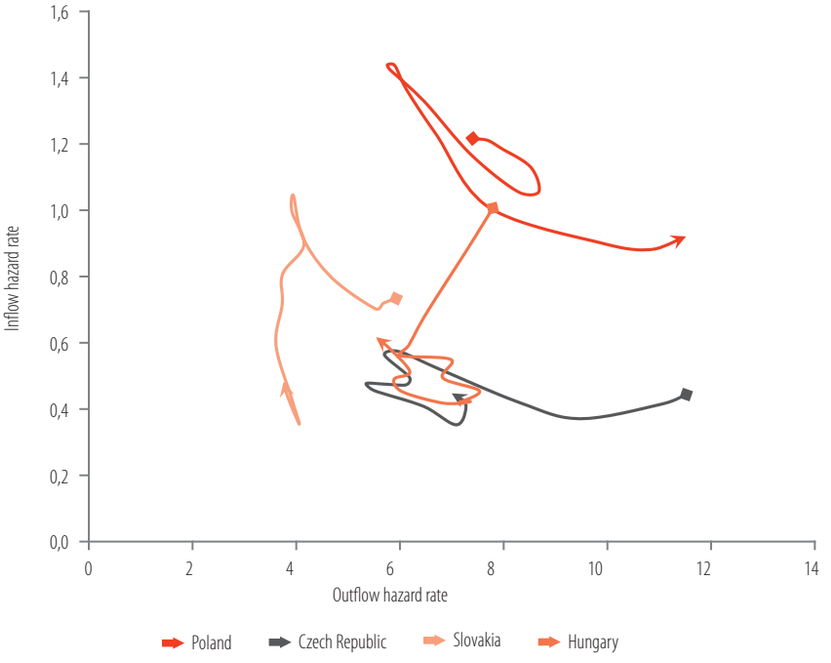


Figure III.10. Evolution of average hazard rate out of and into unemployment in Visegrad countries (3-year moving average).



Note: In Figure II.9 the points denote the average hazard rates in individual decades.
Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

In the early 1990s, Poland exhibited high Inflow hazard rates and low outflow hazard rates. Figure III.10 clearly shows that the initial improvement in the labour market was followed by a downturn that continued until 2002. When the negative trend reversed, the hazard rates returned to the levels of 1997. Later the situation continued to improve, until the current crisis caused a U-turn in the trajectory of the hazard rates.[11] Hungary is an interesting counter-example. In the early 1990s its hazard rates were similar to those in Poland. Whereas in Poland the improvement in the labour market resulted in an increase in the outflow hazard rate, Hungary experienced a marked decrease in the risk of dismissal. In addition, after some adjustments to initial transition shocks, the remaining Visegrad countries (i.e. Czech Republic, Slovakia) reached levels typical for the countries of continental Europe, and only in Poland did both hazard rates remain at high levels. This feature distinguishes the Polish labour market from other countries in the region.

[11] Taking into account the annual data rather than moving average indicates that in essence this movement occurs on the same curve.

Figures III.11-III.12 show the evolution of gross flows and the probabilities of finding or losing a job in a given period of time (month) in Poland from 1993-2009. In general, the probability of job loss was rather high, and finding a job was relatively difficult. In the early 1990s, hazard rates of both flows between employment and unemployment were stable but fairly high. In the second half of the decade, both rates decreased as the reallocation of labour lost the high level observed in the beginning of transition. The situation changed abruptly in 1998. Although the hazard of dismissals was still declining that year, the consequences of the Russian crisis forced companies to limit recruitment. In 1999 the changes gained pace; the outflow hazard rate fell by 15 percent. As companies also began to dismiss workers vigorously, the Inflow hazard rate increased. These trends persisted in subsequent years and in 2002 the hazard rate of inflow to unemployment was about 40 percent higher than in 1998; the chances of gaining employment were about 40 percent lower. Interestingly, that period saw the increase in gross flows from employment to unemployment and vice versa. The increase in the number of unemployed was so great that outflows into employment rose as well, despite a significant decline in probability of finding a job by the average unemployed.

Figure III.11. Gross flows and unemployment rate in Poland in years 1993-2009.

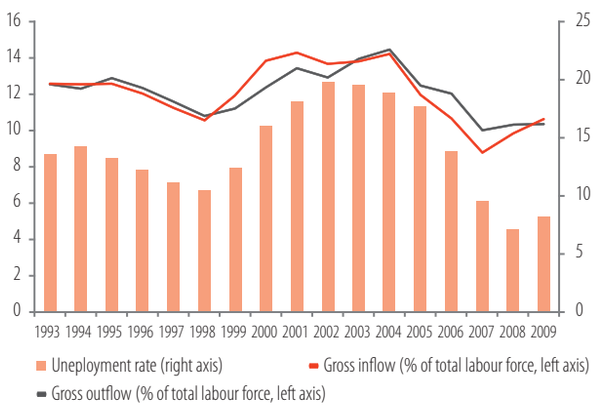
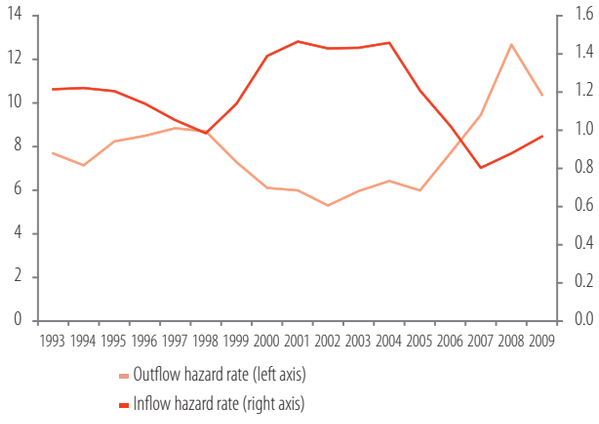


Figure III.12. Changes in hazard rates out of and into unemployment in Poland in years 1993-2009.



Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

After 2002, both hazard rates temporarily stabilized at new levels. Along with improvement in the economic situation after 2004, the likelihood of finding employment by those without work doubled over the 2005-2008 period, while the risk of losing a job declined by 40 percent, and in 2007 reached the lowest level between 1990 and 2010. These changes translated into a rapid decline in unemployment, which in turn caused a reduction in the gross flows; they reached their historical minima in 2007. The impact of the current crisis was already apparent in 2008, as the risk of losing a job increased, but at the same the outflow hazard rate was still rising. Hence, the total number unemployed and the unemployment rate in 2008 turned out lower than a year before. In 2009 the hazard rate of finding a job fell sharply – its year-to-year decline was the deepest in the entire analyzed period.

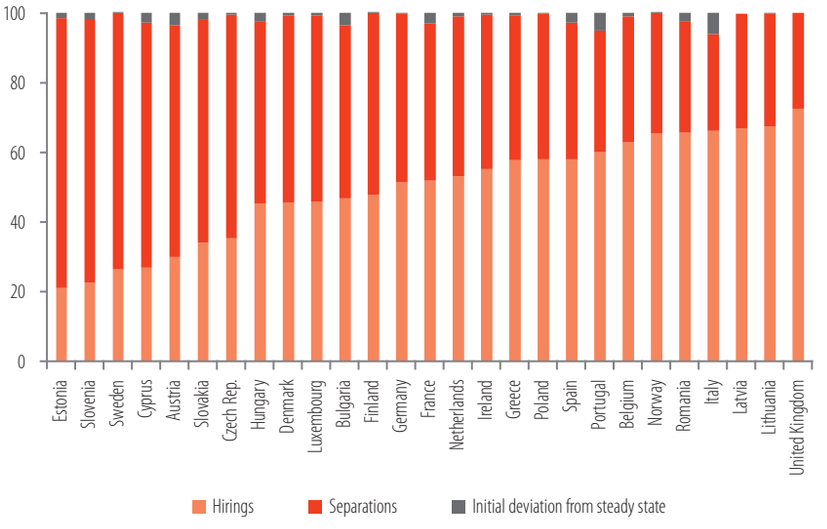
1.3. Decomposition of changes in the unemployment rate

While there is a consensus in literature that high (low) employment and low (high) unemployment can be accompanied by either high or low worker flows, controversies remain on the nature of relationships between changes in the size of these flows and cyclical unemployment fluctuations. According to the traditional approach (see Davis, Haltiwanger, 1992; Blanchard, Diamond, 1990), higher unemployment during a recession results from increased layoffs which intensify inflows to unemployment. Theoretical models have long been based on these conclusions (see Mortensen, Pissarides, 1999). In recent years, however, this view has been disputed by Hall (2005), who used the microeconomic data from JOLTS (Job Opening and Labour Turnover Survey) and the CPS (Current Population Survey) to show that episodes of above-average unemployment in the United States were largely due to decreases in the hiring rate. Shimer (2005) confirmed the results of Hall (2005) with his simple model allowing for the job-to-job flows.

In his next paper, Shimer (2007) proposed a new methodology for flows measurements based on macroeconomic data (see Appendix III.1), and then decomposed the changes in unemployment rate in the US into the contributions accounted for by changes in the intensity of hirings and dismissals. The results reinforced the earlier findings; 75 percent of unemployment changes in the United States between 1948-2007 can be attributed to changes in the probability of finding a job; between 1990-2007 this contribution was 95 percent. Elsby et al. (2009) obtained similar results for the US, but also found that unlike the US, in European countries the contributions of inflows and outflows from unemployment to changes in unemployment rate are comparable. Fujita, Ramey (2008), using microeconomic data, also calculated that changes in the rate of hirings and dismissals are equally responsible for fluctuations in unemployment. On the other hand, Barnichon (2009), using measures of flows similar to Shimer (2007) but applying a more complex decomposition,

ascertained that although generally only about 40 percent of unemployment changes result from fluctuations in the dismissal rate, this ratio increases during recessions. Therefore, during slowdowns the increases in the number of unemployed reflect mainly higher layoffs. This part of *Employment in Poland 2009* aims at a better understanding of this phenomena through analysis of such contributions in Poland and other CEE countries which have so far been omitted by most researchers.

Figure III.13. Contribution of changes in hazard rates into and out of unemployment into the fluctuations of unemployment rate in the European countries in years 1975-2009.[12]



Note: The length of the time series used for individual countries is presented in Appendix 5.
Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

Decomposition of changes in unemployment allows to distinguish between countries where changes in the unemployment rate primarily resulted from changes in the intensity of hiring, and those where the dominant role was played by changes to the risk of losing a job. Figure III.13 shows that in the United Kingdom,[13] Lithuania and Latvia, more than 70 percent of the changes in the unemployment rate resulted from changes in the probability of finding employment. At the other extreme, in Estonia and Slovenia, separations accounted for more than 75 percent of fluctuations in unemployment. However, in case of these countries one must be careful when drawing conclusions on the relative role of these two factors, because of the available short time series. For example, the high contributions of dismissals in the Baltic states and Slovenia to some extent reflect the fact that an exceptionally large rise in unemployment in 2008-2009 was mostly due to higher layoffs, however a close examination of this episode has not been possible yet.

Our results indicate that among the EU15 countries, unemployment changes were to the largest extent due to fluctuations of inflows in Sweden and Austria. In Denmark and Finland, the changes in unemployment were also more due to changes in inflows to unemployment than outflows from it. However, this regularity was found not to be as distinct as in Elsby et al. (2009), which probably arises from the fact that our study covers a longer period of time.[14] In Poland, changes in unemployment resulted on the average mostly from fluctuations in the hiring rate, but the dominance of this factor was not very pronounced – it was responsible for 56 percent of changes in unemployment. Similar proportions were estimated for France, Germany and Spain, where the contribution of hazard of hirings was also slightly higher than that of dismissals.

Hence, our results for European countries confirm neither the traditional understanding of dismissals as the cause of unemployment nor the conclusions of Hall (2005) nor Shimer (2007). It appears that the changes in unemployment may be either due to changes in the hiring intensity (the dominant factor in 15 of the 27 countries analyzed in Figure III.13), or frequency of dismissals (the dominant factor in the remaining 12 countries). If we exclude the period of the current crisis from the analysis (i.e. the period after 2007), then the hazard rate of outflow from unemployment (conditional probability of finding a job) becomes the dominant factor in 19 of the 25 economies, as the spell of a rapid rise in unemployment in Europe in 2008-2009 was strongly related to intensification of dismissals. It is illustrated by the analysis of the contribution of hirings and dismissals to changes of unemployment in individual European countries (Figure III.14).

[12] The accumulated impact of hazard rates out of and into unemployment, and the initial deviation from the steady state, are expressed by the respective formulas: $\beta_f = \frac{cov(\Delta \ln(u_t), C_{ft})}{var(\Delta \ln(u_t))}$, $\beta_s = \frac{cov(\Delta \ln(u_t), C_{st})}{var(\Delta \ln(u_t))}$, $\beta_0 = \frac{cov(\Delta \ln(u_t), C_{0t})}{var(\Delta \ln(u_t))}$.

[13] In line with Elsby et al. (2009), who also indicate that in the UK the contribution of changes in the outflow from unemployment was significantly higher than in the continental European countries.

[14] In the case of Norway, the rejection of the a priori assumption by Elsby et al. (2009) on no duration dependence, and supplementing the dataset with recent data, resulted in the inverse proportions between the contribution of hiring and dismissals to changes in unemployment. This is due to the significant impact of changes in hiring on the rise in unemployment in years 1988-1989 and 2008-2009.

However, although in most countries changes in hazard rates of hirings determine the changes in unemployment rate in the longer period of time, it doesn't have to be the same in the short-term, and in particular during large macroeconomic shocks (spells of abrupt increases in unemployment). Indeed, it turns out that in most cases, large and sudden increases in unemployment are triggered by escalation of dismissals (see Table III.1). This result is robust to changes in definition of a shock; a more restrictive criterion does not decrease the percentage of episodes in which the dominant role was played by dismissals. Moreover, in the vast majority of analyzed European countries (around 80 percent) the rapid unemployment growth in 2008-2009 stemmed from the increase in the separation rate. It indicates that the stronger the economic disturbance, the higher the likelihood of labour market adjustment through dismissals, as argued by Barichon (2009). It is also confirmed in Figure III.14 that presents the contribution of hirings and dismissals to changes in unemployment in European countries. It is worth noting that increases of unemployment over the past two years account for nearly one third of all shocks observed on European labour markets over the last three decades, and for a number of countries the recent intensification of dismissals has been the greatest in two decades.

Table III.1. Spells of high unemployment in European countries – role of dismissals and hirings.

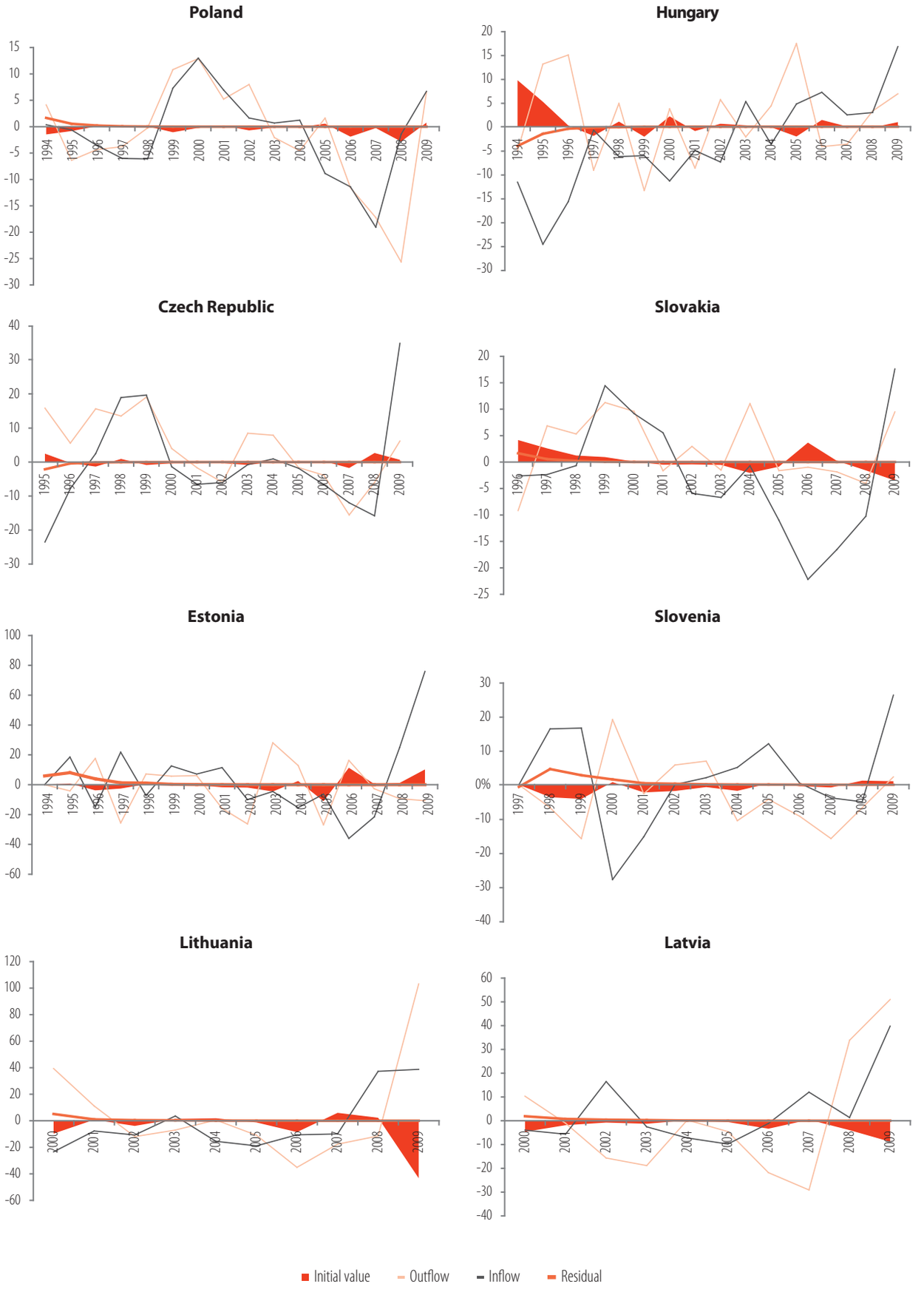
	Total			Before 2008			2008-2009		
Identification of the shock	Total	Shocks by dismissals	Percent	Total	Shocks by dismissals	Percent	Total	Shocks by dismissals	Percent
10 percent within 2 quarters	99	63	64	68	39	57	31	24	77
20 percent within 4 quarters	76	48	63	49	27	55	27	21	78
40 percent within 6 quarters	41	25	61	29	16	55	12	9	75

Source: Own calculations based on Eurostat and OECD data.

Figure III.14 also presents the contribution of both hazards to changes in unemployment in Poland. In the 1990s, the rise in unemployment was caused to a slightly higher extent by lower outflows to employment than by higher inflows. Unfortunately, available data does not allow assessment of labour market flows during the initial rise in unemployment in the early 1990s. Our results again suggest that during the Russian crisis and economic slowdown in 1999-2002, employers adapted first by limiting recruitment and only later through reduction in employment. The contribution of both declining outflow hazard rates and increasing rates of dismissals reached a culmination in 2000, after which the situation started to improve. Higher recruitment of workers in 2003-2004 slightly decreased the unemployment rate. However, only after reversing the impact of the hazard of dismissals, i.e. after the reduction in inflows to unemployment, did the situation on the labour market begin to improve markedly over the years 2005-2008.

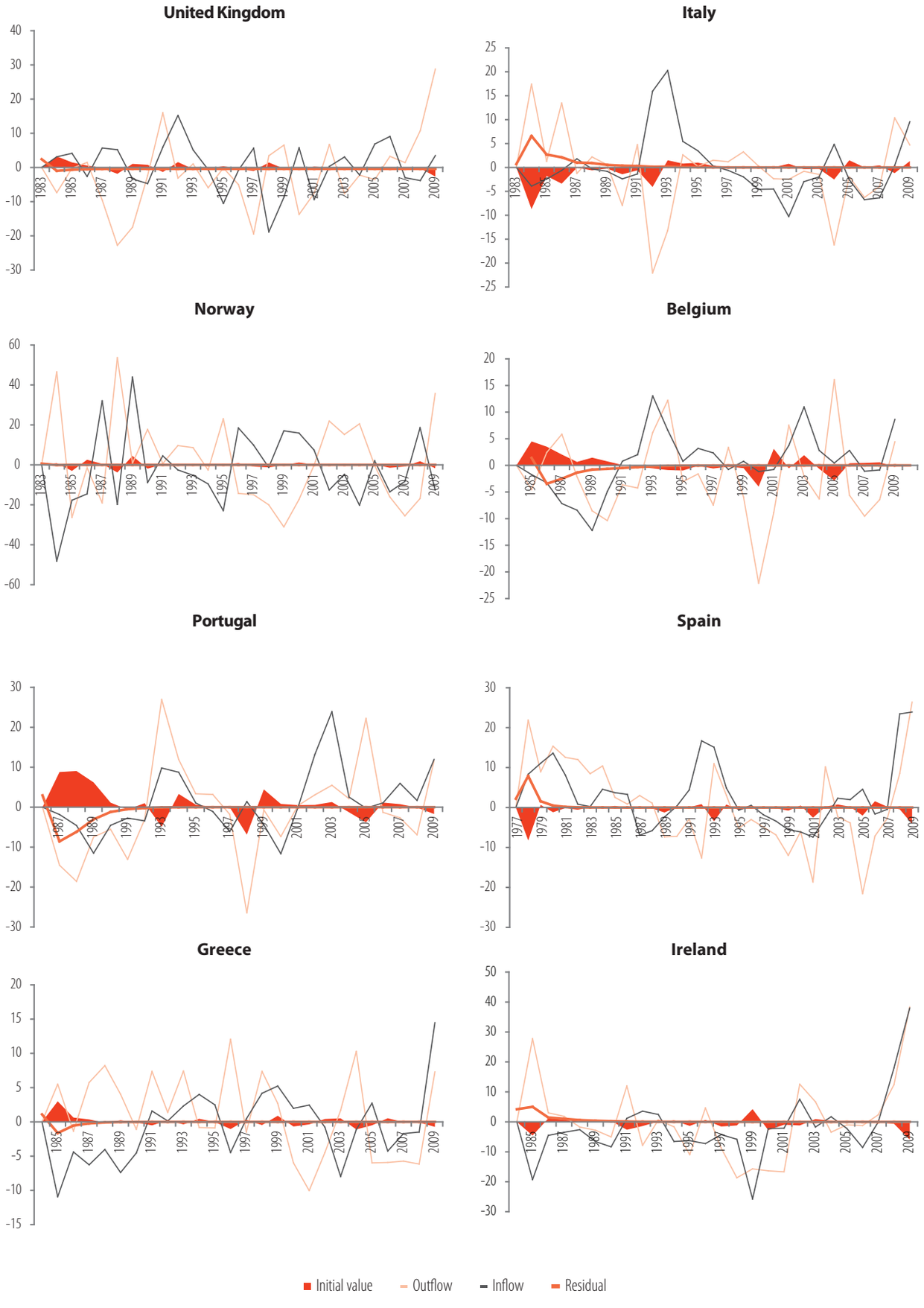
The characteristics of unemployment growth during the current economic downturn appear to be somewhat different than those during the Russian crisis. In the first place, as early as in 2008, the number of dismissals significantly increased due to a marked increase in the hazard of layoffs. Although in that year the chance of finding work by the unemployed was the highest over the entire period 1990-2009, in 2009 it dropped significantly which contributed to a rise in unemployment. This suggests that the crisis of 2008-2009 has so far resulted mainly in an increase in dismissal rates, in contrast to the situation in 1998-2002 when companies first reduced the intensity of recruitment. As mentioned above, the dominant contribution of dismissals to a rise in unemployment in 2008-2009 was widespread in Europe – this trajectory was characteristic for most European countries, including Poland; the only exceptions were Latvia, the United Kingdom and Norway.

Figure III.14. Contribution of fluctuations of the hazard of inflow to and outflow from unemployment to changes in the unemployment rate in the selected European countries.



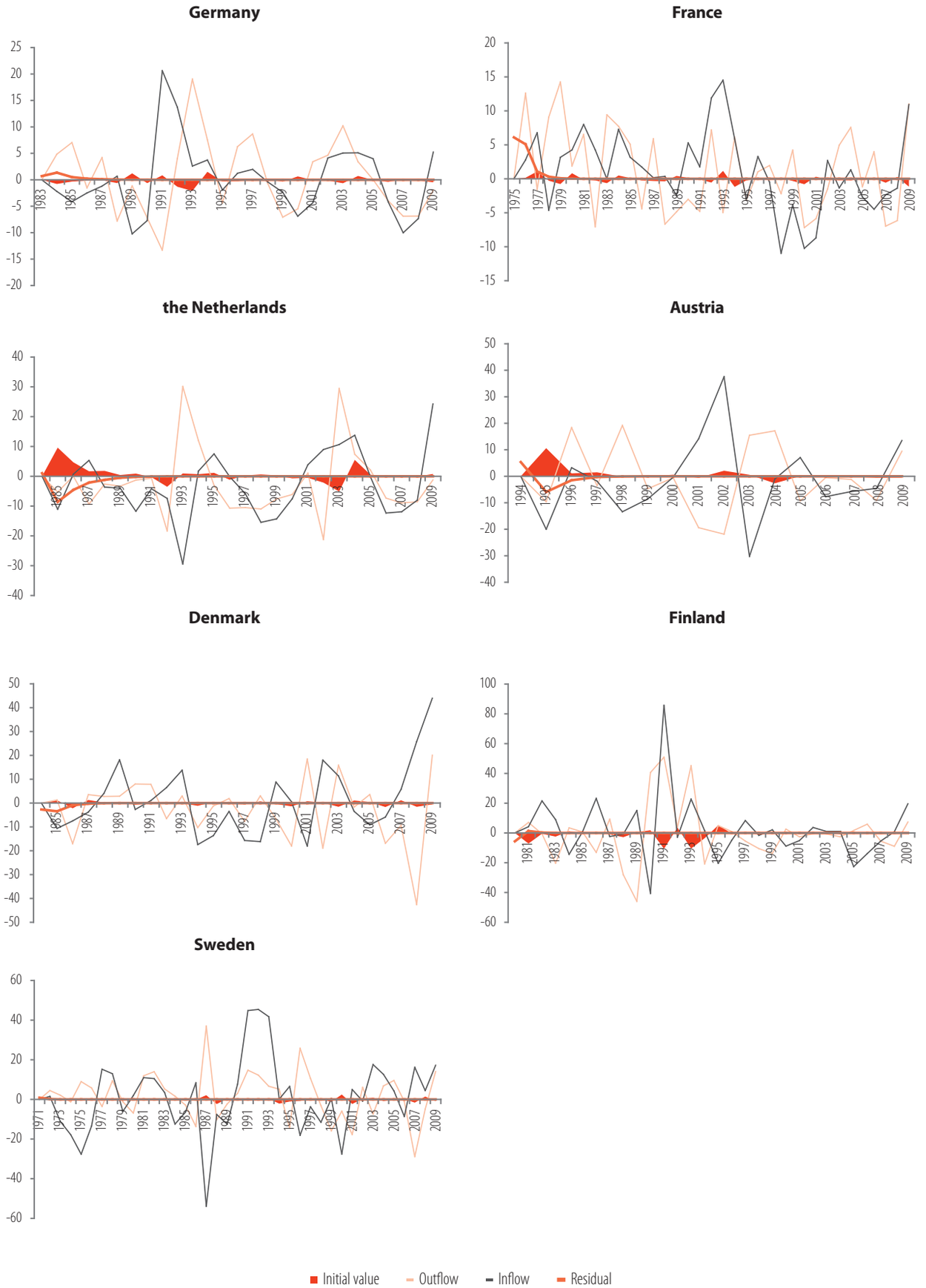
Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

Figure III.14. Contribution of fluctuations of the hazard of inflow to and outflow from unemployment to changes in the unemployment rate in the selected European countries.



Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

Figure III.14. Contribution of fluctuations of the hazard of inflow to and outflow from unemployment to changes in the unemployment rate in the selected European countries.



Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

The different character of these two rises in unemployment in Poland may have partly been due to the contrasting evolution of the size and structure of labour supply.[15] In 1998-2000 the population at working age (15-64 years) increased by 2 percent, and the population aged 20-29 increased by 6.2 percent. Hiring probabilities decreased as employers adapted to the downturn by reducing recruitment, while those entering the labour market only increased the pool of unemployed. In 2007-2009, the demographics of the labour force was very much different: the working age population rose by just 0.2 percent, while the number of people aged 20-29 years actually declined by 3.6 percent. In addition, between 1998 and 2008 the average level of education of people at working age was steadily rising. Despite the downturn, in recent years employers have not given up hiring, although they started to dismiss employees more vigorously. This phenomenon may be related to the gradual transformation of the sectoral structure of employment that only intensified in 2008-2009. As we show in Part I, during that period a decline in manufacturing employment was accompanied by a rise of employment in services. However, our results do not allow the assessment of whether recovery from the crisis will be similar to the earlier recovery (i.e. that the companies will first reduce dismissals) or the expected economic recovery will affect the labour market by increasing the probability of finding a job.

The evolution of the Polish labour market has been very similar to that in Slovakia. In both countries, the economic downturn of the late 1990s caused an increase in unemployment primarily through a decline in the outflow hazard rate. The recovery was accompanied by a falling rate of dismissals, particularly in Slovakia.[16] However, during the current downturn, Slovakia experienced much stronger escalation of layoffs than Poland. It is likely to be due to the very size of the shock – in 2009 in Slovakia, GDP declined year-to-year by 4.7 percent whereas in Poland it grew by 1.8 percent. Another country with a similar plot of the late 1990s downturn was the Czech Republic, although the original cause of it was a bit different and was related to a local currency crisis. However, the recovery in the Czech Republic followed a different pattern, and since 2001 it included changes in both hazard rates into and out of unemployment.

To sum up, although in the long term in most European countries, changes in unemployment rates are caused by changes in the intensity of hiring by firms (thus affecting the probability of finding employment by the unemployed), during sufficiently intense shocks the rise in unemployment is caused mainly by dismissals, regardless of the situation in calmer times. The exception is the United Kingdom, where both in 1991-1992 and in 2008-2009, the unemployment growth was caused by limited hiring. In this respect, the United Kingdom resembles the United States. Contrary to the European trends, in Spain in 1990-1994, in Portugal in 1992-1994, and in Poland and Slovakia in 1998-2000, the contribution of changes in the outflow hazard rate was greater than that of changes in the Inflow hazard rate. However, all the other cases of sizable increases in unemployment in these countries had a 'typical' course, with the dominant role of dismissals. Table III.2 shows that in some countries a rise in unemployment during such episodes was first due to the increased dismissals and only then due to reduced hiring.

Table III.2. Factors behind the episodes of unemployment increase in the European countries in the EEC crisis in 1992, Russian crisis in 1998 and the crisis in 2008-2009.

	Intensification of dismissals	Decreased hiring
EEC crisis (1992)	Belgium, Denmark, Germany (1992), France, Italy, Finland (1991), Sweden (1991-1993), United Kingdom (1992).	Spain, Germany (1993), Portugal, Finland (1992-1993), Sweden (1994), United Kingdom (1991).
Russian crisis (1998-9)	the Czech Republic (1998-1999), Estonia, Hungary, Poland (2000), Slovakia (1999).	the Czech Republic (1997), Lithuania, Poland (1998-1999), Slovakia (1998, 2000).
Subprime crisis (2008-9)	Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Ireland (2008), Greece, Spain (2008), Italy, Cyprus, Lithuania (2008), Hungary, The Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden.	Ireland (2009), Spain (2009), Latvia, Lithuania (2009), the United Kingdom, Norway.

Note: Episodes of increase in unemployment defined as a 20% increase in unemployment rate within 4 consecutive quarters, see Table III.1.
Source: Own calculations based on Eurostat and OECD data.

[15] These topic is discussed in the previous edition: *Employment in Poland 2008* – work over the life course (IBS/CRZL, 2010).
[16] At the same time, in Slovakia the outflow hazard rate was still growing, unlike in Poland. In effect, a decrease in unemployment rate was lower in Slovakia, and the percentage of unemployed out of work for at least a year exceeded 70 percent 2005-2008.

2. Structural and institutional determinants of international differences in labour market flows

2.1. Impact of sectoral structure and institutional framework on labour market flows

Literature suggests number of potential causes of international differences in the size of flows on the labour market. Haltiwanger et al. (2008) argue that the scope of flows at a country level is the result of interactions between (i) the productivity of enterprises, their average size, sectoral structure of the economy, and (ii) various labour market institutions. At the same time, numerous empirical studies (e.g. OECD 2009; Micco, Pages, 2004, Haltiwanger et al., 2008) evidence a strong positive correlation between the relative sizes of flows in different sectors within different countries. It implies that reallocation depends largely on the specificity of a given sector, and patterns of flows in particular industries are surprisingly similar in all OECD countries. Bassanini, Marianna (2009) and OECD (2009) point out that the greatest reallocation of labour is observed in trade, hotels and restaurants. The most stable employment (both in terms of demand and supply) can be found in companies supplying municipal services. In addition, flows generally depend on the size of the company and its age – both creation and destruction of jobs occur more intensively in younger and smaller businesses, albeit the age of the company is a stronger determinant of flows than the size of the company (OECD, 2009).

Since differences in the size of flows between different sectors of the economy are almost as large as between countries (Bassanini, Marianna, 2009, OECD, 2009), and the relative flows in particular sectors are strongly correlated in an international cross-section, it is worth assessing to what extent differences in reallocation measures are due to different sectoral structures of employment in individual countries, and to what extent they result from specific factors associated with their institutional environment. To this end, we refer to OECD (2010) as the methodology used to estimate flows in this report does not allow sectoral analysis. In Figure III.15 gross job reallocation in selected OECD countries is decomposed into the contributions of (i) the factor resulting from the sectoral structure of employment in the given country, and (ii) idiosyncratic component. [17] The differences between the actual and hypothetical level of reallocation (which would prevail if the countries differed only in their sectoral structures) [18] are statistically significant and on average account for about 18 percent of total reallocation (OECD, 2009). Country-specific factors limit the flows in the countries of southern and continental Europe as well as in most of the EU New Member States, and increase them in the Anglo-Saxon and Nordic countries, the Netherlands, and also in Spain and, to a lesser extent, in Poland. Institutions can also affect the reallocation of labour in an indirect manner as they influence the sectoral structure of the economy and choices of individual households. In the next section of this chapter we analyze the impact of particular labour market institutions on the size of job and labour reallocation.

Numerous studies (e.g. OECD 2009) suggest that labour market flows are significantly influenced by the popularity of temporary contracts. Higher flows and shorter duration of employment are the natural consequence of widespread use of non-traditional forms of employment. Moreover, in such an environment employers are more willing to recruit workers because these forms make it easier for firms to adjust the amount of labour to changes in economic situation. Figure III.16 shows the relationship between the percentage of workers employed under temporary contracts [19] and hazard rates in and out of unemployment, adjusted for the impact of labour market institutions. In fact, the use of such contracts is positively correlated with both hazard rates.

Nevertheless, although higher hazards of inflow to and outflow from unemployment may be caused by more frequent use of temporary contracts, an inverse relationship is also possible, in which the contractual structure of employment adapts to deeper economic processes, reflected in the changes of hazard rates. The direction of causation that links the share of workers employed on fixed-term contracts with hazard rates can be examined with a Granger causality test. Simple vector autoregressive models (VAR) with two variables – (i) the percentage of workers employed on fixed-term contracts and via temporary work agencies and (ii) inflow and outflow hazard rates, were estimated for every country in the sample. Then, Granger causality tests were used to assess whether temporary contracts cause (in the Granger sense) flows or whether there is an inverse relationship. Table III.3 contains the results of these tests for individual countries.

[17] Flows defined as a sum of annual rates of hirings and dismissals, estimated on the basis of database on establishments from EU KLEMS. Data used in calculations presented in the figure come from OECD (2010) – gross flows, OECD Stat databases –sectoral structure of employment in individual countries and OECD (2009) – flows by sectors.
[18] Flows that would occur in a given economy, provided that in each sector the reallocation would be equal to the OECD average in that given sector.
[19] This percentage was standardized to a distribution with a mean equal 0 and variance equal 1.

Figure III.15. Reallocation of labour – impact of sectoral structure and country-specific factors in the selected OECD countries, on average in years 2000-2007 (in percentage points).

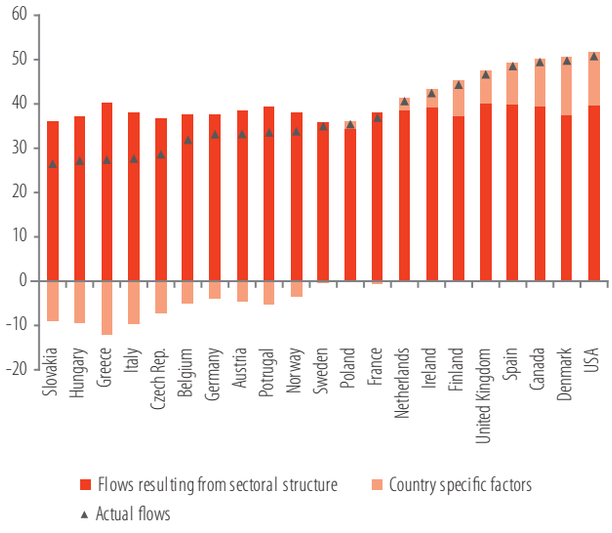
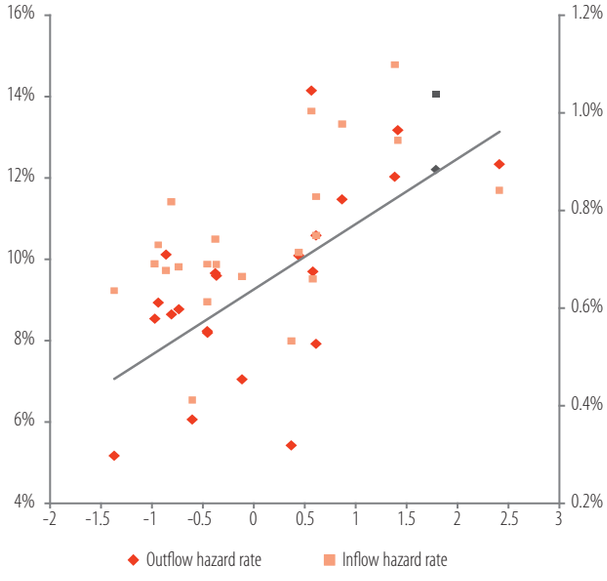


Figure III.16.Hazard rates out of (left axis) and into (right axis) unemployment versus the share of employed under fixed term contracts in total employment (horizontal axis, in percent) in the European countries in 1975-2009.



Note: Institutional variables are standardized within the sample (to a distribution with a mean equal to 0 and variance equal to 1).
Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009).

Table III.3. Results of the Granger causality test for the relationship between the incidence of fixed term contracts and the hazard rates out of and into unemployment for selected European countries.

	Outflow causes the incidence of fixed term contracts	Incidence of fixed term contracts causes outflow	Inflow causes the incidence of fixed term contracts	Incidence of fixed term contracts causes inflow
Bulgaria	1**	0	1***	0
Estonia	0	1**	0	0
Lithuania	1***	0	1***	1**
Latvia	1***	0	1***	1***
Poland	0	1**	1***	1**
Slovakia	0	0	1**	1***
Slovenia	0	1***	0	0
Hungary	0	1***	0	1**
Austria	1***	0	1***	0
Belgium	0	1***	0	0
Denmark	0	0	1***	0
Finland	1***	0	1***	1**
France	1***	1**	0	0
Spain	1**	0	0	0
Luxembourg	1**	0	1***	0
Germany	1***	0	0	0
Portugal	1**	0	0	0
Sweden	1***	1***	0	1***
SUM	11	7	9	7

Note: ***- means a statistical significance at 0.01, ** – at 0.05.We present only the countries with at least one case of rejection of the null hypothesis about the absence of Granger causality.
Source: Own calculations based on Eurostat, OECD and Elsby et al. (2009) data.

According to our results, the higher prevalence of temporary contracts is more often a result of increased outflows rather than the other way round. It means that the use of temporary contracts is likely to increase when businesses need more workers. The same applies to inflow hazard rates. This regularity is particularly evident in the EU-15 countries – an inverse relationship was identified only in Belgium. In consequence, in most EU-15 countries intensified use of temporary contracts is preceded by an increased labour demand, reflected in higher outflow hazard rates. However, an inverse relationship is observed in most new EU Member States – Poland, Slovenia, Estonia and Hungary, where increased outflow hazards rates were caused by surge in the incidence of temporary contracts. In the case of inflow hazard rates, causality occurs in both directions.

Box III.2. Flows vs. institutions – theoretical background.

1. Employment protection legislation
   There is a consensus in economic literature that restrictive employment protection legislation (EPL), in particular regulations of dismissals, is the crucial factor decreasing labour market flows. The rationale behind EPL draws on imperfections of the market, i.e. unequal bargaining power of employers and employees. Thus the governments impose restrictions on employers with regard to rules of dismissals to improve the position of workers. As a result, the total labour costs increase and entrepreneurs tend to internalize burdens stemming from EPL when deciding about hiring. The higher the restrictions, the lower the rates of job destruction and creation– and hence the flows from unemployment to employment and vice versa. Given the availability of the two types of contracts, with different rules on dismissals applying to each of them, the burden of adjustment of employment to labour demand shifts falls on workers not covered by the protection typical for open-ended contracts (e.g. temporary workers, or employed on fixed-term contracts), and as the result flows are expected to be slightly higher than in a situation of uniformly restrictive regulations.
2. Unemployment benefits
   The impact of unemployment benefits on labour market flows is ambiguous. Generous benefits allow the unemployed to search for work for a longer period of time, and consequently find a job better suited to their skills and requirements. Thus, the established employment relationship will last longer which increases the average spells of unemployment and employment, and reduces the flows. On the other hand, in accordance with the standard job search model, unemployment benefits increase the reservation wage, so as a result more jobs are vulnerable to destruction when the economy is hit by a productivity or demand shock (when wages fall, workers often decide to terminate the contract; and if wages are sticky, more layoffs follow). Although then a larger number of unemployed results in a fall in recruitment costs, potentially enabling an increase in hirings, again the higher reservation wage results in the situation where lesser productive individuals rarely move to employment.
3. Active labour market policies
   In principle, active labour market policies facilitate the establishment of an employment relationship by reducing the cost of the employer (e.g. through employment subsidies) or the employee (training, job search assistance). They also reduce the opportunity cost of an employee in the event of dismissal, thus reducing the severity of job loss. The overall impact of active labour market policies on flows is therefore positive.
4. Tax wedge
   The tax wedge lowers the expected return from labour, reduces labour supply and discourages the search for employment. If wages are rigid, then the tax burden falls on the employer, and the tax wedge increases the total cost of employment, which thereby reduces job creation and destruction (similarly to the EPL). Therefore, the higher taxation of labour contributes to a reduction in labour market flows.
5. Trade unions
   The 'right-to-manage' model (Nickell, Andrews, 1983) indicates that in strongly unionized industries employment and flows are relatively lower, since the main objective of trade unions is to maximize wages of their members. Similarly, 'insider-outsider' models (see Blanchard, Summers, 1986) show that unions may use their bargaining power to stabilize the structure of employment. Both factors reduce flows. On the other hand, higher unionization decreases wage dispersion, i.e. low-productive persons are overpaid and highly productive employees are underpaid. In this situation, productivity and demand disturbances may lead to a larger scale of dismissals. Therefore, the impact of unionization on flows depends on the relative strength of both effects and is a priori ambiguous.
6. Minimum wage
   The existence of a minimum wage leads to a decline in hiring rate, because employers are often reluctant to create jobs with productivity lower than the one determined by the statutory minimum wage. On the other hand, due to the downward rigidity imposed by a minimum wage, companies affected by a negative productivity shock often decide to dismiss workers and employ them again after the economic situation improves, thus a higher minimum wage leads to higher labour market flows.
7. Product market regulations
   As in the case of employment protection, there is a consensus in economic literature on the impact of product market regulations on hiring. Barriers to entry reduce the number of start ups, thereby reducing the hiring rate. In the case of liberal regulations, more companies are launched and destroyed – and hence higher flows of workers.

Therefore, it seems that whereas in Western Europe flexible forms of employment are in general used in line with their original purpose, (i.e. as an instrument raising the capacity of the labour market to adapt to short-term fluctuations and changes in the labour demand), in the NMS countries they are used more as a tool that allows companies easier hiring and firing of employees, regardless of business circumstances. A Eurofound survey (Coppin, Vandenbrande, 2007) suggests that labour mobility in Poland is largely forced by employers (the percentage of the respondents saying that they had been forced to change jobs, is one of the highest in Europe), which indicates that the widespread use of temporary contracts is weakly related to the expectations and needs of workers. It remains an open question why the incidence of these contracts varies in European countries. It has partly been dealt with in *Employment in Poland 2007*. Undoubtedly, it requires further research, but which goes beyond the scope of this edition. In the next section of this chapter we analyse the determinants of international differences in flows, focusing on labour market institutions.

2.2. Identification of institutional determinants in the scale of flows

Our assessment of the influence of institutions on labour market flows is based on hazard rates estimated for European countries. The estimates presented in this section concern the conditional probability of losing or finding a job in a given unit of time (see Appendix 4) as gross flows largely depend on the number of people employed or unemployed. By definition, hazard rates depend much less on the current level of employment and unemployment, rather they are related to 'deep' characteristics of the labour market, such as the institutional environment or labour mobility.

Models were estimated for hazard rates and measures of institutions averaged over the recent decade (2000-2009). This was due to the limited availability of data on institutions before 2000, in particular for Poland and other NMS which are central to our analysis. The focus on institutional determinants also implies the necessity to work with average hazard rates over the business cycle, as hazard rates are subject to cyclical fluctuations and the use of yearly data would be inappropriate.[20] Hence, the dependent variables in the models presented are the hazard rates of hirings and separations in 23 European countries averaged over 2000-2009.

The basic list of explanatory variables comprised of a wide range of institutional indicators:

- Employment Protection Legislation Index by the OECD for temporary and fixed-term contracts;
- Employment Protection Legislation Index by the OECD for open-ended contracts;
- Employment Protection Legislation Index for collective dismissals;
- The overall Employment Protection Legislation Index by the OECD;
- The average tax wedge;[21]
- Tax progression (calculated as the difference between the tax wedge for the wealthiest and poorest households);
- Unionization (measured as a percentage of union members among employees);[22]
- Centralization of collective bargaining (Visser index);
- Coordination of wage bargaining (index);
- Collective bargaining coverage;
- The minimum wage in relation to the average wage;
- Expenditure on unemployment benefits in relation to GDP;
- Net replacement rate in unemployment benefits system;
- Expenditure on active labour market policies in relation to GDP;
- Expenditure on active labour market policies per unemployed in relation to GDP per capita;
- Indices of restrictiveness of regulation of economic activity, including regulation on starting and closing a business (*Doing Business 2010*);
- OECD indicators of product market regulations (PMR);

All variables are standardized in order to achieve comparability of estimated parameters. Only the significant variables from the list above and those with a sufficient number of observations were left in the final models. Due to the limited number of countries with available data on the net replacement rate (significantly influencing the hazard rates), it has been substituted in some models with expenditure on unemployment benefits in relation to GDP, which are available for a wider sample of countries and are correlated with the replacement rate (correlation coefficient for the sub-sample was 0.65).

[20] Hazards out of unemployment are pro-cyclical, and hazards into unemployment are anti-cyclical.
[21] Tax wedge and tax progression were based on *OECD Taxing Wages (2009b) data*.
[22] Variables concerning trade unions are taken from ICTWSS database, developed by the Amsterdam Institute for Advanced Labour Studies (AIAS) (Visser, 2009)

Moreover, the models include three control variables which quantify factors potentially affecting the hazard rates, that at the same time could not be explained by the institutions. These variables are:

- average unemployment rate in 2000-2009, as an approximation of the equilibrium unemplo-ment;
- variation of unemployment (variation coefficient), reflecting the strength of shocks and volatility in the labour market which affected the analyzed countries over the previous decade;
- the share of workers on temporary and fixed-term contracts in total employment – as we show in sub-section 2.1, this share is correlated with the hazard rates and flows, but the causality is not clear. It is also suggested by OECD (2010), as well as in *Employment in Poland 2007*, that institutional factors are not sufficient to explain the differences in the incidence of these forms among the EU states;

Obtained estimations of parameters are presented in Table III.4. In the next section of this chapter, we discuss the influence of individual institutions on the international differences in labour market flows.

Table III.4. Estimated models of institutional determinants of differences in inflow and outflow hazard rates on European labour markets in years 2000-2009.

	Model 1		Model 2		Model 3		Model 4
Dependent variable:	outflow	inflow	outflow	inflow	outflow	inflow	inflow
EPL – traditional open-ended contracts	-0.018***	- 0.001**	-0.024***	-0.002***	-0.024***	-0.002***	-0.021***
EPL – fixed-term contracts and temporary contracts	-	-	-	-	-0.015***	-0.001***	-
Tax wedge	-	-	-0.015**	-	-	-	-
Progression of the tax wedge	-	-	-	-	-0.01**	-	-
Percentage of labour force covered by collective agreements	-	-	-0.025***	-0.001***	-	-	-
Minimum wage	-0.026***	-0.002***	-0.014*	-0.002***	-0.044***	-0.001***	-0.03**
Gross social transfers in relation to GDP	-	-	-	-	-0.019***	-	-
Expenditure on benefits in relation to GDP	-0.021**	-	-	-	-	-	-
Replacement rate at the beginning of the unemployment spell	-	-	-	-	0.019***	0.001**	-
Expenditure on ALMPs	-	-0.002***	-	-0.001***	-	-0.002***	-
Starting a Business Index (DB)	-0.016**	-	-0.011**	-0.001*	-0.015***	-	-
Product market regulations (PMR, OECD)	-	-	-	-	-	-	-0.017**
Average unemployment rate	-	0.003***	-0.057***	0.002**	-	-	-0.024*
Coefficient of variation of the unemployment rate	0.04***	0.003***	-	0.003***	0.024***	0.002***	-
Percentage of employed under fixed term contracts	0.016**	0.001**	0.029***	0.002***	0.011**	0.002***	0.02**
Constant	0.093***	0.007***	0.088***	0.007***	0.104***	0.007***	0.097***
R^2	77%	81%	84%	94%	99%	97%	73%
Adjusted R^2	68%	74%	74%	89%	97%	95%	62%
Number of observations	23	23	20	20	17	17	19

Note: (*), (**), (***) denote the statistical significance, respectively at the levels of 10, 5 and 1 percent.
Source: Own calculations.

Employment protection legislation

In order to assess the influence of the EPL on labour market flows, our regressions took into account indices showing how restrictive the legislation concerning traditional employment contracts is (rules of concluding and terminating open-ended contracts), legislation on fixed-term contracts and temporary work (determining the availability of such contracts and the possibility of renewing them), collective dismissals, and also, alternatively, a composite index that averages three dimensions of legislation. Theoretical predictions (see Box III.2) suggest that the inflow hazard rates should be most affected by the regulations of layoffs as their aim is to reduce the frequency of dismissals. At the same time, restrictive regulations on the termination of employment contracts also affect hiring as employers internalize the costs of potential separation at the time of recruitment (see *Employment in Poland 2007*).

The impact of legislation relating to temporary contracts on labour market flows is a priori ambiguous. Limits on the contract duration or the number of renewals, discourage employers from using this form of employment. On the other hand, the average shorter duration of these contracts resulting from such legislation translates into more frequent separations. As shown in the previous section, hazard rates for both flows are positively correlated with the incidence of temporary contracts, although among European countries there are various patterns of causality between the flows and the usage of contracts.[23] The rules governing the use of temporary contracts may therefore influence the intensity of flows even if the incidence of these contracts is controlled in the regressions.

Previous empirical studies had to a large extent confirmed the theoretical predictions both for the USA (Autor et al. 2007) and European countries (Schivardi, Torrini 2008). There are also numerous studies on the influence of reforms of labour codes on the labour market in individual countries (see Kugler et al. 2003 for Spain, Marinescu 2008 for the United Kingdom, and Kugler, Pica 2005 for Italy). These results are rather uniform with regard to the effect of reforms on the flows – in each case, an increase in the costs of dismissals on open-ended contracts resulted in decreased intensity of hiring and layoffs; the studies differed only in the quantitative impact of changes. Moreover, it appears that minor changes in legislation do not significantly affect flows (Martins, 2009 for Portugal, von Below, Thoursie 2008 for Sweden). To sum up, empirical studies show a significant effect of labour market reforms on flows, albeit in order for this effect to be noticeable, the modifications should be sufficiently broad and concern a wide range of companies.[24]

Figure III.17. Outflow hazard rates (vertical axis) vs. stringency of regulations on open-ended contracts in 23 European countries (model 1).

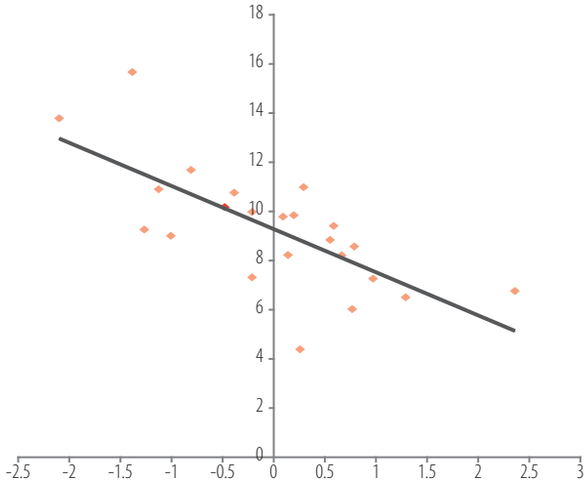
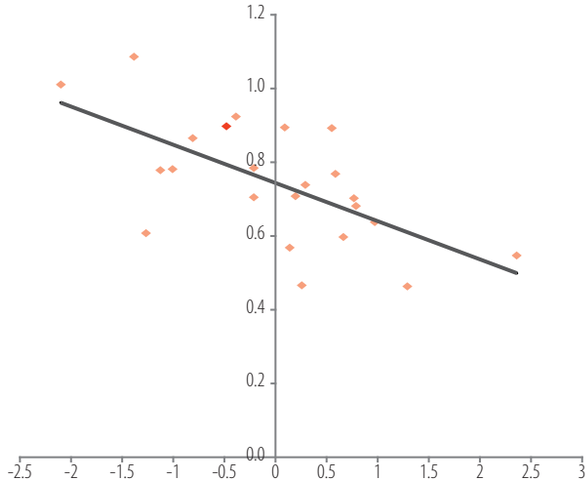


Figure III.18. Inflow hazard rates (vertical axis) vs. stringency of regulations on open-ended contracts in 23 European countries (model 1).



Note: Institutional variables are standardized in the sample (to a distribution with a mean equal to 0 and variance equal to 1).
Source: own calculations.

[23] However, in order to identify the causes of frequent hiring employees under fixed-term contracts in some countries, including Poland, it is not enough to refer only to the employment protection legislation – cross country correlation between the differences in stringency of policies on temporary contracts and regular employment and incidence of temporary contracts is insignificant.
[24] Most studies (e.g. von Below, Thoursie 2008, OECD, 2010) which indicate no effects of such reforms are concerned with only a fragment of the labour market, e.g. small companies.

So far there have been few attempts to analyse employment protection legislation from a wider perspective of international differences in labour market flows (a short review of the available studies can be found in OECD, 2010). All the available papers indicate a negative influence of such legislation on labour market flows; stronger regulation decreases reallocation in the labour market and thus makes it more difficult for companies to adapt to shocks. In addition, greater restrictions on traditional contracts increase the use of temporary contracts (OECD, 2004).

Our regressions are intended to fill this gap in research in two ways. First, the subject of our analysis is not the flows, but rather the hazard rates – both for redundancies and hirings. Second, our model has been estimated for a cross-section of European countries that are relatively homogenous with regard to the construction of their labour laws. This permits identification of the impact of even slight differences in the stringency of these regulations on the intensity of hiring and dismissing workers in European countries. Figures II.17 and III.18 present the relationship between the index of employment protection for open-ended contracts and hazard rates, adjusted for the impact of other variables included in the regressions.

The presented estimations show a negative dependence between the stringency of legislation on open-ended contracts and hazard rates, both of outflow and inflow. Partial correlation coefficients are respectively -0.64 and -0.57 (we have taken into account the impact of other institutions, and also controlled for variation of unemployment and its average level). We may conclude that, other things equal, the reduction of employment protection by one standard deviation in the sample (e.g. reduction in Poland to the level observed in Denmark) would increase outflow hazard rate by 1.8 percentage point, and inflow hazard by 0.1 percentage point, which translates to respectively 20 percent and 16 percent of the average values of these hazards in the sample.

Tax wedge on labour, unemployment benefits and social transfers

According to theory, the impact of labour taxation on workers' flows is negative – a higher tax wedge [25] lowers both the company returns from hiring and the employee remuneration. [26] Since higher tax wedges reduces the motivation of both parties to establish an employment relationship, one can expect it leads to a lower intensity of labour market flows. This conclusion was confirmed empirically in the work of Gomez-Salvador et al. (2004), albeit the estimated impact is rather small (10 percent increase in the tax wedge reduces the reallocation of jobs only by 0.5 percentage points). [27] These authors also acknowledge that the impact of labour taxation is not very robust to changes in the model specification. [28]

Also in this study, taxation proved to not be a crucial determinant of the intensity of flows between labour market statuses – although it significantly influences outflow hazard rates. Nevertheless, this impact is moderate in comparison to other institutional determinants of labour market flows. The increase in the tax wedge by one standard deviation in the sample (i.e. by 7.4 percentage points) [29] is associated with a decrease in probability of outflow by about 1.5 percentage points, i.e. by about 17 percent. [30] There is a negative correlation between the progression of the tax wedge and the outflow hazard rate. This is consistent with theoretical predictions that in countries with a higher marginal tax rate, the intensity of job searches by the unemployed may be lower, which is reflected in outflow hazard rates. It should be noted, however, that the progression of the tax wedge was only statistically significant within a specific set of variables, and in the sample which was limited to 17 countries. The inclusion of unemployment benefits into the model resulted in the loss of significance of estimates of the impact of taxation (and of progression as well), which is associated with the co-linearity of these variables. Both the tax wedge and the generosity of the benefit system (analyzed in Figures III-21-III.22) are merely the empirical approximations of the fiscal and social policies adopted by individual states. These measures are interchangeable and imperfect, but both show the negative impact of higher fiscal leniency on outflows from unemployment.

Unemployment benefits may affect the reallocation of labour in a number of ways, and their net effect is ambiguous. Standard job-search models (Mortensen, Pissarides 1994, 1998) imply that generous benefits increase the reservation wage, so that company-employee relationships are more vulnerable to productivity and labour demand shocks, i.e. higher benefits increase inflows to unemployment. On the other hand, a higher level and in particular longer availability of benefits reduce the intensity of job searching, thus compressing the outflows from unemployment. At the same time, literature on labour market institutions (see Belot, van Ours, 2004, Nickell, Nunziata, Ochel, 2005, OECD 2006) agree that higher benefits increase the equilibrium unemployment rate, so although generous benefits decrease the hazard rates, their net effect on gross flows is inconclusive. On the other hand, a generous unemployment support system can improve matching in the labour market as job seekers are more selective, especially if higher benefits are accompanied by a more efficient system of counseling and supervision of job search (OECD, 2007). Consequently, the flows to employment may be higher and the relationship between employer and employee may be longer, hence the risk of job loss

[25] The difference between the gross total labour cost incurred by the employer and net wages financing the consumption of the employee.
[26] Whether the tax wedge has an effect on the labour market through demand- or supply-side depends on the elasticity of wages and elasticity of labour supply (see Pissarides, 2000, Bukowski et al., 2005). However, these proportions have only a secondary significance for this discussion.
[27] At the mean reallocation rate for the Euro zone, equal to 9.3 percent
[28] Estimated for microeconomic data from the *Amadeus* research on companies
[29] E.g. a reduction of the tax wedge in Poland to the level observed in Portugal
[30] The amplitude of changes is thus greater than in the paper by Gomez-Salvador et al. (2004), but in fact the results should not be compared due to diametrically different methodologies and character of data.

may be lower. Therefore, the theoretical assessment of the impact of the support system for the unemployed and flows and hazard rates is rather ambiguous. OECD (2010) finds, however, a positive empirical correlation between the average replacement rates and flows in the labour market.

Figure III.19. Outflow hazard rates (vertical axis) vs. tax wedge in 20 European countries (model 2).

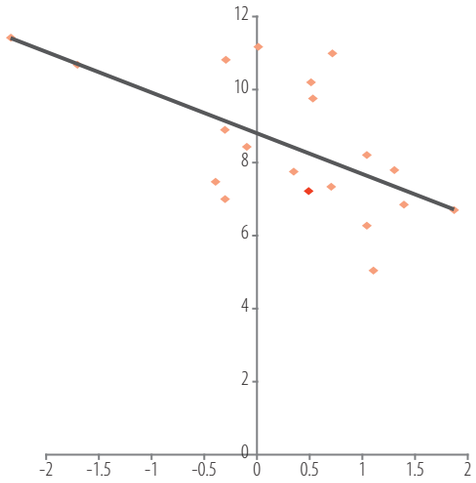


Figure III.20. Outflow hazard rates (vertical axis) vs. progression of the tax wedge in 17 European countries (model 3).

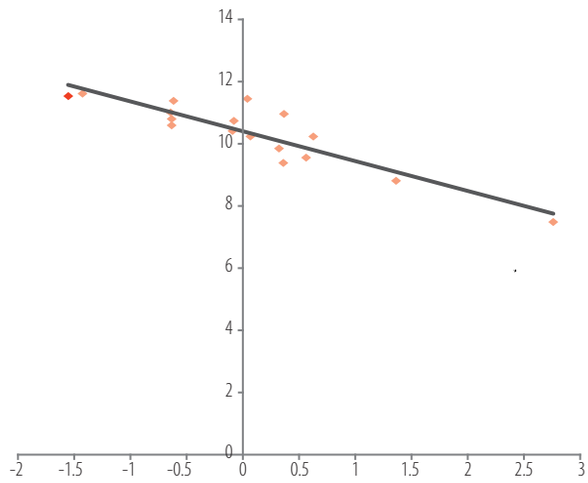


Figure III.21. Outflow hazard rates(vertical axis) vs. expenditure on unemployment benefits in relation to GDP in 23 European countries (model 1).

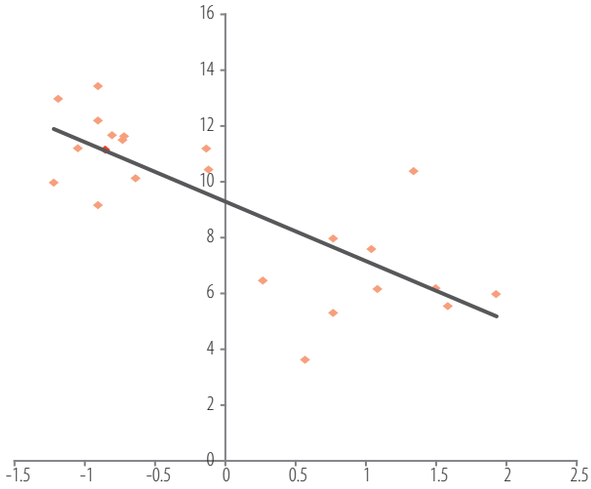
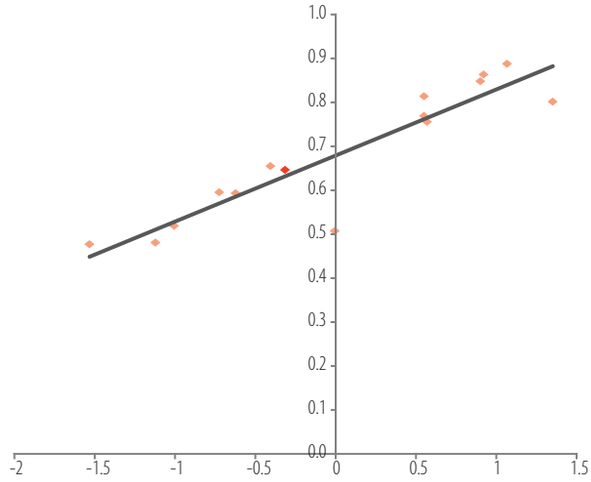


Figure III.22. Inflow hazard rates (vertical axis) vs. replacement rates in the unemployment benefit systems in 17 European countries (model 3).



Note: Institutional variables are standardized in the sample (to a distribution with the mean equal to 0 and variance equal to 1).
Source: Own calculations.

Due to the limited availability of data on replacement rates (only available for 17 countries)which measure the generosity of the benefit system, we took into account the share of the benefit spending in GDP in the initial regressions for 23 countries (models 1-2). Model 3 uses the replacement rate, which is less likely than expenditures to be endogenous with respect to other dependent variables, at the expense of narrowing the sample by 6 countries.

These results, although apparently contradicting intuition, are consistent with the OECD estimates (2010). A positive correlation between the generosity of benefits and hazard rates is probably due to the fact that European countries with high replacement rates (e.g. Denmark, Sweden, the Netherlands and Finland) at the same time have relatively restrictive criteria for granting benefits and requirements for active job search. This presumption is confirmed by the estimated impact of social transfer spending (as a share of GDP) or expenditures on unemployment benefits (as a share of GDP), which were found to be significantly negative in models 1-2. This indicates the presence of noticeable income effects. An alternative explanation of the positive impact of replacement rates is provided by Acemoglu, Shimer (1999). According to them, insurance against unemployment encourages companies to create jobs that are more vulnerable to productivity shocks (and hence the risk of closing them is greater). Consequently when such shocks emerge, the flows are higher in countries with more generous benefit systems. Interestingly, the replacement rate for benefits granted to the unemployed five years after losing a job was not statistically significant in any of the performed regressions. This is consistent with the belief that after such a long period the benefits function is a redistribution of income, rather than insurance against unemployment.

Unionization and the model of collective bargaining

A theoretical explanation of the influence of trade unions on labour market flows is based on the observation that their strong bargaining position flattens the wage structure and makes wages more rigid. In this way, employers are unable to adapt to changes during a business cycle through the adjustment of wages, and are more likely to do so by changing the number of employees (Cahuc, Zylberberg, 2004). In effect, hazard rates are higher than they would be in the case of flexible wages. On the other hand, the basic models of collective bargaining (*right-to-manage*) and the *insider-outsider* model show that unions maximize the utility of the employed, and thus try to minimize the possible dismissals and hirings (Lindbeck, Snower, 1984). In this context, the relationship between the position and role of trade unions and hazards of flows is ambiguous.

Quantification of trade unions and wage bargaining model is a difficult task and requires construction of indices that measure various aspects of these phenomena. The most frequently used data are measures such as the trade unions coverage, as available in OECD (2010) and composite indices provided by the AIAS – *Amsterdam Institute for Advanced Labor Studies* (Visser, 2009). AIAS performs a comprehensive assessment of various dimensions of trade union activities in European countries – such as centralization and coordination of wage bargaining and the share of labour force covered by collective agreements. It seems that this last variable is the most correlated with wage rigidities and should primarily affect the flows (cf. Booth, 1995).

Figure III.23. Outflow hazard rates (vertical axis) vs. percentage of labour force covered by collective agreements in 20 European countries (model 2).

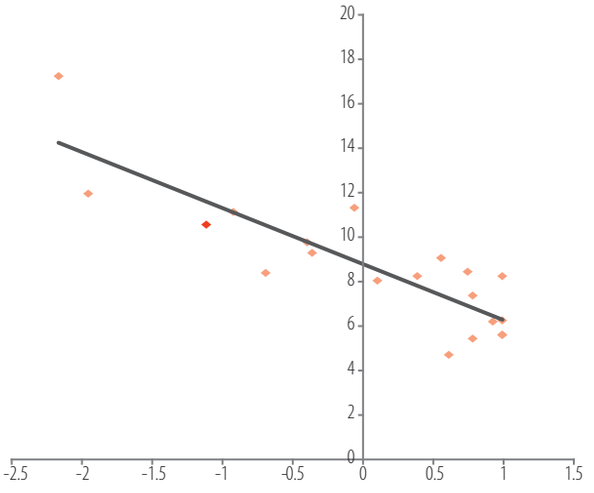
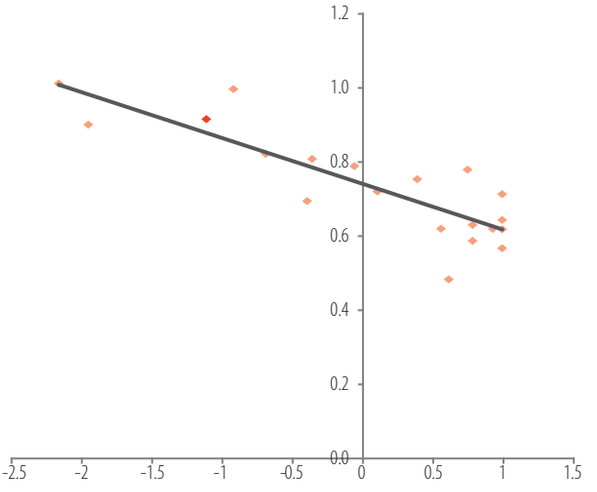


Figure III.24. Inflow hazard rates (vertical axis) vs. Percentage of labour force covered by collective agreements 20 European countries (model 2).



Note: Institutional variables are standardized in the sample (to a distribution with the mean equal 0 and variance equal 1).
Source: Own calculations.

Indeed, only the collective agreements coverage proved to be a statistically significant predictor of hazard rates for both inflows to and outflows from unemployment. Its impact, however, is modest –coverage higher by one standard deviation in the sample (i.e., as when a composite index increases by 0.95, which is roughly equivalent to the difference between Poland and Denmark), implies outflow hazard rate lower by 2.5percentage points, and for inflow into unemployment by about 1.24percentage points. For comparison, Gomez-Salvador et al. (2004) used an index of wage bargaining centralization, which proved to be negatively correlated with indicators of job reallocation. In the samples used in the a forementioned regression models, the correlation coefficient between centralization of bargaining and the share of labour force covered by collective agreements amounted to nearly 80 percent, which leads to the conclusion that these variables can generally be treated as interchangeable. [31]

A lack of statistical significance of other variables measuring the strength of trade unions is not only a result of co-linearity, but also reveals the shortcomings of these remaining measures. The percentage of unionized workers says little about the real impact of these organizations on the economic life in the country. Composite indices are often arbitrary. An additional obstacle making it difficult to obtain a full picture of the trade unions functioning is the incompleteness of statistical data and the reluctance of such organizations to present the exact number of active members and complete disclosure of statistics. All these factors make it rather difficult to perform comprehensive empirical research on the correlations between the various activities of trade unions and labour market measures on an aggregate level. The multi-dimensionality of collective bargaining and industrial relations is elaborated upon in Part IV of this report.

Minimum wage

According to neoclassical economics, in a perfectly competitive labour market, workers should be remunerated according to individual marginal productivity. The introduction of a minimum wage results in downward wage rigidity, and if the minimum is higher than the marginal productivity of some individuals, then they are not going to be employed. A minimum wage above the market-clearing level pushes those people outside employment. Bertola, Rogerson (1997) show that when confronted with a high minimum wage, employers tend to adapt to downturns through redundancies as they cannot reduce wages. The impact of minimum wages on the pattern of flows is therefore ambiguous, and it seems that it largely depends on interactions with other labour market institutions that regulate the ease of hiring and firing workers. Empirical studies indicate either the negative impact of minimum wages on flows, or statistically insignificant correlations (OECD, 2010). For example, Cardoso, Portugal (2002) argued that raising the minimum wage in Portugal resulted in a reduction of labour market flows. It appeared that this decrease was highest in sectors employing low-productive workers, which seems to confirm the hypothesis that companies refrain from employing least productive individual, because during an economic downturn they would have to incur redundancy costs.

Figure III.25. Outflow hazard rates (vertical axis) vs. minimum wage (in relation to average wage) in 20 European countries (model 1).

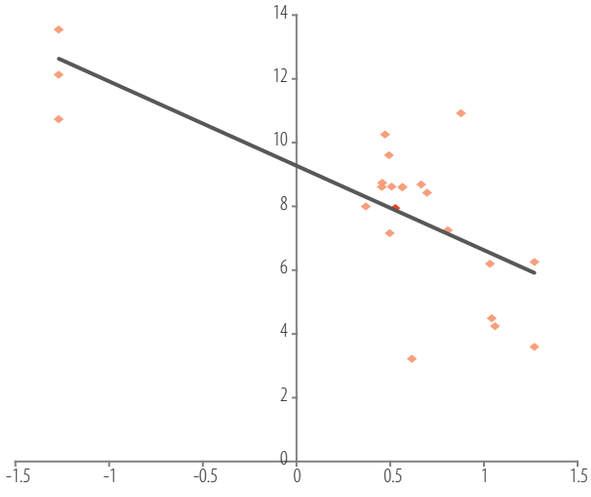
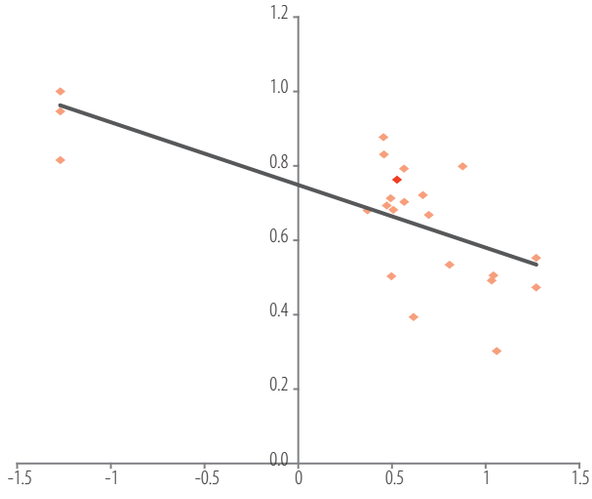


Figure III.26. Inflow hazard rates (vertical axis) vs. minimum wage (in relation to average wage) in 20 European countries (model 1).



Note: Institutional variables are standardized in the sample (to a distribution with the mean equal 0 and variance equal 1).
Source: Own calculations.

[31] Estimations of models with this variable instead of the collective agreements coverage indicate that such a situation does actually occur. However, we present model with a better fit.

The standard measure of the minimum wage, also used in this study, is the ratio to the average wage. The effect of minimum wage on both hazard rates was found to be strongly negative and robust to changing of the other explanatory variables. The reduction of the minimum wage to average wage ratio by one standard deviation in the sample (i.e. 5percentage points, which corresponds to the difference between Poland and the Netherlands) is associated with an increase in outflow hazard rate by about 2.6 percentage points and into unemployment by 0.16 percentage points.

Active labour market policies

The purpose of active labour market policies (ALMPs) is to assist the unemployed in finding productive employment quickly (cf. *Employment in Poland 2007*). The impact of active policies on outflows from unemployment should therefore be positive, provided that ALMPs are carried out effectively. One of their main functions is to improve matching of the unemployed to vacancies, which in turn should result in the extended duration of their employment spells and a reduction in redundancies. On the other hand, by minimizing the opportunity cost of unemployment, active labour market policies can increase the rate of voluntary separations, and thus increase the inflows into unemployment. The theoretical impact of ALMPs on the inflows is thus ambiguous, but it is expected that these programs should generally intensify outflows from unemployment.

Empirical literature on the interaction between flows in the labour market and the ALMPs is rather poor – most reports concern their impact on the unemployment rate. For example, Kluve et al. (2007) point out that the broad availability of such programs can generate a 'carousel effect', namely the rotation of the unemployed between training programs and short-term employment in order to regain benefit entitlements. Moreover, active labour market policies frequently involve negative external effects; the improvement in the situation of the participants is accompanied by deterioration in the situation of persons not covered by such policies (Ministry of Labour and Social Policy, 2007).

This analysis concerns the correlation between ALMPs and hazard rates for flows at the aggregate level. Effective ALMPs should improve the probability of finding a job, yet external effects can limit this. This reservation is commonly expressed in international studies (Kluve et al., 2007; Ministry of Labour and Social Policy, 2007). For Poland, such a result was obtained by Puhani (2003). In turn, Schmid et al. (2001) argued that both the results and effectiveness of ALMPs depend to a great extent on the structure of instruments used. Due to a lack of comparable international data on active labour market policies run in various countries, in the regressions we used the most widely used measure – the expenditure on ALMPs per unemployed in relation to GDP per capita.

Figure III.27. Inflow hazard rates (vertical axis) vs. expenditure on active labour market policies in 23 European countries (model 1).

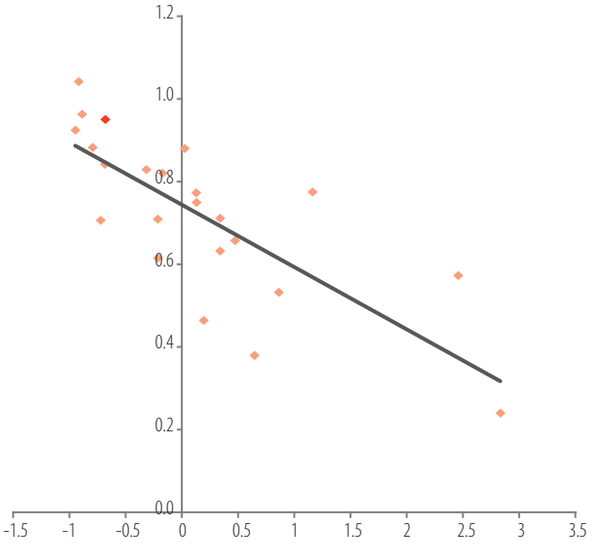
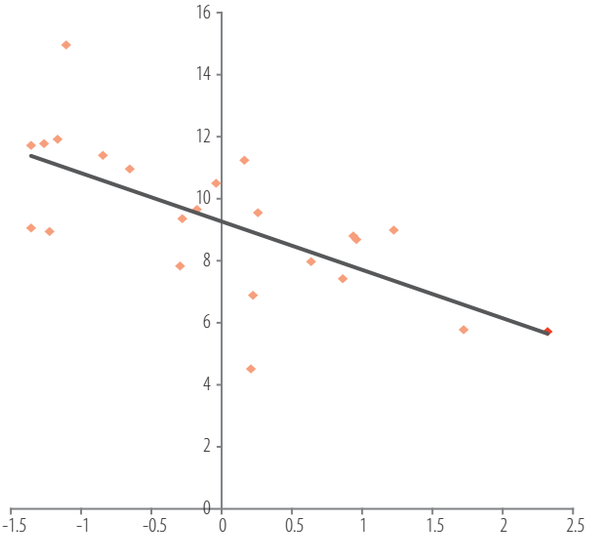


Figure III.28. Outflow hazard rates (vertical axis) vs. doing business regulations (*Doing Business 2010*) in 23 European countries (model 1).



Note: Institutional variables are standardized in the sample (to a distribution with the mean equal to 0 and variance equal to 1).
Source: Own calculations.

The regression results are robust to changes in specifications and samples. In all four models, active labour market policies clearly reduce inflows into unemployment – where expenditure on ALMPs in relation to GDP is higher by one standard deviation (which is 17 percent of GDP per capita, equivalent to the difference between Poland and Germany), then inflow hazard rates fall by 0.15 percentage points. However, in no case did the correlation between expenditures on ALMPs and outflows from unemployment prove significant. It appears that in the cross-section of European countries, higher expenditure on ALMPs is associated with better quality of labour market adjustment and lower hazard of dismissal.[32] However, the scope of such programs does not differentiate chances of outflow from unemployment in various countries. Most likely this is due to various negative external effects such as the substitution effect (individuals participating in ALMPs are employed instead of others that are not covered by such programs), or the deadweight loss (the programs may cover people who would find a job anyway – see Ministry of Labour and Social Policy, 2007). Indirectly, this could also explain the strong negative impact of ALMPs on inflow hazard rates – the small net effectiveness of such programs did not result in a greater number of voluntary separations.

Regulations of product market and governing business activity

Since, as argued in Chapter 1, companies entering and leaving the market are responsible for a significant part of labour reallocation,[33] regulations affecting starting and closing businesses may directly influence labour flows in particular countries. Similarly, regulations that raise the cost of doing business increase the threshold of productivity above which economic activity starts to be profitable. Thus, entries to the market become less frequent when regulations are more stringent (OECD, 2010). In this context, the regulations that support entries should increase flows as they cause a more intense formation of new companies which are also more vulnerable to productivity shocks.[34] As argued in Chapter 1, the creation and destruction of jobs are highest in young and small businesses. In addition, the higher cost of doing business (and therefore more restrictive product market regulations) can both increase and decrease the sensitivity of firms to productivity shocks. On one hand, higher costs of running a business decrease profits, but on the other hand they reduce the number of companies on the market, which allows higher mark-ups. In the event of a shock, the existing firms can reduce the mark-ups, which enables them to maintain employment at the same level.

Empirical literature on the impact of regulations on entry of firms on labour market flows is scarce, however several studies indicate that reforms liberalising the rules of starting a business increase productivity by fostering competition (Nickell, 1996, Olley, Pakes, 1996). Haltiwanger et al. (2008) present a weak correlation between product market regulation and labour market flows, where in turn Bloom et al. (2010) underlined the intense reallocation of jobs in OECD countries induced by the liberalization of trade with Asian countries, and the resulting increase in competitive pressures.

In the regressions we use two indices measuring the rules affecting business activity and the product market regulation. The first variable, Starting a Business Index, comes from the Ease of Doing Business Index constructed by the World Bank,[35] and the second is the composite index of product market regulation (PMR index) by the OECD. Both indices were only found statistically significant in regressions with the outflow hazard rate as dependent variables. These results were robust to changes in specification – the index of starting a business turned out significant in three estimated models (in the fourth it was replaced by an also significant PMR index).[36] This suggests that barriers to entry and regulations restricting competition in the market are important obstacles to business creation and, consequently, to the creation of jobs. On the other hand, these factors do not seem to affect the hazard of inflow to unemployment in a statistically significant way. Thus, reforms affecting the process of starting a business, leading to a reduction of the World Bank index by one standard deviation, may increase outflow hazard rates by 1.5 percentage points, without affecting inflow hazard rates, i.e. may unambiguously increase the chance of being employed.[37] As a result, in the case of Poland, such reform means improving the ease of starting a business to the level observed in Portugal, and the liberalization of product market regulations to the level recorded in the Czech Republic, and could exert a noticeable impact on the flows out of unemployment (increase the hazard of outflow by about 1.7-2.0 percentage points).

Effect of institutions on the international differences in labour market flows – a synthesis

The performed regressions indicate that institutions largely shape inflow and outflow hazard rates. Table III.5 shows the decomposition of deviation from the European average of outflow hazard rates in particular countries. It appears that in all countries where job opportunities are relatively high, the above-average performance can be attributed to the ease of starting a business (and, conversely, at the end of the ranking are countries with a costly and tedious process of starting a business), indicating the practical importance of this factor. On the other hand, it is impossible to identify other institutional factors that are common to all leading countries. In the

[32] A skeptical interpretation is also possible, as ALMPs can be associated with 'hidden unemployment'. Calmfors et al. (2002) argue that substantial expansion of spending on and participation in ALMPs in Sweden in 1990s was associated with such a phenomenon.
[33] Haltiwanger et al. (2006) assigned to them from 30 to 40 percent of total flows in OECD countries.
[34] It is associated with learning-by-doing and observation that firms with the longer history in a given market are more productive (e.g. Bahk, Gort, 1993).
[35] It is the first dimension of the World Bank's DB index.
[36] Figure III.28 shows the influence of regulations on starting a business (from Doing Business database). The figure for the measure of product market regulation (PMR by OECD) is very similar and the estimations of parameters are not significantly different, so it is not presented here.
[37] A comprehensive decrease in product market regulations (increase in competitiveness), as measured by PMR index, a reduction by one standard deviation in the sample leads to an increase in outflow hazard rates by 1.7 percentage point.

United Kingdom, Denmark and Finland, outflows from unemployment increase as a result of the low employment protection, albeit these countries run different model of unemployment benefit systems – high spending in the Scandinavian countries slightly reduce the reallocation. It seems that there is no universal institutional recipe for achieving high outflows from unemployment. It is also interesting that in the group of countries with low hazard rates, there are no clear similarities with respect to the institutional environment. This demonstrates the diversity of determinants of hazard rates in European countries, and even, as shown by numerous studies (Belot, van Ours, 2004, Nickel et al., 2005; OECD, 2006) the importance of interaction between institutions, and of a comprehensive approach to the institutional environment of the labour market.

Table III.5. Decomposition of the deviation of outflow hazard rates from the mean (based on model 1), countries ordered from the greatest hazard rates (in percent).

	Minimum wage	EPL – open-ended contracts	Unemployment benefits	Starting a business	Share of temporary contracts	Variability in unemployment	Idiosyncratic component
United Kingdom	-1.49	3.68	1.53	1.82	-1.56	2.50	0.83
Denmark	-2.32	2.43	-2.86	1.73	0.90	2.78	3.96
Sweden	-1.20	-0.97	-2.22	1.97	2.22	4.53	0.53
Luxembourg	-1.25	-0.52	1.93	-0.25	-1.38	2.98	2.22
Finland	-1.49	0.68	-4.11	1.32	1.39	4.98	0.81
Austria	3.36	-0.35	0.25	-1.50	-0.59	0.23	0.91
Spain	-1.31	-0.25	-2.31	-2.69	3.86	4.72	-0.81
The Netherlands	-2.13	-1.17	-3.19	0.27	0.71	4.72	0.11
Ireland	-2.80	2.22	-0.57	1.91	-0.97	1.75	-2.24
Lithuania	-1.76	-1.03	2.53	0.06	-1.51	-0.58	1.17
Latvia	-1.21	-0.16	1.55	1.02	-1.30	-1.93	0.67
France	-3.36	0.37	-1.64	2.12	0.98	2.30	-2.33
Estonia	3.36	-1.35	2.60	0.46	-2.20	-2.62	-1.90
Poland	-1.40	0.84	1.81	-3.62	2.86	-2.25	0.07
Portugal	-1.30	-4.15	0.28	-1.91	2.27	0.33	1.63
Hungary	-1.84	1.42	1.93	-1.46	-0.61	-3.29	0.99
Czech Republic	-0.98	-1.71	2.23	-0.99	-0.74	-0.57	-0.31
Slovenia	3.36	-2.27	1.36	-1.35	0.93	-4.90	-0.50
Belgium	-2.73	1.97	-3.37	0.44	-0.73	1.27	-0.35
Germany	-1.63	-0.45	-1.21	-0.33	0.59	3.77	-4.43
Italy	-2.75	1.77	1.93	-0.35	-0.19	-2.08	-2.04
Belgium	-2.64	0.00	0.00	-0.83	-1.32	-0.40	1.27
Slovakia	-1.34	-1.39	1.71	-0.40	-1.18	-3.52	0.68

Source: Own calculations.

2.3. Labour market institutions in Poland compared to other European countries

In the previous section we discussed the results of regressions explaining the hazard rates of inflows and outflows from unemployment with a range of institutional variables. We further present the outlook of institutions in Poland in the light of these findings and assess how changes over the last decade may have affected the flows. We try to identify which institutions determined to a larger extent flows in the Polish labour market, and whether the changes in recent years were desirable from this perspective. The analysis focuses on the labour market institutions which proved to have had a statistically significant impact on labour market flows, with the exception of the trade unions which are thoroughly discussed in Part IV of this edition of *Employment in Poland*.

Employment protection legislation

Regulations on hiring and dismissing workers in all countries of Central and Eastern Europe are moderately restrictive in comparison with the older EU countries. On one hand, EPL indices are higher in these countries than in Denmark, Ireland and the United Kingdom, and on the other hand are lower than in France, Portugal and Luxembourg. Poland exhibits much more restrictive legislation than Slovakia or Hungary, and more liberal than the Czech Republic and Slovenia. Compared to other new Member States, the regulations on indefinite duration contracts are relatively liberal in Poland; the high value of the composite index is mainly due to strict regulations on fixed-term contracts, including temporary agency work. Employment protection in case of open-ended contracts in Poland might be described as moderately restrictive – the lengths of the notice period or severance payment in Poland are relatively low. As in all other post-communist states, the restrictions imposed on collective redundancies are relatively high, which can be perceived as a result of efforts to prevent massive employment reductions after the privatization of state enterprises in the 1990s.

According to the LABREF database, in 2002-2004 a number of reforms relating to each of the three aspects of the OECD EPL index were carried out in Poland, yet the overall impact of these changes was ambiguous. For example, in 2002 the rules relating to fixed-term contracts were softened, and the maximum duration of such contracts (the number of permissible renewals) was abolished. However, the requirement to convert the third such contract (spanning at least 12 months) into a permanent contract was restored in 2004, [38] and was soon accompanied by a bill limiting the maximum total duration of employment of a given temporary agency worker in a specific firm to 12 months over a 3 year period. Another important change in recent years was the liberalization of rules on collective redundancies. On balance, though, the changes resulted in an increase of overall restrictiveness of employment protection in 2000-2008, which contrasted with the general trend towards liberalization observed in the OECD countries. Although in 2000 the EPL index in the Poland was notably smaller than the average for OECD countries, a few years later the restrictiveness of employment protection reached the OECD average. In line with the arguments presented in the previous section, the impact on labour market flows exerted by the regulation on fixed-term contracts and temporary agency work is ambiguous. However, our estimates indicate that the hazard rates are likely to be shaped by rules on traditional contracts, and in Poland the EPL subindex in this respect has barely changed since the mid-1990s. Although in recent years the hazards of outflow from unemployment have increased significantly (see Figure III.12), their low levels in the past largely contributed to high unemployment. At the same time over the years 2000-2009,the incidence of fixed-term contracts in Poland has substantially increased. The coexistence of these developments suggests that despite the relatively moderate restrictiveness of regulation on open-ended contracts, creation of jobs contracted on permanent basis has been weak. It is therefore advisable to examine the adequacy of these regulations to labour market requirements and the expectations of agents.

Tax wedge on labour, unemployment benefits and social transfers

The overall taxation of labour, i.e. the ratio of the sum of income tax and social security contributions paid by the employee and employer, to gross wage, was slightly lower in Poland in 2009 than the average in the OECD. [39] It is similar to other CEE countries, with the notable exception of Hungary where the tax wedge is one of the highest in the EU. The difference in the tax wedge between Poland and other European countries however varies for different income groups – whereas for a single earner it was 7.5 percentage points lower than the EU15 average, the difference was less than 5.5 percentage points for working couples with two children. According to the OECD (2009b), the tax wedge progression in Poland in 2009 was the lowest in Europe – the difference between the wedge on highest incomes (a single person, earning 167 percent of the average wage) and the lowest incomes (a single parent with two children, earning an average 67 percent of the average) was only 6.5percentage points. Only Spain had a comparably low difference (10.2percentage points); and the average for all the European countries in the samples was almost 25percentage points. OECD (2009b) estimates that 99 percent of Polish taxpayers pay the basic income tax rate (18 percent), which makes the income tax almost flat.

According to OECD data, the tax wedge in Poland since 2000 declined in all family-income groups, largely due to changes in the tax system introduced between 2007 and 2009. A parallel trend was also observed for the average tax wedge in all countries of the European Union and OECD, but it was not as pronounced as in Poland. Until 2006 the tax wedge in Poland had been rising, as a result of freezing, in nominal terms, thresholds of the tax schedule. When the thresholds were changed, the average tax wedge dropped by more than 2.5percentage points. In 2009 the second threshold was abolished and the tax rates were reduced. As a result, not only the average wedge but its progression decreased in 2009 in comparison with 2000, which was opposite to changes introduced in most OECD countries.

The impact of taxation, especially taxation of low earners, should however be analysed jointly with the construction of the social transfers system. The results of regressions discussed in the previous section show that in an international cross-section, outflow hazard rates are negatively correlated with both taxation and the scale of spending on benefits (transfers). In Poland, the replacement rates in the benefit system are modest – in 2007 they were slightly lower than the OECD average, both immediately after dismissal and after 5 years without work.

[38] It was restored when Poland joined the EU.
[39] Both in the case of single earner household and a one-earner couple with two children.

In the 2000s, most EU15 and NMS8 countries had introduced (some of them earlier) a system with unemployment benefits at least partly based on previously earned wages, which stresses the insurance function of the system. Only Poland, Ireland and Malta do not use such a solution. As a result, a negative correlation between the replacement rate and previously earned income in Poland is stronger than in most EU countries and other countries in the region, except Hungary.

At the same time, the obtained estimates suggest a positive impact of replacement rates on the outflow hazard rates, which can be related to the effectiveness of labour market policies in countries with high replacement rates. Out of the surveyed countries, the most generous unemployment support can be found in Denmark and Netherlands – in 2007 the initial net replacement rate of unemployment benefit was over 77 percent of previous wages.[40] In comparison, the average for European OECD countries was 67 percent, and 3 percentage points less in Poland. Slightly higher values were observed for example in the Czech Republic, while OECD countries most similar to Poland in this respect were Belgium and Italy.[41] In addition, in OECD countries since 2000 there has been a tendency to increase the benefits paid directly after the loss of jobs and reduce payments after 5 years.[42] The Polish system offers a relatively low replacement rate after 5 years from the loss of work–the only countries with lower benefits are Portugal, Spain and Greece. Moreover, in Poland benefits have gradually declined in relation to the average wage and minimum wage. The eligibility period has also decreased. These changes have not been accompanied by strengthening of insurance function of the benefit and the creating of incentives for beneficiaries to search for a job. Changes introduced in 2010, i.e. increased benefits during first three months of eligibility and reduction of payments during the next three months, were a step in the right direction, but still insufficient as it did not solve the problem of regressive, with respect to previous wages, replacement rates.

Further, the unemployed often live in non-working households, and social transfers targeted at people of working age on the basis of labour market reasons amounted on average to nearly 5 percent of GDP in Poland in 1996-2005. This was one of the highest spending levels in the OECD.[43] Among the CEE countries, a similar spending on transfers was recorded only in Slovenia, and in the remaining countries of the region it was less than half that level. In combination with the relatively low replacement rates and relatively high-taxation of low earners, one may suspect prevalence of strong income effects in Poland which reduce the aggregate supply of labour and hence the labour market flows. Results presented in the previous section indicate that the simultaneous reduction of the total transfers addressed to people at working age and increasing replacement rates in the unemployment benefits system (including the implementation of best European practices in terms of support and monitoring of job search) would increase the outflow hazard rate and shorten the average duration of unemployment in Poland.

Table III.6. Evolution of the minimum wage and unemployment benefit in relation to average wage in the Polish economy in years 1995-2009 (percent).

	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09
Minimum wage	41	41	40	40	31	35	37	36	36	36	36	36	35	38	38
Unemployment benefit	42	36	35	34	27	26	26	26	26	26	25	24	23	21	19

Note: Unemployment benefit is calculated including social insurance contribution per employee.
Source: Own calculations.

Minimum wage

The minimum wage in Poland in 2009 amounted to 38.5 percent of the average wage, which was close to the average level in the EU.[44] Also among the NMS, Poland was in the middle of the spectrum. In Slovakia, the Czech Republic and Estonia, minimum wages were lower, and in Latvia, Lithuania, Bulgaria and Slovenia higher. Since 2000, the ratio of the minimum wage to average wage in Poland had risen by 3 percentage points; such a change occurred between 2007 and 2009.[45]

High minimum wages may reduce labour market flows due to the downward rigidity of wages as employers are reluctant to hire unskilled workers. The results of empirical studies are inconclusive – some of the previous studies (Abowd et al., 1999; Stewart, 2002; OECD, 2010) showed no significant effect of this factor on labour market flows. However, our results indicate a significant negative correlation between the level of the economy-wide minimum wage and the outflow hazard rate. In this context, the increase in the minimum wage in 2008-2009 was implemented in a strikingly unfortunate moment as it accompanied the rising number of redundancies and worsening of job prospects during the economic slowdown. Based on the obtained estimates, it can be concluded that

[40] This measure is calculated by OECD for different types of workers, and then averaged.
[41] Unfortunately, the database does not include Slovakia and the Baltic states, which prevents a full comparison.
[42] The differences in replacement rates are not large, only 1-2 percentage points.
[43] Since 2000, this share has been rather stable. Moreover, the structure of transfers to people of working age in Poland was different from most OECD countries – relatively more funds were spent on pre-retirement schemes and early pensions, thus creating incentives for leaving the labour market. The abolition of early pension schemes in 2009 will result in convergence of the spending structure to the one dominant in the OECD.
[44] Only those countries where minimum wage is determined by legal act.
[45] This increase is higher than in other OECD countries. The tendency of increase, however, occurs in all countries where the minimum wage is determined by law.

an increase in a statutory minimum over the last two years may have caused a decrease in outflow hazard rate by 0.5 percentage point and in the Inflow hazard rate by 0.03 percentage points. At the same time, the minimum wage particularly affects young workers who enter the labour market with a lack of experience and are usually affected by an above-average risk of dismissal. In this context, although the change in regulations might have had a minor impact on the average risk of layoffs, it may have reinforced the problems of this group.

Active labour market policies

In 2008 expenditures on active labour market policies in Poland in relation to GDP were close to the OECD average, while in terms of spending on the unemployed in relation to GDP per capita, they were slightly lower than the European average, and more than double the expenditures of the Czech Republic, Slovakia or Hungary.[46] Since 2000, when spending on ALMPs in Poland was particularly low, it has increased more than eight times resulting from an upsurge of available resources (e.g. for training expenditure) driven by EU funds, and a decreasing number of unemployed (Ministry of Labour and Social Policy, 2007, CRZL, IBS 2010). Similar developments were observed in most EU countries, although the pace in Poland has been particularly high. In Poland in 2009, the ratio of total expenditures on active labour market policies to GDP was similar to those observed in Italy or Luxembourg.

When properly conducted, ALMPs help to improve employability of participants, although the effects at the aggregate level may be much smaller than at the individual level due to the presence of negative externalities. Our estimates show that in European countries, higher spending on such programs does not increase the chances of the unemployed finding jobs, but rather it reduces the probability of dismissal. A series of macroeconomic studies have shown that higher expenditure on ALMPs is associated with lower levels of unemployment (see OECD, 2006), which, under the assumed methodology, translates into significantly lower flows. If negative externalities of ALMPs are substantial, then the total spending may not influence outflows. Indeed, the analyses in *Employment in Poland 2007* indicate that although the increase in expenditures and the number of ALMP participants in Poland were accompanied by significant net benefits to participants of the programs (particularly training), the sub-optimal mechanisms for the selection of beneficiaries and the structure of spending probably eroded the positive effects at the aggregate level. In the face of rising unemployment, Poland should improve these two aspects of ALMP and avoid a reduction of expenditure on ALMPs per unemployed.

Regulation of product market and governing business activity

Although young companies are relatively small and employ few workers, their establishment and liquidation significantly contribute to labour reallocation, from 5 percent of the workforce in the Netherlands to more than 12 percent in the UK (OECD, 2009). Creation and destruction of companies is responsible for, depending on the sector, 25-35 percent of job reallocation in OECD countries (Haltiwanger et al., 2006). Also the estimates presented in the previous section show that the conditions for starting and closing economic activity seem to be one of the significant factors influencing the size of flows in the labour market.

According to the most recent *Doing Business 2010* report, doing business in Poland is relatively difficult. The overall assessment of regulations shows it is similar to that in the Czech Republic and more burdensome than in all other countries in the region. The biggest obstacles are the procedures for starting a company, obtaining construction permits and a complicated tax system. Product market regulations are also among the most restrictive in Europe, and do contribute to reduced outflow hazard rates. However, since 2000 there have been some considerable improvements, such as consolidation of applications for company registration and registrations with tax, social security, and statistics authorities (the introduction of a 'single window service'), and a reduction in capital requirements for limited liability companies. As a result, the position of Poland against other European countries in 2010 was the best since the Doing Business study was started (i.e. 2003), although it remained unsatisfactory. Unfortunately, Poland is still among those European countries where starting a business was most difficult (better only than Austria, Spain, Greece and the Czech Republic). Furthermore, no improvements have been observed with respect to dealing with constructions permits, and in the case of the tax system, the Polish position against other EU countries has even worsened. None of the ten aspects of Doing Business index[47] has seen a spectacular improvement – any improvements to the business environment were not sufficient to significantly elevate the Polish position in the EU, or they did not change it at all. Product market regulations have also been somewhat liberalized, but only in line with observed trends in the European Union and did not improve the relative position of Poland in the EU.

Ease of starting companies, measured by an appropriate indicator of Doing Business, was found to be a significant determinant of labour market flows. It consists of four measures related to the problems faced by start-ups – the number of procedures required to start a business, the time this process takes, the cost (as percent of GDP per capita) and the minimum capital required to set up a company (as percent of GDP per capita). The recent (2010) ranking shows that currently the number of procedures necessary to establish a limited liability company in Poland is similar to the average in the OECD, as well as the minimum capital requirement. A lot longer is needed to complete the entire registration process (32 days), and the cost which exceeds 17 percent of GDP per capita – these are the factors

[46] Comparisons based on ration of ALMP spending to GDP may lead to erroneous conclusions. Higher expenditure is in fact often the result of higher unemployment. Therefore, a better measure, often used in the literature, is spending on active labor market policies per an unemployed in relation to GDP per capita.

[47] Starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, closing a business.

responsible for the such low position of Poland in the ranking (113 of 183 surveyed countries, worse than Sri Lanka, Iran, or Liberia). In recent years, a number of reforms have been introduced to ease starting a company – a significant reduction in capital requirements and reduction in the number of procedures from 10 to 6. These changes may have increased outflow hazard rates, although other components of the index measuring the ease of starting businesses have not changed significantly in recent years.

The evolution of the institutional environment of flows in Poland

In 2000-2009 Poland introduced a number of institutional changes which, in varying degrees, could affect labour market flows. It seems that most of them were steps in the right direction – i.e. they intensified the labour reallocation. However, only a short time since the implementation of the reforms, a lack of relevant data and difficulty with quantifying the changes makes it impossible to carry out a formal analysis of their effects. A summary and potential impact on flows (both hazard rates and gross flows) is presented in Table III.7.

Table III.7. Labour market institutions in Poland in years 2000-2009 and their potential effect impact on flows.

Institution	Effect resulting from regression	Changes in Poland in 2000-2009	Comment
Labour law and employment protection legislation	Negative	Since 2000 stringency of regulations on temporary contracts has slightly increased. Situation with open-ended contracts has not changed.	Changes in the labour law in Poland have been too small to inflict any significant influence on labour market flows.
Tax wedge on labour, unemployment benefits and social transfers	Negative	Compared to 2000, the tax wedge and unemploymen benefits have decreased.	In the light of the estimated regressions, the changes could have increased the hazard rates into and out of unemployment.
Unionization, model of collective bargaining	Ambiguous, proportion of labour force covered by collective agreements – negative	The strength of trade unions in Poland is being reduced, both in the level of unionization and the percentage of labour force covered by collective agreements.	The empirical estimations show that a decrease in the unionization in Poland results in the increased flows.
Minimum wage	Negative	Minimum wage remained at the average OECD level.	Fluctuations of the minimum wage were not significant enough to induce changes in flows. Its increase in 2007-2009 could have increased the scale of dismissals and decreased the number of hirings.
Active labour market policies	Negative (inflow to unemployment)	Expenditure on ALMPs have increased abruptly, partly due to the access to EU structural funds.	According to estimations, the increase of expenditure on ALMPs may induce better matching of the unemployed to the needs of employers and in consequence decrease the inflow to unemployment.
Difficulty with starting a business and product market regulations	Negative	Only over the last three years, has the launch of companies been eased and the capital requiremens for starting limited liability companies.	The changes may induce an increase in labour market flows in the future.

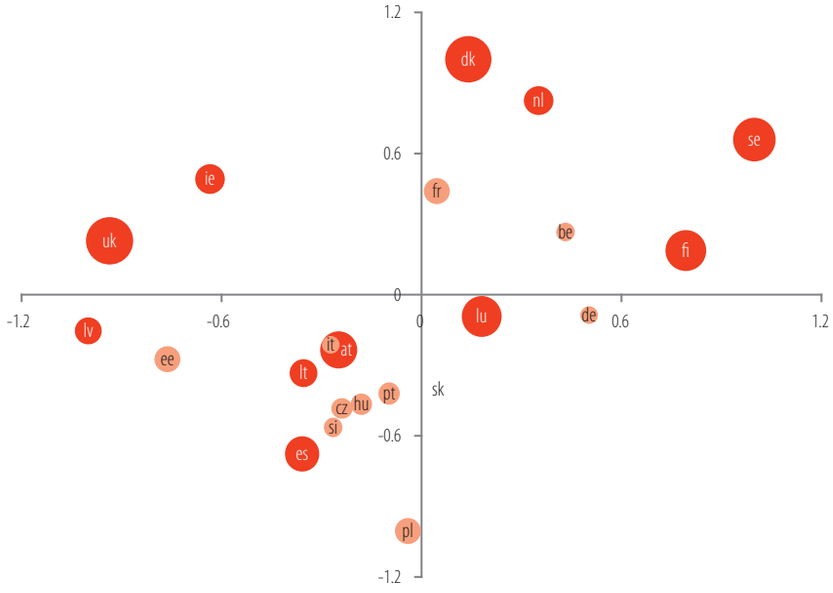
Source: Own calculations.

The model of labour market institutions and the flows of workers

Figure III.29 plots labour market institutions and intensity of labour market flows, specifically the outflow hazard rates (which are crucial for the average unemployment spells and the risk of long-term unemployment) in European countries. We cluster the EU countries into several groups with similar institutional environments and relatively similar hazard rates (see Figure III.29):

- **countries with extensive regulations on both the demand and supply side.** That group includes Scandinavian countries (Denmark, Sweden and Finland) and the Netherlands. They have Europe's highest hazard rates, complex regulations on the demand side (Sweden, Finland) and flexible supply-side regulations (Denmark, Netherlands). Among them, the Danish *flexicurity* model seems to be most effective at increasing outflow hazard rates. Its substantial expenditure on active labour market policies is accompanied by low legal protection of traditional forms of employment and liberal regulations for starting businesses. A similar case exists in Sweden with legislation fostering competitiveness of product markets, and, to a lesser extent also exists in the Netherlands.
- **Anglo-Saxon countries (UK and Ireland).** These are the only economies in which the demand-side labour market institutions are poorly developed, and regulations on the supply side are better developed than the EU average. Hazard rates, in line with theoretical implications, are higher than in most other surveyed countries.
- **Countries of continental Europe.** France, Belgium, Germany, Luxembourg, Austria, Portugal and Italy are grouped in the center of the plot. Their institutions, both on the demand and supply sides, are similar to the average in the sample. outflow hazard rates are slightly lower than average.
- **new EU members (except Poland).** In this group (consisting of the Baltic states, the Czech Republic, Slovakia, Hungary and Slovenia), there is a visible institutional convergence to the EU15, whereas the scale of intervention is still somewhat lower than the average in the 'old' EU. The Baltic states, institutionally closer to the Anglo-Saxon countries, are characterized by higher rates out of unemployment than the rest of the group.
- **Poland and Spain.** Flows in these two countries to some extent result from a high incidence of fixed-term contracts. Although the outflow hazard rates in these countries are at the European average, the risks of redundancy are the highest in Europe. The institutional environments in both countries rather do not facilitate reallocation. The widespread use of temporary contracts is accompanied by a high hazard of dismissals, and the institutions do not raise outflow hazard rates.

Figure III.29. Scale of interventions on the supply-side (vertical axis) and demand-side (horizontal axis) of the labour market vs. the outflow hazard rates (size of circles) in European countries.



Note: Institutional variables are standardized in the sample (to a distribution with the mean equal to 0 and variance equal to 1). The policies of the demand-side include the sum of the W1 index from Doing Business and expenditure on ALMPs normalized to the interval (-1;1), and the supply-side policies include the indexed of restrictiveness of fixed-term and open-ended contracts, minimum wage, tax wedge, social transfers in relation to GDP and the rate of unionization. The diameter of the circles denote the outflow hazard rates, red circles – value above the median, blue – below the median.

Source: Own calculations

Summary

The conclusion and termination of contracts between employees and employers resulting in a change of jobs, the flows of people from employment to unemployment and in the opposite direction, between professional activity and inactivity, are the inherent characteristics of any labour market. These processes occur continuously, although business cycle fluctuations intensify flows between employment and unemployment. Interestingly, the reallocation of workers between companies and sectors, although inherent to the structural changes in the economy and individual career paths, shows no significant international differences. Substantial differences occur with respect to flows between employment and unemployment, which are the subject matter of this part of the report. Attention has been given to gross flows, expressed as the number of persons or the percentage of workforce, and hazard rates – the conditional probabilities of losing or finding a job in a given period of time. These measures are crucial both from the point of view of the employed and unemployed, as they determine the average duration of employment and unemployment spells in a country, and also from a macroeconomic perspective, as hazard rates reflect profound characteristics of particular labour markets. According to the methodology of Elsby et al. (2009) hazard rates for European countries were estimated from the aggregated data at the level and time structure of unemployment, thus ensuring international comparability of the results. As far as we know, this is the first application of this methodology for Poland and other NMS.

The results obtained in Chapter 1 show that while there is no systematic relationship between total unemployment and hazard rates, the probability of outflow from unemployment clearly correlates negatively with the long-term unemployment rate, although the hazard of redundancies does not. Among European countries, the differences in both measures of flows are substantial. In Poland, the risk of dismissal was unusually high in recent years, and opportunities to find a job rather moderate, similar to the European average. Outflow hazard rates in Poland were higher than in countries such as Slovakia, Czech Republic, Germany, Belgium and Greece, although in all these countries the risk of losing a job was lower. Hazard rates also exhibit ample changes at the business cycle frequency. As shown in Section 1.3, although in most European countries including Poland the changes in unemployment to a greater extent were due to changes in the probability of finding a job, in the event of large macroeconomic disturbances the main source of rising unemployment is an increase in dismissals. In 2008-2009 thiswas the case for almost all European countries.

In Chapter 2 we search for the causes of international differences in flows. Our focus is on labour market institutions and the contractual structure of employment. We show that increased use of temporary contracts is accompanied by higher inflow and outflow hazard rates. At the same time, it is sometimes the prevalence of temporary contracts that increases the hazard rates, and sometimes the opposite is true – an increase (decrease) in the demand for labour induces an increase (decrease) in temporary employment, be it on fixed-term contracts or via temporary work agencies. In contrast, high stringency of legal protection of traditional open-ended contracts reduces both flows in both directions. The same applies to the minimum wage. Reallocation is also inhibited by a broader coverage of workers with collective agreements which stiffens the wage schemes. The dynamics of hiring and separations is also affected by the model of passive and active labour market policies. While higher social transfers are associated with lower outflows from unemployment, a higher replacement rate (i.e. ratio of benefits to wage earned before the job loss) is accompanied by higher probability of finding employment. In practice, countries offering high replacement rates often provide a well-organized public employment services, job counseling and intermediation and monitor how the beneficiaries search for job. Also, higher spending on ALMPs appears to affect the characteristics of flows, reducing the risk of inflow to unemployment. This may be associated with a lower structural mismatch in the economies that allocate substantial resources for ALMPs, but may also reflect a systemic effect in which dismissed employees 'fall' into programs provided by employment services and do not increase the pool of unemployed.

Table III.8. The impact of labour market institutions on the intensity of hiring and dismissing employees.

Policies and institutions	Hiring	Dismissing
Protection legislation on open-ended contracts	-	-
Minimum wage	-	-
Tax wedge on labour	-	insignificant
Social transfers	-	insignificant
Replacement rate	+	insignificant
Scale of ALMPs	insignificant	-
Percentage of labour force covered by collective agreements	-	-
Restrictiveness of regulations on starting a business	-	insignificant
Percentage of employed under fixed-term contracts	+	+

Source: Own calculations.

Flows are determined not only by labour market institutions but also by regulation of the product market. This stems from the fact that up to 1/3 of jobs can be created by new companies that enter the market. Therefore, in countries where starting a business is fast, easy and cheap, the chances of the unemployed to find jobs are generally higher than in countries where the process is tedious and expensive. In general, all regulations that create barriers to entry have such an influence on labour flows. In light of these conclusions and the observation that outflows from unemployment in Poland in 1993-2009 were on the average low, the most important problem are regulations affecting starting a business. According to World Bank figures, starting a business in Poland is the most difficult in the entire EU. Further critical areas are (i) minimum wage increase after 2007 and (ii) a social policy model – in particular the relatively high scale of transfers to households of individuals at working age, and the design of unemployment benefits, which provide income at a uniform rate, independent of the previous wage, and which translate into a replacement rate below 50 percent for those already earning about 40 percent of the average wage in the economy.

Part IV. Social dialogue in the changing labour market

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Introduction

Social dialogue is usually defined as the cooperation of the government, trade unions and employer organisations in the arrangement and development of work related issues. According to the International Labour Organisation, social dialogue is understood to mean 'all forms of information sharing, consultation and negotiation between or among representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. It can take place at a national, regional or enterprise level' (Ishikawa 2003). The idea is that the properly organised involvement of citizens in decision making may increase social acceptance of public policies, making them better developed and more balanced, and hence more effective and better suited to the actual needs of a given country and its people.

Social dialogue mainly, but not only, concerns wages that is the remuneration for labour. Wages are a major cost for enterprises, the main source of income for most households, and the point of reference for those with other sources of income, for example for the unemployed. The mechanisms of wage determination and general relationships between employees and employers affect national economic policies, hence the involvement of the government in the formal framework for wage determination.

The participation of governments in wage bargaining started relatively recently, i.e. after World War II. Previously the level of wages had been left to market forces or to independent agreements between trade unions and employer organisations (Kaufman 2007b, Hassel 2006). After 1945 most Western European countries started to be more active in their interventions, in line with the policies of the welfare state and recommendations of Keynesian economics. It was also the time when trade unions started to become the part of the political systems, through strong informal and half-formal relations with increasingly powerful left-wing parties and tripartite institutions at a national level, consisting of employer organisations, trade unions and government representatives (see Box IV.1). The tripartite institutions were not to substitute parliamentary democracy, as in fascist states before and during World War II, but rather to increase the influence of workers and employers over economic and social policies of governments. These changes became the foundations of the process known today as social dialogue.

Box IV.1. Neocorporatism – origins of social dialogue.

There are no clear theoretical arguments in favour of state interference in wage determination in the labour market. It is also difficult to find purely economic arguments that explain the involvement of social partners in the process. In classical and neoclassical economic theories, the role of the state should be as limited as possible, and economic policies should be restricted to the careful use of fiscal and monetary instruments, and the construction of the basic regulatory framework. Despite the fact that Keynesian macroeconomics provides a much broader scope for public intervention, mainly in the form of demand control in the business cycle, but it also does not directly justify the agreements on wage indexation between the government and social partners. Nevertheless, since the Second World War, the governments of countries in Western Europe have been using wage policies determined by tripartite consultation as an important instrument of macroeconomic policy.

The increased interference of national governments in wage determination after World War II was related to the experience of the Great Depression in the 1930s. The post-war reconstruction of economies and production for non-military purposes seemed to be such a tremendous challenge that Western governments assumed possible long-term stagnation, high unemployment, and even the resurgence of fascism. The spread of communism in Central and Eastern Europe also seemed to be a significant threat. Hence, it is not surprising that full employment became the most important goal of economic policies in almost every Western democracy in the 1940s and 1950s. Keynesianism became the key economic and social doctrine, with its assumption that a decrease in employment during the reallocation of resources across sectors can be stopped through the stimulation of aggregate demand by government spending. This anti-cyclical policy has its limitations – a non-inflationary decrease in unemployment by an expansive fiscal policy is possible only until the achievement of the equilibrium level. Further efforts will inevitably lead to inflationary pressure. However, in the Keynesian view, the nature of relationships between unemployment and inflation (and hence the Philips curve) depends on curbing wage pressure through consultation with employees (trade unions). As argued by Hassel (2006), the governments in 1945-1960 came to the conclusion that the expansive macroeconomic policy accompanied by limitations in real wage increases would effectively stimulate economic growth in the devastated European economies. In this way, prices would not grow excessively and employment would increase, without affecting the profitability and competitiveness of enterprises (see also Eichengreen 2008, Crouch 2006).

For the first twenty years after the war, almost all governments of Western Europe were reducing inflationary pressures through wage policies consulted within the framework of national tripartite institutions. In the political exchange during tripartite meetings, trade unions agreed to restrictions in the growth of wages in return for welfare state benefits (higher pensions, unemployment benefits, etc.) and improvement in their institutional environment (the extension of trade union rights and competences of the tripartite bodies). In the 1970s, this process started to be known as (neo)corporatism (see e.g. Schmitter 1974, Lehmbruch 1977, Williamson 1985) and the tripartite negotiations became an important element in the political system. The trade union movement integrated with the market economy and with parliamentary democracy. After 1945, most trade unions ceased to use politically motivated strikes as their weapon against governments, and many gave up their class demands. Radical and revolutionary unions, associated with the Communist movement or left-wing extremism (e.g. in Italy), were marginalised. Industrial relations began to be significantly shaped by unions accepting the market economy.

Apart from the traditional partners of social dialogue, there are other actors, such as associations, organisations, informal opinion-forming groups, whose views, knowledge and experience should be used in solving economic and social problems. Yet their actual presence in European social dialogue has been only incidental. Therefore in this part of the Report on social dialogue in Poland in the context of international achievements and economic theory, we focus mainly on the interactions between trade unions, employer organisations and the government.

We divided Part IV into two chapters. The first chapter discusses factors that determine the effectiveness of social dialogue, and in particular those that help achieve the goals of social consultation despite the divergent interests of the parties concerned. The second chapter is focused on the current practice of social dialogue in Poland, especially including tripartite dialogue. We present the partners of dialogue and the institutional and legal context of their actions. We examine the adequacy of this institutional and legal framework for the actors of social dialogue, and if the individual levels of the dialogue, i.e. national, regional, sectoral and enterprise levels, are adequately connected and coordinated. We pinpoint the most important deficiencies in this regard. We examine the daily practice of social dialogue in Poland and its relevance to the challenges of the modern labour market.

1. Social dialogue in Europe

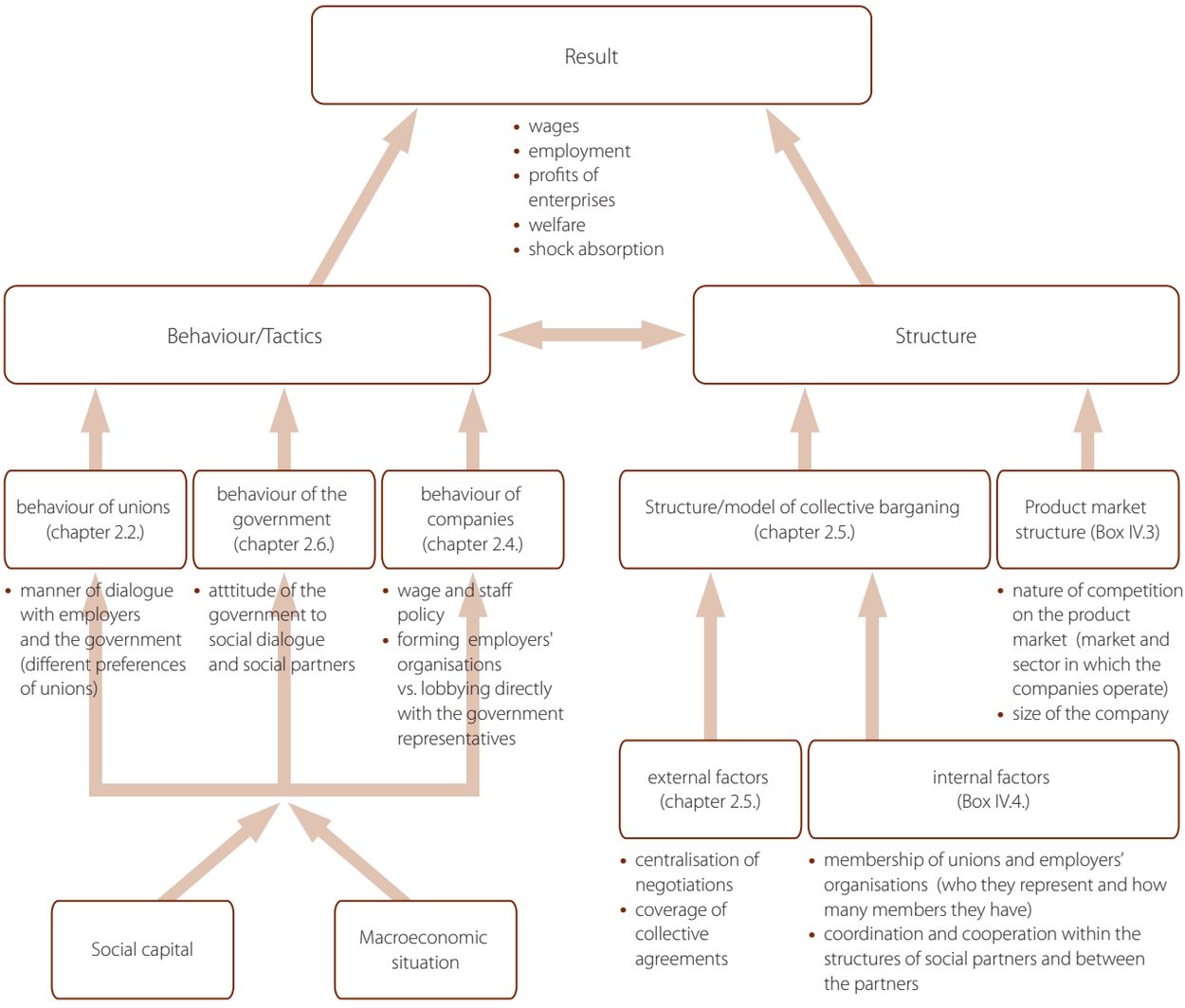
1.1. Introduction

The actors of social dialogue in European countries are trade unions, employers and public authorities, yet all three parties together only participate in collective bargaining at national and regional levels. At the sectoral level this full representation is much less frequent, and at the enterprise-level the dialogue is bilateral – only between unions and the employer. There are distinct differences between individual levels of dialogue. At the enterprise-level, it depends mainly on the product market structure, the level of market competitiveness, and the industry in which the firm operates. These economic factors directly affect the profitability of the company and the surplus divided between the owners of capital and labour. Enterprise-level bargaining is influenced by dialogue at higher levels, mostly by the model and coordination of collective bargaining and the possibility of extending collective agreements to the entire industry. Another important factor is the institutional distinction between the subject matter of enterprise-level consultation and at industry, regional and national levels.

The effectiveness of social dialogue at a national level is mainly affected by the trust between partners, a common understanding and interpretation of social and economic problems, and the role of the government in solving them. It is particularly important whom the partners represent, i.e. what organisations they consist of and what their internal structure is, since it is precisely these factors that determine the interests of the parties and their willingness to cooperate. As shown by Olson (1982), in a market economy, the rational organisations of interest groups will always engage in rent-seeking behavior, i.e. a transfer of resources to its members at the expense of the public. The control of this socially undesirable phenomenon depends both on the government, as the representative of the general public, and on the extent to which trade unions and employer organisations are representative of the whole society. The rent-seeking behaviour of these two parties decreases with the number of members and the resultant higher social representation. When there is no external social group that could pay for a particular policy, trade unions and employers' organisations are more likely to internalise the consequences of their actions and hence their position during bargaining becomes more rational.

Well-functioning social dialogue can benefit both enterprises and the economy. Joint co-operation of trade unions and employers at enterprise-level can reduce staff fluctuation, increase management efficiency, the scope of training, and thus improve competitiveness. At a national level, the co-operation of trade unions and employer organisations in some countries of Western Europe has led to the emergence of a flexible but also secure labour market of the *workfare state*. The effectiveness of social dialogue and hence its impact on the economy is determined by a number of interacting factors; the most important presented in Diagram IV.1, indicating the relevant section of this reports. The subsequent sections of this chapter include a detailed analysis of those factors, starting with an examination of the activities of social partners (trade unions and employers' organisations), and then the role of the government in effective dialogue. We discuss the specificity of enterprise-level bargaining, focusing on factors that determine its social effectiveness, and also the impact of a national model of collective bargaining on the efficiency of the economy at the macro level.

Diagram IV.1. Determinants of the effectiveness of social dialogue.



Source: Own elaboration based on Naylor (2003).

1.2. Activities of trade unions

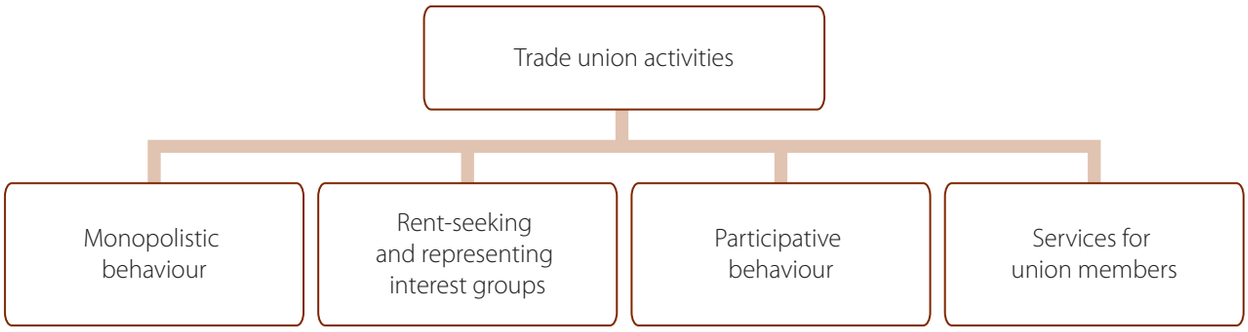
According to the classical definition (see e.g. Calmfors et al. 2001), a trade union is an association of workers united as a single, representative entity for the purpose of improving the workers' economic status and working conditions through collective bargaining with employers. This general statement refers to a very heterogeneous institutional reality – trade union organisations vary in structure, number of members, forms of participation in social dialogue, interactions between themselves, and the nature of links with political parties and government. They also have different social legitimacy and may serve various functions: (1) a service function, (2) a representative function, (3) a regulatory function, (4) a government function and (5) a public administration function (Ewing 2005).

The service function is to carry out certain actions for the benefit of the employee, such as training and legal or tax advice. Its extension is the workplace representative function, which consists of representing the interests of employees in the workplace. Unions are crucial in solving a collective dispute and for the creation of a collective labour agreement, and also in conflicts between an employee and the employer, where they may provide substantive and legal assistance. According to Ewing (2005), the regulatory function is the most important, as the unions can influence the legal system directly through collective bargaining at the national level and indirectly through legislation. Australia is a specific example – its workers' and employers' organisations have the right to submit their own bills. The government function is directly linked to the regulatory function, because influencing legislation is inevitably associated with various contacts with the authorities – indirect forms of forcing decisions (e.g. demonstrations) or direct cooperation with the ruling

parties, and in extreme cases entering the coalition government. The public administration function lies in the fact that public authorities may delegate certain tasks to the unions. These include educational programs but also actions taken in response to government policy, such as the fight against inflation.

The activities of unions can be divided into four general areas: (1) monopolistic behaviour, (2) rent-seeking (representation of interest groups) (3) participative behaviour, and (4) services to members. The first two relate to those aspects of trade union activities that often but not always cause negative social or economic externalities, and the latter two relate to actions with a generally positive impact for direct beneficiaries and third parties (see Diagram IV.2.)

Diagram IV.2. Types of activities of trade unions.



Source: Own elaboration.

Box IV.2. Why do people join trade unions?

Union membership can be explained by several factors, with the emphasis on two basic types of motivation: (1) solidaristic and (2) instrumental. The former is traditionally associated with the labour movement, the identification of people with their working environment and a sense of class identity. Participation in trade unions is thus a confirmation of social identity and is autotelic in nature (Gardawski 2009a), i.e. it is a goal in itself for the members of that group, almost condition *sin equa non* of the affiliation."

The instrumental approach is associated with a materialistic attitude to the work itself and is contractual in character. The participation in trade unions and paying fees is treated as an investment with tangible returns in the form of higher wages, protection against dismissal, improved working conditions, and other services. Most of these advantages are collective in nature and are also enjoyed by workers who are not union members (not paying fees and not spending time on union activities). Trade unions are thus susceptible to the *free rider problem*. Rational individuals will not have the motivation to contribute to the cost of production of a given good (in this case to union activities), when they may get it for free – as free riders – Olson(1965).

The significance of the free rider problem depends on the type of goods supplied by trade unions and their excludability. Under uncertain conditions and with high transaction costs, trade unions can play the role of service provider for employees, e.g. collecting labour market information, organizing training, providing legal advice, monitoring the performance of companies, and collectively representing workers in dealing with the employer, etc. Since the cost of these activities is subject to economies of scale, the employees may benefit from joining a union even when they do pay membership fees. This effect is stronger the higher the quality of services provided by trade unions and the more excludable these services can be made by the unions.

Monopolistic behaviour of trade unions

The first works of mainstream economics described trade unions from the perspective of a monopoly union model, operating in a perfectly competitive market, whose objective function was to seek the optimal level of prices for labour (Kaufman 2007a, Addison, Schnabel (ed.) 2003, Booth 1995). However, it should be remembered that two conditions must be satisfied for trade unions to be able to negotiate a wage above the market equilibrium. The first condition is the existence of a surplus, usually resulting from the monopolistic or oligopolistic position of the company or imperfectly competitive product markets, (e.g. monopolistic competition) which the employer may share with employees (see Box IV.3). Secondly, the unions must have a sufficiently strong bargaining power when negotiating with an employer so that the employer is forced to share part of the surplus with workers (see Box IV.4).

Box IV.3. What determines the level of surplus?

Even a monopolistic position in labour supply does not guarantee the unions the power to negotiate the increase in wages above the equilibrium point. This is so because the power of the trade unions to influence the level of wages depends on the labour demand elasticity related to the conditions that shape the product market.

The market power of a company creates a monopoly rent, which can then be taken over by workers in the form of higher wages and/or other improved working conditions. In a perfectly competitive market where companies pay wages equal to the marginal product of labour and the prices are equal to marginal costs, there is no surplus that the employer could 'share with employees'. In this context, if unions obtained wages above the market price, it would entail the destruction of the enterprise. Under certain conditions (such as when the market consists of very few employers in the industry – the monopsonistic market), companies are able to offer wages below the equilibrium. In this case, the strength of trade unions may be regarded as a counterweight to attempts of employers to offer wages that do not correspond to the actual productivity of workers.

Therefore, the size of the surplus depends on the nature of competition on the product market. When the company is the sole seller of the product – a monopolist, then the size of the surplus depends only on the price elasticity of demand in the market. At the opposite extreme is ideal competition, which excludes the existence of the surplus – an enterprise with no unions and thus no wage pressure could employ non-associated workers, and hence produce at a lowercost than its unionised competitor.

Obviously, there are intermediate states between pure monopoly and perfect competition: e.g. oligopoly- in which a small number of companies dominate the product market, and monopolistic competition – in which many companies produce a product that is at least slightly different from the products of competitors. In oligopoly, the size of the surplus will depend not only on the elasticity of demand, but also on the strategic decisions of companies in the market. Under conditions of monopolistic competition, the surplus depends on the elasticity of demand for the products of each of the manufacturers, which in turn is determined by the extent of the substitutability of their products.

The less competitive the market is, the higher surplus for the manufacturer, and thus the higher rent sought by trade unions. The size of surplus will also depend on the existence of barriers to entry for firms into the market, the current regulations of the product market, and the scale of international competition.

Numerous studies (see Calmfors et al. 2001, Kaufman 2007a, Booth 1995) show that when market conditions are close to monopoly, trade unions are more prone to making more radical demands at the expense of business efficiency, while in highly competitive markets unions often support the management and often agree on efficiency solutions.

Imperfectly competitive markets, where corporate profits are zero, wages above market equilibrium must lead to a number of inefficiencies. This is because the higher wages in unionised firms result in employment reduction, necessary to prevent bankruptcy, and the dismissed workers move to firms and sectors in which workers are not unionised. This leads to labour supply greater than the demand for labour in non-unionised industries and the resultant overproduction, with the too low production in unionised sectors. The result of this reallocation of labour is a deadweight loss – a decrease in value added, as individuals dismissed from unionised sectors generally get less productive jobs in other industries (because of their inadequate skills).

The aforementioned social costs arise only when unions operate in a perfectly competitive environment. Without this assumption of a perfect and efficient market, *second-best* solutions may appear in which unions may contribute to the efficiency of the whole economy. In particular, they may act as a counterweight to the very strong position of employers in a situation of strong competition in labour supply or labour demand monopsony. Furthermore, companies can face the strong bargaining position of workers even when there are no trade unions in the enterprise – i.e. in the presence of high transaction costs and staff turnover (see Lindbeck, Snower, 1988, Kaufman2007a). Hence, even in the absence of unions, a mutual monopoly of workers and entrepreneurs may exist. It is not a priori clear whether the substitution of collective bargaining (via trade unions) by individual negotiations, when transaction costs of individual contracting are high, contributes to increased efficiency.

An increase in wages is only one of the topics of negotiations between unions and employers. In fact, they may cover all the other issues that influence labour income (such as the system of remuneration for overtime or night shift), as well as fringe benefits which may be financed by the employer and which are not traditionally included in the components of remuneration based on provisions of labour law (such as a company car, or financing holidays). In addition, unions may also negotiate an overall improvement in working conditions, and also conditions of dismissals and constructive dismissals. In this way, in an imperfect labour market and under certain conditions unions can be an effective mechanism for improving the working conditions in the company.

Box IV.4. What determines the bargaining power of unions at the enterprise-level?

A basic source of the bargaining position of unions in talks with the employer lies in their ability to mobilise all employees of the company (industry) in order to undertake a collective action, and therefore monopolise labour supply. When this condition is met, unions may use a strike and put the company at risk of considerable losses.

This activity is more efficient (in terms of interests represented by unions) the higher the cost of staff turnover and/or the higher the level of unionisation in an industry in relation to total employment. In this context unionisation is crucial because the more workers that are unionised in a given sector, the smaller the number of available workers who might replace strikers in a lock-out, i.e. a dismissal of all strikers and the hiring of new workers. However, the relationship between unionisation and bargaining power does not seem to be linear. Osborne (1984), Booth (1995), indicate that there is a minimal (critical) number of members below which companies will not treat the union as a sufficiently strong or sufficiently representative partner. This critical value depends on the size of companies, technologies used, or conditions in the labour market.

The bargaining power of unions also depends on the legal environment, which determines the cost of protest for employers and employees. These are the regulations on calling a strike, stipulating who and on what basis can take these steps. In this context it is important to provide a small group of employees, key to the operation of the business, the legal possibility of organizing strikes and halting the entire production process. In some countries (Denmark, Germany, Italy, the Netherlands) there are proportionality rules that dictate the proportions between the extent of the strike, its purpose and its costs to the employer. In this way they limit the extent/number of strikes (Calmfors et al. 2001). Equally important is the ability to receive benefits from the state budget by striking employees and/or use of union funds by strikers.

Rent-seeking – representation of interest groups

Empirical works (Bertola et al. 2001, Gardawski 2009a) show that the political activities of trade unions are aimed at meeting the interests of groups of workers they represent, rather than at promoting ideological values of the labour/trade union movement. Consequently, in the mid- and long-term, even though unions are not fully democratic organisations and their leaders can have considerable freedom of action, the activities of trade unions reflect the preferences of their members (Bertola et al. 2001, Calmfors et al. 2001, Crouch 2006).

As is clear from international research (e.g. Bertola et. al 2001),[1] union members are more likely than non-unionised employees to accept the status quo with regard to the state's role in the labour market (for example, the current level of taxation and social advantages) and in social policy (e.g. system of social transfers). This attitude results more from the characteristics of persons belonging to unions than the influence of individual organisations on the views of its members. In other words, union membership *per se* does not determine the attitudes of trade unionists in relation to inter-generational transfers within the welfare state, they are rather related to the fact that union members are on average older than the general workforce, more often employed on an open-ended contract than on other flexible forms of contracts, and are usually heads of families in households.

We can conclude that the processes that influence the level of unionisation and the structure of unions also determine their behaviour in the labour market and attitudes towards national economic policies. As we describe later in this Report, unions with a relatively weak position in the labour market do not succeed in reaching employees (as well as the unemployed or employed under the civil-law agreement contract), including the young, well-educated and those employed in sectors characterised by high competition.

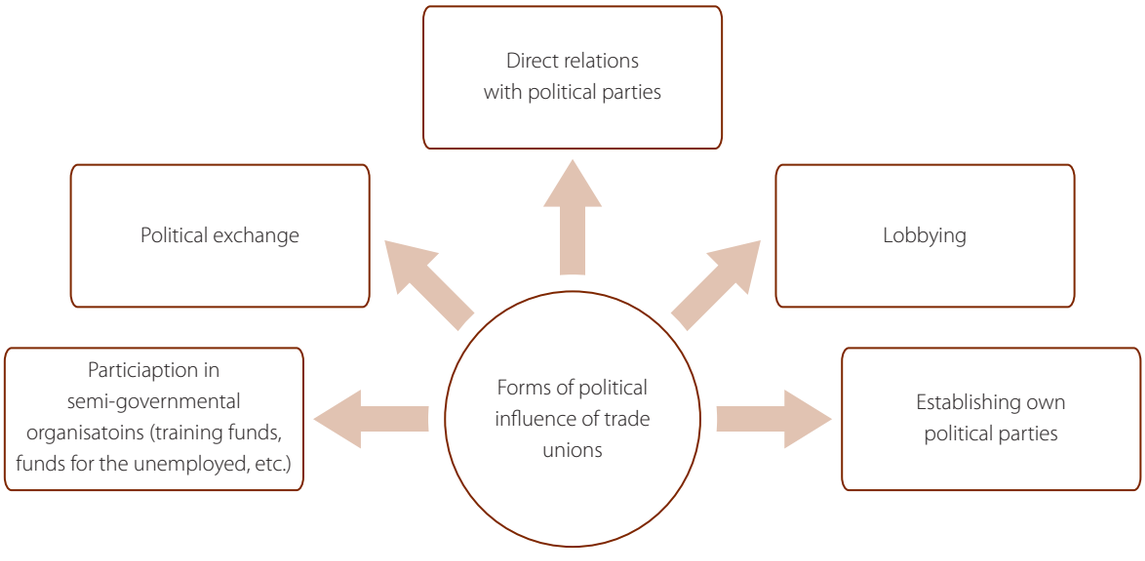
The social composition of unions results in the political strategy of preserving traditional instruments of the welfare state, regardless of their relevance to the (potentially) changed socio-economic reality. In particular contemporary European trade unions, largely consisting of the employees of public and traditional sectors of the economy, are generally opposed to raising the retirement age and limiting sector privileges, while promoting the policies that lead to an increase in the surplus (which can then be 'split' with employees), see Box IV.3 (above). In this context, the political activity of unions will tend to reduce competition in product and labour markets, and thus higher prices and higher equilibrium unemployment. The demands of trade unions relate mostly to the increase in minimum wage, protection of domestic producers against foreign competition, or legislation protecting existing jobs, even if it harms the formation of new ones. The presence of trade unions and collective bargaining also entails the flattening of earnings among workers with different skills and productivity, which in turn narrows the substantive criteria for evaluating their work in the company (Pencavel 1995, Kaufman 2007a).[2]

In order to achieve a better position for its members, trade unions may influence the political process (Streeck, Hassel 2003), see Diagram IV.3. First, they exchange their economic strength for political power. For example, they can agree to reforms or changes in the regulatory and institutional environment of the labour market in return for traditional protection of the welfare state and improved

[1] Research conducted in Germany, Italy, France and Spain.
[2] The standardisation of wages, so often demanded by unions, may contribute to the productivity effort among workers only when they feel secure and not exploited.

institutional environment of labour organisations (see Box IV.1). Nowadays, political exchange of this kind may take place only if the centralised and highly coordinated trade unions have a strong presence in the area of collective bargaining and thus have an impact on the implementation of macroeconomic policies by the government, in particular with regard to monetary stability and employment, crucial for the popularity of politicians. Under these conditions, governments are more or less held hostage by trade unions (Streeck, Hassel 2003, Hyman 2001, Hausner 2007). Secondly, the unions may pursue their goals by direct and/or indirect relationships with political parties, such as the SPD in Germany, the Labour Party in Britain, or the political parties in Poland (OPZZ is connected with and supported by left-wing parties, Solidarity by right-wing parties). However, in recent years the ties between European trade unions and social democratic parties have loosened, due to the widespread transformation of the traditional left-wing parties representing the working class into the New Left, based rather on the middle-class. Thirdly, the political power of unions may result from their participation in quasi-governmental and quasi-fiscal structures such as labour market agencies, agencies of social security, unemployment insurance institutions and educational institutions. Finally, similar to other interest groups (including employers' organisations, business lobbies, professional associations, environmental organisations, etc.), unions may use lobbying to gain support in parliament and government for their proposals. As indicated by Hassel and Streeck (2003) if unions want to have impact on decision-making process, they must apply methods that are used by other pressure groups – provide government with analyses and reports and, where necessary, influence public opinion in favour of their preferred policies.

Diagram IV.3. Political involvement of trade unions.



Source: Own elaboration based on Streeck, Hassell (2003), Gardawski (2009a).

The political activities of trade unions (as well as other rent seekers, for example employer organisations) are often associated with two types of cost/inefficiency, and thus deadweight loss for the public. The first is related to the extent to which the unions are able to reduce market competition so that wages of those who they represent increase at the expense of outsiders (the unemployed, economically inactive, consumers). Secondly, political activity is costly in general because resources spent on politics cannot be used in the production process.

Participative role of trade unions

Although trade union activities may generate a number of inefficiencies (allocative inefficiency), similar to those resulting from the imposition of taxes or the existence of monopoly prices, under certain conditions they may also play a positive role in the economy. From a historical point of view they were created in response to the excessive use of the employers' bargaining position as monopsonist in the local labour market, and thus in response to a situation against the interests of broader socio-economic development.

Efficiency activities of trade unions are primarily related to transaction costs and coordination problems during any collective action. Costs of communicating with other employees and coordination are too high for an individual. This prevents a single worker from lobbying in favour of better working conditions or changing inefficient aspects of the business. Trade unions may offer an effective way of dealing with these problems by strengthening communication between employees and creating a platform through which the critical voices of employees can reach the management of the company. The heads of companies may consult their employees even without trade unions, but in reality when workers are not protected by unions, they may not want to risk expressing

certain objections or requests to their superiors. A 'shade area' arises: workers are willing to complain about some aspects of the working environment, but will not discuss the pathologies of management, especially if they concern their immediate superiors (Gardawski 2009a).

Effective co-operation of management with the representation of the employees may facilitate implementation of solutions for the improved functioning of the company, as workers may voice their critique without the need of resignation. In an obvious way, it reduces undesirable staff turnover (see Freeman, Medoff 1984, McLennan 2007) which, in turn, generates a number of additional positive effects, such as greater incentives for entrepreneurs to provide training in the workplace and invest in human capital. For example Booth et al. (1999), using data for Great Britain, showed that union members receive a greater number of training hours and are less likely to leave the company than non-unionised workers.

Trade unions as service providers

Another role of trade unions which may help improve the welfare of the general public (not just a limited, unioninised sub-population), is their role of public service providers. Depending on the country and the system of industrial relations, trade unions provide a range of services to their members, e.g. employment law advice, training or tax advice. In the U.S., the U.K. and the Netherlands, some unions even offer financial services such as the issue of credit cards, while in Sweden unions are involved in negotiations with private insurance companies on terms of insurance for their members.

Box IV.5. Role of trade unions and employers' organisations in adult education.

Despite the positive effects of lifelong learning, many factors exist causing insufficient involvement of employees and employers in human capital accumulation. Participation in education (learning) below the social optimum level may stem from the barriers related to assymteries of information, the lack of finances and labour market failures. In each of these areas, the social partners have the potential to play an important role in raising the level of learnig. As observed by Dębowski, Lis, Pogorzelski (see CRZL / IBS 2010) it is particularly important in Poland where the scale of participation in adult education is one of the lowest in Europe.

First, unions can 'motivate' employers to provide training, either through collective agreements or the articulation of the employees' needs. For example, more than 20 percent of German and Spanish companies provide training, in which this issue is governed by collective agreements, while training in France is the second most important subject of collective bargaining at sectoral level (after wages), see Ok and Tergeist (2003). At the enterprise-level, the involvement of unions or works councils in lifelong learning can help increase the efficiency of this process. Freeman, Medoff (1984) showed that unions create a platform through which critical voices may reach the management – accordingly, they can also more effectively communicate the needs of workers with regard to training, and evaluate the completed trainings. Generally, it is assumed that lifelong learning is a common interest of employers and employees. Walton and McKersie (1965) assume that the training is integrative type of bargaining in which unions and the employer enter into negotiations with the conviction of similar benefits, as opposed to distributive bargaining in which both parties aim to maximize their own interests at the expense of the other party. Obviously, employers and unions will have different requirements on the methods and subject matter of lifelong learning. Entrepreneurs are likely to seek job specific training that is useful only in the workplace. They will also be inclined to finance the training of mainly skilled workers, make them participate in the costs of training, and outside working hours. Trade unions generally care about the politics of equality in training and non-specific knowledge that could be useful not only in the workplace. As a result, as evidenced by Bellmann, Ellguth (2004) and Stuart Robinson (2007), in companies with well-organized unions there is a higher number of hours of training, increased expenditure on education not specific to the company, and higher participation of the low-skilled workers (see also: Van Buren, Erskine 2002; Jarvis (ed.) 2009).

Second, trade unions (together with employer organisations) usually have a better understanding of the training needs of employees than the government, and so at the national level they can effectively participate in the design of policies and programs related to lifelong learning. This is particularly important in Poland, in which the vocational training system does not correspond to the needs of employers. The social partners may also play an important role in determining standards of professional competence, indicating what specific skills should be acquired to obtain a given qualification. This solution has two major advantages. First, it helps employers identify and compare the skills of employees. Secondly, it opens up the possibility of obtaining the same qualifications through different types of education.

Third, trade unions can use their better understanding of the labour market to advise workers on afuture career path and thus their education. An example of such support is the position of the union learning representative (ULR), introduced in the UK in 1999. The primary function of ULRs is raising awareness of the benefits of education and training, advice, mediation, and assistance in applying for training funds. In many cases, ULRs establish and run specialized centers of learning in the workplace. In 2008, there were almost 25,000 trained ULRs in the UK (Clough, 2010, McIlroy 2008), and recently similar solutions have been implemented in Ireland, Denmark, Finland and New Zealand.

Source: Dębowski, Lis, Pogorzelski (CRZL/IBS 2010), Dębowski (2010).

In the contemporary labour market, the most promising areas seem to be in consulting services in the labour market and educational activity. International studies (see Bertola et al. 2001) show that in most European countries the most frequent reason for joining unions is the existence of a problem in the workplace. However, the growing need for professionalism and increased complexity and flexibility of the labour market have made consulting much more costly than a dozen years ago. It is for reasons of rising costs of legal advice, especially advice on employment law, that trade unions merged in Germany, Finland, Sweden and the Netherlands (Visser 2003, van Gyes 2006); in this ways they can use economies of scale in support of their members.

The second major area of union activities as public service providers, is the participation in lifelong learning. The importance of education in human life has risen along with the acceleration of modernisation processes. Rapid technological development requires not only the acquisition of appropriate skills at school but to continually improve these skills in later life in order to actively participate in social life. The same applies to the labour market, where rising demand for skilled workers lowers the demand for those with low skills.[3] Despite the positive effects of lifelong learning, there are some factors that cause insufficient involvement of employees and employers in human capital accumulation. As shown in Box IV.5, union activity, at least in theory, could contribute to the improvement of this situation.

1.3. Trade union density and collective agreements in Europe

The strength of unions depends primarily on their ability to influence changes in the socio-economic system in which they operate. In the empirical assessment of the 'raw power' of trade unions (excluding legal and institutional environment), researchers use mostly two measures: (1) trade union density rate, i.e. the number of members of trade unions (in relation to the total workforce) and (2) the degree of centralisation and coordination of the whole trade union movement (union centralisation). And the coverage of collective agreements accurately determines the extent to which trade union activities influence the economy.

Over the past two decades, unionisation and coverage of collective agreements have decreased in most developed countries (see table IV.1). This is connected with a change of institutional environment of trade unions – gradual disappearance of the traditional working class, the emergence of new occupations, the shift of employment from manufacturing to services, and intensification of globalization and international competition (see Visser, 2003, Calmfors et al. 2001).

Table IV.1. Percentage of trade unions members and employees covered by collective agreements in selected OECD countries.

	Union Density				Coverage of collective agreements			
Country/year	1980	1990	2000	2007	1980	1990	2000	2007
Austria	57	47	37	32	95	99	99	99
Belgium	54	54	56	54	97	96	96	96
Denmark	79	75	74	68	70	70	80	82
Finland	69	72	76	71	90	90	90	90
France	18	10	10	8	80	90	90	90
Germany	35	31	25	20	80	80	68	63
Italy	50	39	35	33	80	80	80	80
Netherlands	35	25	23	21	70	70	80	82
Poland	..	33	15	14	..	..	40	35
Portugal	61	32	24	18	70	70	70	62
Spain	7	11	15	15	60	70	80	80
Sweden	80	80	79	74	80	80	90	90
United Kingdom	51	39	31	29	26	18	14	35
United States	22	15	13	12	26	18	14	14

Source: Own elaboration based on ICTWSS; Visser 2010.

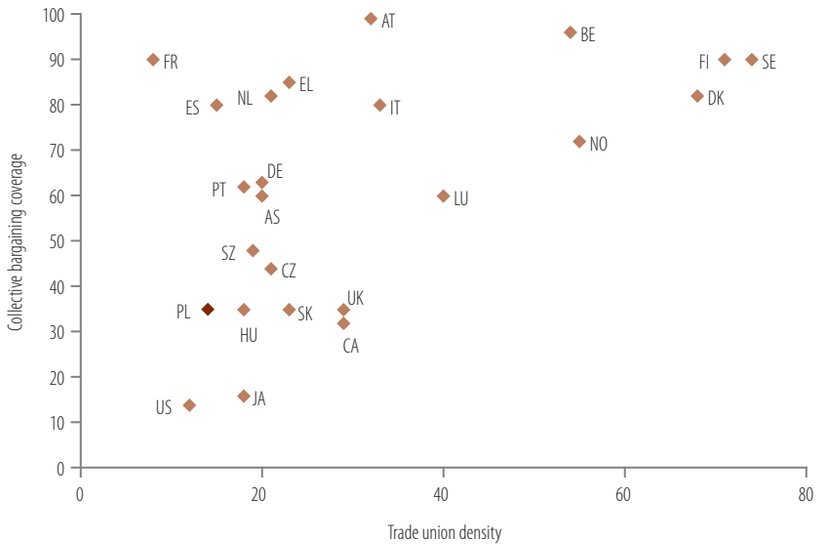
Globalisation stimulates the development of multinational corporations and enforces competition in the global market, with limited protection from nation states. This significantly undermines the role of national-level collective agreements (that regulate labour relations at the level of industries, regions or countries, but never internationally) which are the essence of the European

[3] Estimations of the European Commission show that after 2010 only 15 percent of new jobs will be for low-skilled workers, and about 50 percent will require university education (KE 2006).

trade union movement and industrial relations. Empirical studies have shown that national-level agreements, especially those detailed ones, undermine the strength of European companies in competitive struggle (Kiellberg 2007). It is the reason for increasing decentralisation and the more general character of current collective agreements. The focus of collective bargaining is gradually moving from the national level to lower levels and more employment relations are left outside the sphere of collective agreements.

The data in Table IV.1 show the evolution of the union density and the coverage of collective agreements in OECD countries. Figure IV.1 shows the relationship between these two values – in only half of the countries, a high ratio of workers covered by collective agreements is accompanied by a high level of membership rate (usually in countries where bargaining takes place only at the enterprise level). In some countries coverage of collective agreements is three times higher than union density, and is nine times higher in France. In general, coverage of collective agreements is less varied among countries than unionisation and its decrease has been much smaller. This higher proportion of employees covered by collective agreements than union membership, particularly apparent in Western countries, is due to frequent national or sectoral level agreements and the practice of extending a given agreement to other companies in the industry or the economy.

Figure IV.1. Union density vs. coverage of collective agreements in selected OECD countries in 2007 (in percent).



Source: Own elaboration based on ICTWSS; Visser 2010.

Another problem faced by trade unions, including those in Poland, is the increasing diversity of the preferences of workers. For example, contract workers may wish to convert their contracts into an open-ended employment contract, and often the only way to do this is the reduction of costs of entrepreneurs during dismissing and hiring, thus increasing the flexibility of employment contracts – a solution that already hired workers (insiders) may not want. The decline in the number of people belonging to unions is also accompanied by a process of demographic aging. As is clear from international research, in the period 1988-2001, the median age of an average union member rose by more than two years in the four largest countries of continental Europe – France, Germany, Italy and Spain, while the average age of workers in general decreased, due to a significant reduction in unemployment among young people (see Boeri and van Ours 2008).

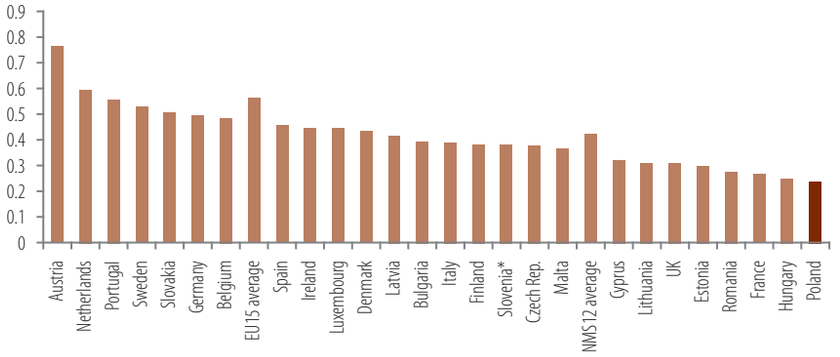
These phenomena in the past two decades have led to the weaker position of trade unions all over Europe. In the EU15, especially Scandinavia, this decrease has been smaller, but also those countries experienced the deregulation of employment relations and lower involvement of workers in trade union activities. However, workers' organisations in those countries have sustained their strong position because they were able to more effectively respond to contemporary challenges than elsewhere. First of all, they were able to break with the traditional model which targeted mostly men employed in manufacturing, and reach out to workers from other sectors and women (Crouch 2006). Maintaining the strong position of trade unions in Scandinavia was also possible thanks to the performance of socio-economic functions in the Ghent system, in which unions are involved in the payment of unemployment benefits. The fact that only union members qualify to obtain financial support in Sweden, Denmark and Finland, is undoubtedly a strong incentive to join the unions.[4]

[4] In Belgium, where the city of Ghent is located, a hybrid system is used (quasi-Ghent), in which public administration is also involved in the payment of unemployment benefits.

The strength of trade unions may also be reduced by their dispersion and/or lack of cooperation between different organisations. These two aspects of their operation are described by the centralisation index (see Visser 209, Industrial relations, 2004). The centralisation of trade union activities may be measured on a vertical and a horizontal plane. In the first case (vertical plane) we take into account at what level (national, industry, enterprise) important decisions are made concerning the activities of a given union organisation. In this approach we also examine the extent to which organisations at national level may affect the activities of trade unions at lower levels (industries or regions), and to what extent trade unions at the industry level influence trade unions at the enterprise level, e.g. in the organisation of strikes, negotiations, etc. The greater the role of national or industry unions, the higher the centralisation index. In the horizontal plane, we examine the number of decision-making centres. The object of analysis is whether the decisions are made by one trade union or by many. The more central trade union organisations that are involved in the decision-making process, the lower the value of the index.

In this regard, trade unions in Western Europe have a much stronger position, both in horizontal and vertical centralisation, than trade unions in the NMS12. In Poland, centralisation is exceptionally low – the lowest in the entire EU – see Figure IV.2. These issues will be discussed in detail later in this chapter.

Figure IV.2. Union centralisation index in the EU in 2006/2007.



Note: Centralisation index assumes values in the interval (0-1); the higher the value, the higher the centralisation.

** data for Slovenia from 2003*

Source: Own elaboration based on ICTWSS; Visser 2010.

1.4. Activities of employers' organisations

Similar to employees, employers associate in order to increase their bargaining power at levels higher than enterprise. Motivations of participation in employer organisations are in principle similar to the trade unions, i.e. (1) solidaristic – to confirm membership in a group, and increase professional and social prestige, and (2) materialistic, serving employer's interests and receiving specific services provided by these organisations. It is assumed that in employers, as profit-oriented entities, materialistic motivations are stronger than solidaristic ones (see Gardawski 2009b). Entrepreneurs mainly expect their organisation to effectively lobby and exert pressure on the government to protect them against bureaucratic restrictions of public administration and against pressure from trade unions, and also to supply them with specific services (e.g. assistance in labour law, tax law, and organisation of training).

Historically, there are two types of employer organisations. First, in many European countries there are chambers of commerce, organisations that mainly provide services to their members and lobbing in relation to the product market rather than the labour market (see Van Gyes 2006). Only in some countries such as Austria, and Slovenia, do these institutions play a significant role in industrial relations and participate in social dialogue. The second type are voluntary associations of employers, that after meeting certain standards (mostly concerning their representativeness) are treated as the representatives of employers and may conduct social dialogue with trade unions and the government. In this report, we focus on the latter type of employer organisations.

In theory, the position of a company during negotiations with workers is related to its ability to overcome the effects of potential industrial conflict – usually, strikes. This was also the primary cause of the formation of the first employer organisations in the mid-nineteenth century (primarily in Germany and the Scandinavian countries) in response to the increasing number of strikes organised by disgruntled employees. The cost of a strike from the perspective of a single firm is greater than from the perspective of the entire industry, as a single company is more likely to lose its market share to other companies that operate in the same sector that have not suspended their production due to the strike. If a strike is organised throughout the industry and is temporary, the cost can be easily internalised by a price increase and ultimately borne by customers rather than businesses. This is why a single company is more likely to agree to higher wages in return for withdrawing a strike than an organisation associating most companies in a given industry.

Employers' associations may also alleviate the price/wage spiral, which arises when a single company offers a wage above the equilibrium in order to obtain greater involvement of employees or to attract workers from other companies. If other firms choose to do the same, the net effect will be not an increase in real wages in the enterprise but only an increase in nominal wages in the industry. A strong employers' organisation, which coordinates the conduct of individual companies may therefore help internalise these externalities and prevent the uncontrolled bidding of wages.

Despite these common benefits and purposes, an entrepreneur will join an employers' organisation primarily to pursue their own interests, which may differ from those of other companies (see Box IV.6). If a company is large, it may negotiate and hold meetings with the government directly, without forming a special organisation. Often, large companies even prefer to negotiate individually without larger associations as such lobbying to give them more benefits at the expense of their competitors (e.g. by receiving exclusive government contracts, additional custom duties, special permits, certificates, changes in the rules of competition in the market for the benefit of the interest group). For these reasons, marginalisation and reduction of the role of institutionalised forms of social dialogue is more desirable for employers with high market power than for companies with smaller bargaining power, and also for trade unions for which the central tripartite (or bilateral) institutions are essential for influencing national industrial relations. [5]

An important characteristic of employers' organisations is their diversity and tendency toward fragmentation and specialisation. While it may seem that employers have an easier task in building their structures than the workers' organisations – fewer members, smaller member rotation, more resources and a stronger network of elites, in reality employers are more fragmented than unions (Traxler 2004, VanGyes 2006).

Box IV.6. Differences between the interests of large and small companies.

The size of the company very much determines its strategy of competing in the market, and also interests it will represent in the organisation of employers. There are four major characteristics differentiating the behaviours of large companies from small and medium-sized ones:

1. **Area of activity and mobility** – the overwhelming majority of small businesses focus their activities on local markets, in contrast to large enterprises that use economies of scale, expand the scope of their activities to national and international markets. This does not mean that small firms that focus on local markets are not subject to international competition; product market liberalisation and globalisation are increasingly exposing them to competition not only with large national companies, but also internationally, thus imposing high adjustment costs. It comes as no surprise that small businesses differently perceive deregulatory and liberalisation processes than large companies which due to their high adaptive capabilities, innovation and economies of scale are the main advocates of 'open borders'. You may note that in this respect small firms have the same interests as trade unions, i.e. in their demand to reduce international competition in the product market (see Rama, Tabellini 1998).
2. **Innovations and organizational replacement** – although small businesses are an important source of innovation in the economy, they often do not have enough funds for a fast organizational and technological change. They also spend relatively less resources than large firms on research and development. This has important implications in the formulation of policies to promote innovation, which in recent years have become commonplace in almost all developed economies and also in some developing countries such as China. Policies supporting innovation and competitiveness cannot be based only on supporting research and development, as is the case with large firms. The most desirable support for small businesses should be the promotion of existing solutions, thus facilitating imitation of solutions in management and production, and training for managers and employees (see Bartkiewicz, Dębowski2010).
3. **Regulations** – adjustment costs resulting from changes in regulations (e.g. changes in taxation, regulations on environmental protection, conditions of hiring and dismissal are usually felt more by smaller businesses because of their limited economies of scale, and also because a certain critical value of resources and expertise is needed to effectively cope with changing regulations.
4. **Use of capital and labour** – the manufacturing process in small companies is usually more labour intensive than in large firms. Labour productivity in small companies, and thus the unit cost of labour, is higher than in large enterprises. Hence, each increase in the cost of labour (either through taxation or through any other additional regulations) reduces the competitiveness of small firms more than large companies.

Source: Traxler (2004).

Fragmentation of employers' organisations can significantly limit the scope of social dialogue primarily above the enterprise-level where it virtually cannot take place without associations of employers. In other words, the level and scope of negotiations between employers and worker representatives, including the coverage of collective agreements in a given country, will depend on the characteristics of employers' organisations, i.e. the number of workers employed in the associated companies, industries or regions in which they operate, and the quality of their collaboration and coordination. An equally important aspect is the degree of centralisation of social dialogue. If it is high (e.g. collective bargaining taking place in tripartite institutions), then the position of the association of employers

[5] Weak associations of employers and low importance of national-level bargaining can be observed in the United States and the United Kingdom. In those countries entrepreneurs lobby directly, usually without the intermediation of organisations (see Crouch 2006).

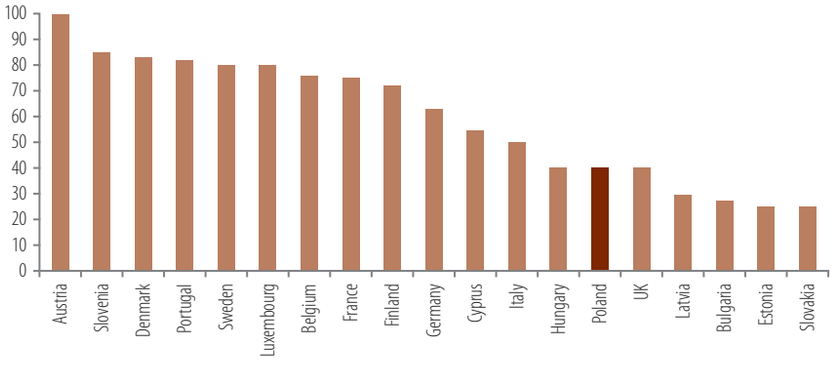
will be stronger among its members, and also the interests of employers will be discussed with both government and trade unions. By contrast, in countries where centralisation is low, representations of employers will primarily focus on lobbying, i.e. on talks only with the government (Wilts 2001, Van Gyes 2006). Employer organisations in their strategy to exert political pressure can in principle use the same instruments as trade unions (see Diagram IV.3). At the same time they may also feel tempted to represent only the special interests of their members at the expense of the wider community, including any sectors of the economy and different categories of companies that are not their members.

In each EU country there is at least one central organisation of employers (known as a peak organisation) that associates companies on general terms and regardless of their type (sector or size), and thus aspiring to act as a representative of all enterprises in the economy and coordinates activities among other employers' organisations (see Table IV.2). However, in some countries they do not succeed in playing the assumed role, for example in Germany, Greece and Portugal, where industry organisations are more important. In other countries, there is more than just one national-level employers' organisation, which inevitably leads to competition between them and so impedes social dialogue. As shown in Table IV.2, the greatest number of central organisations at the national level can be found in Italy, Hungary, and Poland.

The existence of only one dominant employer organisation does not necessarily mean that it is able to coordinate the conduct of other employers' organisations participating in the dialogue. Such coordination is possible in small economies of Western Europe, namely Austria, Belgium, Denmark, Finland, the Netherlands and Luxembourg (see Table IV.2). In large countries of the EU15, such as the United Kingdom, Germany, France and Italy, the coordinating role of the central organisation is relatively weak.[6] In the NMS, the situation is similarly varied. Highly coordinated employers' organisations exist only in Slovenia, while in Estonia, Latvia, Lithuania and Slovakia, this level can be described as average. Poor coordination between employer organizations is characteristic for the rest of the NMS, including Poland (see Van Gyes 2006).

There is a clear difference between employers' organisations in the EU15 (excluding the UK) and the NMS with regard to their membership. As in the case of trade unions, employers' organisations in the NMS have a smaller number of members (see Figure IV.3). This means that in the NMS both workers and employers have a relatively weak position compared to the government, which, as we show later in this part of the Report, raises serious implications for dialogue at the national level (with the clearly dominant position of the government) and the efficiency of autonomous dialogue.

Figure IV.3. Percentage of workers employed by companies belonging to the central organisations of employers in relation to total employment in selected European countries, data from 2007.



Source: Own elaboraton based on EIRO (country profiles).

[6] In Germany it is explained by the fact that social dialogue is conducted mainly at the industry-level.

Table IV.2. Structure of employer associations in EU25.

	Number of central organisations	Level of coordination of the central employers' organisations	Main area of activities of employer asociations						
			Total [7]	By sector			SME	NGO	Agriculture
				manufacturing	construction	services			
Austria	1	strong	WKO	VOI					
Belgium	1+5	strong	FEB/VBO				UCM; Unizo	CSPO	UPA/BB
Cyprus	2	poor	OEB; CCCI						
Czech Rep.	2+2	poor	SPCR, KZPS		SPS		AMSP		
Denmark	1+2	strong	DA			FA			SALA
Estonia	1	moderate	ETTK						
Finland	1+2	strong	EK				SY		MTL
France	1+3	poor	MEDEF				CGPME; UPA	Usgeres	
Germany	1	poor	BDA						
Hungary	9	moderate	MGYOSZ	OKISZ, VOSZ, STRATOSZ		KISOSZ	IPOSZ	AFEOSZ	AMSZ, MOSZ
Ireland	1+1	strong	IBEC		CIF				
Italy	12	poor	Confindustria		(2)		Confapi (+2)		(3)
Latvia	1	moderate	LDDK						
Lithuania	2	moderate	LPK				LVDK		
Luxembourg	1	strong	UEL						
Netherlands	2+1	VNO-NCW					MKB		LTO
Poland	4	poor	KPP, PKPP, BCC				ZRP		
Portugal	4	moderate		CIP		CCP, CTP			CAP
Slovakia	2	moderate	RUZ, AZZZ						
Slovenia	4	strong	GZS; ZDS				OZS; ZDODS		
Spain	1	moderate							
Sweden	1+2	poor	SN					SFO; KFO	
UK	1	poor	CBI						

Note: The table includes abbreviations of the names of employers' organisations; underlined names signify the greatest role in national-level bargaining in a situation where there are more central organisations in a given country; "1+2"in a column of the number of central organizations means that in a given country there is one employer organization with key significance and two other organizations (e.g. industry organisations).
Source: Industrial Relations 2006 and EIRO (industrial relations country profiles).

1.5. Organising collective bargaining

The economic impact of trade unions and employers' organisations depends not only on themselves but also on the structure of collective bargaining in a given country. A particularly important aspect is the degree of centralization and coordination of collective bargaining. In some countries (e.g. United Kingdom, United States), negotiations between unions and employers are held primarily at the enterprise level, and in others (e.g. continental and southern Europe) at the level of industries or the national level. In this context, even decentralised bargaining can be coordinated by industry or national organizations of the two parties concerned.

Examinations of the economic impact of the degree of centralisation of collective bargaining usually focus on the macroeconomic impact, and especially on the level of unemployment and inflation. According to the traditional argument, centralised and coordinated negotiation models result in lower unemployment and lower price growth by reducing the pressure on wages. In a simplified approach, this case can be summarized as follows. If unions manage to negotiate higher wages, employers can do four things to maintain the current level of profitability: (i) increase productivity, (ii) raise prices, (iii) limit investments, (iv) reduce employment. When bargaining takes place at the company level, none of these strategies will affect the overall level of employment and prices (at least in the short term), which are the main areas of interest for unions. When a single firm raises prices, it has little impact on aggregate inflation, and therefore does not result in a decline in living standards of the union members at the enterprise. Even when the company decides to dismiss some workers, assuming that the dismissals are not taking place throughout the economy, the fired workers should find employment in other companies relatively easily. For this reason, non-centralised and uncoordinated bargaining encourages unions to negotiate wage increases more aggressively, in contrast to bargaining relating to a broader group of employees. On the other hand, when it comes to wage increases as a result of a coordinated national decision, representatives of trade unions can be sure that high

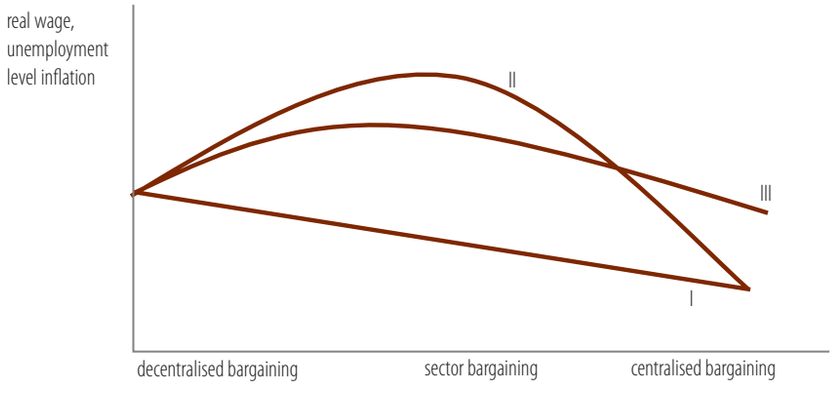
[7] The main area of activity not presented.

wage increases will have a negative impact on at least a significant part of their members. When most companies are forced to raise prices of their products as a result of an increase in wages, increased inflation reduces the growth of wages. Similarly, when dismissals due to higher wages concern a wide group of workers, chances of finding employment will fall in the entire economy, which will directly affect the prosperity of union members. Centralisation and coordination of wage bargaining thus encourages unions to limit their wage demands.

If the union wage pressure depended solely on the degree of internalisation of externalities associated with an increase in wages, then the relationship between inflation/unemployment and the degree of centralisation would be proportional (i.e. more coordination would always lead to lower wages and higher employment), see line I in Diagram IV.4. In practice, however, it is influenced by yet another aspect, i.e. the degree of market power of unions. Rising wages in only one company would reduce demand for labour in the enterprise more than if it was introduced in all the competing companies in the industry. Coordinated wage bargaining will in this way give wage setters more market power and will increase wage pressure (Calmfors et al. 2001).

The net effect of increased coordination therefore depends both on the degree of internalisation of negative externalities of wage increases, which leads to a decreased wage pressure across the economy, and on the market power. The nature of links between the model of collective bargaining and labour market outcomes is described by the Calmfors and Driffil hypothesis (1988), according to which wage growth is lowest in systems with the most decentralised or completely centralised (covering the entire economy) wage bargaining. An intermediate case (and also the worst in the light of this theory) is industry-level bargaining, because then unions do not fully internalize the negative effects of wage increases, and shift the costs to the society. At the same time they have high bargaining power and hence a significant opportunity of seizing the producer's surplus for its members, at the expense of other citizens (see line II in Diagram IV.4).

Diagram IV.4. Correlation between the degree of bargaining coordination and the level of wages.



Note: I – denotes the effect of internalisation of negative externalities related to increased wages; II – Calmfors-Driffill hypothesis without international competition (and/or non-unionised competitors); III –Calmfors-Driffill hypothesis taking into account international competition.
Source: Calmfors et al.2001.

The market/bargaining power of unions depends on market competition, including international competition. Competitive pressure flattens the relationship between the domestic bargaining coordination and the real wage. Foreign competition especially limits the possibility of raising product prices after an increase in wages (Rama 1994). A similar effect may be exerted by incomplete unionisation in the industry. During collective bargaining, competition from non-unionised companies in the product market may reduce wage pressure in a similar way as competition from abroad (see line III in Diagram IV.4). Other studies have shown that centralisation generally gives better results than decentralised bargaining but under certain conditions, depending on the degree of central bank independence and of unionisation in the public sector (see Streeck, Kenworthy 2005).

Literature highlights the impact of the bargaining structure on the types of economic policies implemented by governments (Streeck, Kenworthy 2005). In centralised negotiations governments can be more confident that any increase in labour costs will be moderate, and thus wage-push inflation will be lower. In this way, governments have more incentives to use more expansionary fiscal policy and/or monetary policy as instruments against unemployment in different periods of the cycle. On the other hand, governments may be motivated to include social partners in the decision making process in order to mitigate the costs of disinflationary policies (Hassel 2006). Even denying the traditional shape of the Phillips curve (with a negative correlation between unemployment and inflation) the governments must take into account the inflationary expectations of workers and take into account the short-term negative impact of disinflationary policies on unemployment. The administration may want to leave the process of adaptation only to the market and rely solely on monetary instruments which in the medium term should result in lower wage expectations and thus lower inflationary

pressure. However, the restrictive monetary policy and high wage expectations may carry a potentially high cost of sacrifice in terms of increased unemployment, which in most cases would not be politically acceptable. In this situation, the government may find it necessary to engage in the process of wage formation in the labour market, improve its efficiency and alleviate the inconsistencies between the expectations of workers and economic reality. Hassel (2006) argues that this is one of the main reasons why governments in Western Europe continue to use wage policies, and hence support the existence of corporatist arrangements and social dialogue in the traditional tripartite formula.

In discussing the impact of the collective bargaining structure, we need to mention income inequality. As shown above, trade unions put a strong emphasis on the alignment of pay levels between individuals in the labour market and improved working conditions. Empirical evidence clearly shows that the centralised model of collective bargaining in which unions play a significant role is associated with lower wage differentiation at the level of individual countries (see Booth 1995, Calmfors et al. 2001).

1.6. Role of state in social dialogue

The state, represented by its offices and above all the government (also parliament, regional or local authorities or other institutions responsible for social and economic policies), is the third key party of social dialogue. On one hand it plays the role of a regulator, creating a legal framework and institutional arrangements that determine the environment in which social partners operate, and on the other hand it assumes the role of employer for public sector workers and thus a direct party in disputes over pay and working conditions. This role of the state in collective bargaining means that the attitude of public administration towards institutions of social dialogue, the state's relationship with society, and social and economic policies, all strongly influence the strategies adopted by social partners and thus the efficiency of the dialogue.

Representatives of the government may present two opposing positions in respect to social dialogue. On one hand they may think that public authorities, having direct democratic legitimacy (mandate) and sufficient expertise, are the only authorized decision makers, and so there is no need for arrangements with selected interest groups. There is also the opposite vision which emphasises the fact the institutionalised tripartite social dialogue with trade unions and employer organisations can effectively complement state policy, for example as it was in 1950-1970 in Europe, when tripartite dialogue was reducing inflationary pressures and was an important complement to macroeconomic policies. The dialogue of social partners with the government may also provide an effective transmission channel between a restrictive monetary policy and labour market participants (see Box IV.1), as well as serve as an element supporting adult education (see Box IV.4) or other areas of complex socio-economic policy pursued by modern states. The social partners have specific expertise which would be difficult to obtain directly by representatives of government and thus the dialogue provides decision makers with more valuable information. More importantly, it is empasised that systematic cooperation between the dialogue partners and the government generates a number of other positive effects. First of all, it leads to the growth of trust and shared understanding of the economic problems among participants in the dialogue, and hence an effective mechanism for reaching a consensus in the field of socio-economic policy, which gives the government a chance to gain wider public support for their own reform projects.

In many European countries social dialogue is of key importance in shaping labour market institutions so that the market is flexible enough to adapt to structural changes, absorb shocks and intensify modernization processes while maintaining the security of the participants in the labour market (Philips, Eamets 2007). The implementation of this model, known as *flexicurity*, is most developed in the Scandinavian countries where high co-operation, trust and understanding of key economic issues between the partners, contributed to the emergence of flexible and secure labour markets characterised by low unemployment and high levels of labour market participation (Gerningon et al. 2000).

The involvement of social partners in the decision-making process can be advantageous even where governments are weak or have low social acceptance, as it was in Spain in the late 1970s, in Ireland in the 1980s, in Italy plagued by corruption scandals, or in the new EU Member States during the initial period of transformation. Even though the positions of trade unions and employers were relatively weaker in those countries, with lower coordination, their acceptance and commitment were essential for carrying out important socio-economic reforms. Despite the lack of special institutions for dialogue, agreements between the governments and social partners often resulted in the conclusion of social pacts.

It should be mentioned however, that the tripartite corporatist arrangements, in which political and economic decisions are made by a narrow interest group, are somewhat inconsistent with the idea of a democratic state. In this context, the role of the government is to balance the particular interests of employers and trade unions and to also represent the wider public. There are two main reasons for this representative function of the government in social dialogue. First, traditional social dialogue involves only the representatives of labour and capital (workers and employers) and excludes other social categories, such as minority ethnic groups, students, unemployed, pensioners, environmentalists, etc. Second, there are clear asymmetries in access to the forum of the dialogue event among representatives of labour and capital. This situation occurs during tripartite negotiations when only the interests of certain sectors are represented, those with well-organised trade unions and/or employers' organisations. Hence, there is a risk that

highly centralised social dialogue may be exclusive and create a partial model of democracy, less flexible and less sensitive to issues not directly linked with employment relations, or even exclusively narrowed down to problems in several sectors. In this case, a key role of the government is to organize and chair the dialogue. It is the responsibility of the government to seek a compromise, which equally takes into account the arguments of interest groups and citizens who are not directly represented in the social dialogue. This shows the importance of a civil society which can actively participate in public debate to motivate the government to take such action.

In assessing the dialogue institutions, it should also be remembered that the very system of parliamentary democracy offers uneven opportunities for the articulation of views of different interest groups. The idea of representative democracy is the choice of the authorities through elections. Hence the officials must be open to interactions with the public and specific interest groups (future or current voters), while on the other hand citizens cannot be deprived of their ability to form associations and to exert pressure on the authorities. A democratic system without communication between the government and citizens would be weak, devoid of vitality and activism, and the role of citizens would be limited only to voting. In such a situation the political process could be influenced by a narrow interest group with unproportionally high resources. This is even more likely because of the fact that in representative democracy the interests of weaker groups (ethnic, religious, generational, social) are usually poorly represented. Furthermore, the greater the impact on the political process exerted by small but wealthy interest groups, the greater their resistance to the institutionalisation of the process.

The role of the state is thus to establish procedures for balancing the influence of all interest groups on policy and define clear criteria for access of the various players to the bargaining process and ensure the transparency of information. The government's role is reduced to the role of an arbitrator, who in a transparent process of dialogue, tries to weigh the conflicting arguments and lead to a settlement that is acceptable and satisfactory for the widest range of citizens possible. In the absence of these institutions, lobbying is secret and virtually without any rules of conduct. In this case, a dominant position and a real influence on politics, at the expense of the rest of society, is reserved for the strongest companies, employers' organisations and trade union organisations at industry-level. For example, the United States are one of the developed countries often criticised for lack of institutionalised social dialogue and thus the associated costs.

On the other hand it cannot be forgotten that a democratically elected government may have a different view from the social partners and carry out policies against their opinion – as it has a mandate to pursue its own policies, given by the voters for one parliamentary term. It may do so only explicitly and not treating the dialogue as a facade. It is not always possible to achieve a compromise between the government (or local government administration, when the dialogue is conducted at lower levels) and the social partners, but it is important to understand that in this situation the role of the government and social dialogue is to provide the public with clear views of all the parties, show the differences in views and arguments used, so that interest groups and citizens in general can form their own opinion on the issue. If the debate allows a comprehensive assessment of the costs and benefits, and the public is informed about them, even if it does not lead to compromise, it is still in the public interest.

1.7. Social dialogue and economic efficiency

Based on the aforementioned observations, we can present a list of conditions under which social dialogue can contribute to an increase in economic efficiency. As already shown, each party, i.e. trade unions, employers and government, play a slightly different role depending on the level of bargaining. It is presented schematically in Table IV.3

At enterprise level, unions seek to improve the working conditions of employees and the policy of equality at the company, which does not always lead to negative consequences. Often, just by creating a platform for communication between management and staff, it can facilitate management of the whole company. This effect increases with greater competition in the industry. When market conditions are close to a monopoly and the unions focus on rent-seeking, such an effect does not occur. In a model approach, employers also seek to maximise profits and seize the largest part of the surplus at the expense of labour. Hence, in order to compensate for the position of employers, trade unions must organize a sufficiently large number of employees. The strength of the unions increases with the degree of unionisation within the industry and the economy, and the degree of coordination among them. However, the effectiveness of social dialogue, in addition to the balance of power, is determined by mutual trust and the ability of compromise between the parties. Employees must trust that the employer is willing to listen and consider their demands (provided they are economically justified), and the employer must be sure that the information provided to employees during the negotiations will not be used in bad faith (e.g. forwarded to competition). In this context, the effectiveness of the organisational model of company unions is particularly important. Greater effectiveness can be found in a model in which workers have one representative at the enterprise or industry level (trade union monism).

Enterprise-level bargaining is also affected by dialogue at higher levels, in particular by the structure of collective bargaining and the possibility of extending agreements over the entire industry. At the national level, collective bargaining should be either highly decentralised or highly centralised, so that the costs of agreements are not passed on social groups not involved in bargaining. Additional costs are incurred when unions (or a certain group of manufacturers) are able to reduce competition in the market so that their direct customers receive an increase in wages (or gains) at the expense of outsiders (the unemployed, economically inactive, consumers). For this reason, it is important who the partners represent, i.e. organisations they include and what is their internal structure. These factors determine the interests of the parties of the dialogue and their willingness to cooperate.

The whole process is crucially influenced by the attitude of the government (and other state institutions). The government's role is primarily to safeguard the transparency of the dialogue, balance the conflicting arguments and the pursuit of acceptable and satisfactory settlement for as wide a group of citizens as possible. But for the dialogue to be effective, trade unions and employers' organisations must learn to negotiate and comply with the bilateral agreements, and have to be able to convince their members of their achieved solutions. On the other hand, the government is responsible for regulations that determine the bargaining position of employers and unions at every level of dialogue. It is important that the system does not favour either party, and is consistent across the levels of dialogue.

Table IV.3. Role of social partners and public administration at different level of dialogue – a model approach.

	Trade unions	Employers and their associations	Public administration
Enterprise level	Representing the interests of employees in relation to the employer (working conditions and wages), promoting the policy of equality at the enterprise, seeking the highest share of surplus for the employees, services for its members (legal advice, training).	Representing the interests of the capital owners, maximising profit and the share of the surplus.	Regulating the bargaining position of either party (e.g. through legislation on strikes) and determining the significance of enterprise-level dialogue in the system of industrial relations in a given country.
Industry level	Seeking an increase in bargaining power in relation to autonomous dialogue and higher share in surplus. Supporting enterprise-level organisations	Counterbalancing the bargaining power of unions in the industry by a united position of employers in the industry. Supporting individual employers.	Regulating the bargaining position of either party and determining the significance of industry-level dialogue in the system of industrial relations in a given country.
National level	Representing the union members as interest groups in bargaining with other groups and government, direct and indirect involvement in the political process, industry lobbying if members are concentrated in selected industries. Supporting lower-level organisations (legal advice, training) and international contacts.	Representing the members in talks with the government and in bargaining with other groups (including employers and unions) and the government, lobbying for the industry in legislation, indirect involvement in political process. Supporting organisations at lower levels.	Fostering dialogue, balancing narrow interests, representing the interests of minorities, providing institutional infrastructure for social dialogue at the national level.

Źródło: Opracowanie własne

2. Social dialogue in Poland

2.1. Organisations of social partners

The structure of the organisations of workers and employers in Poland is greatly dispersed in comparison with other European countries. At the central level there are three trade unions and four employers' organisations which are recognised as equal and representative social partners (see Box IV.7) participating in central and sectoral social dialogue forums. However, a significant number of people belong to unions that are not affiliated to central organisations, and thus are not represented in the dialogue at regional and national levels.

Box IV.7. Criteria of representativeness of social partners in Poland.

The concept of representativeness of trade unions and employers' organisations operating under the Tripartite Commission (TC) is defined in the *Tripartite Commission Act*.[8] According to the Act, the following entities can be regarded as representative: worker and employer organisations uniting more than 300,000 employees and operating in more than half of the sections of the Polish Classification of Activities (PKD). These conditions are confirmed by the Warsaw district court and its decision is valid for four years, after which the social partners must submit an application for such status again. Representative organisations, in accordance with the Act on TC (as opposed to non-representative ones) are entitled to special rights, e.g. in the legislation process (opinions on draft legal acts), and may appoint representatives to various bodies, Regional Commissions for Social Dialogue, employment councils, supervisory boards, Social Insurance Institution, etc.

The representativeness in the enterprise is defined by the Labour Code. In accordance with the Code, a worker organisation is representative when it associates at least 10 percent of the staff (or 7 percent if the union belongs to a representative organisation at a higher level according to the Act on TC) or when it is the biggest in the firm in a situation where none of the unions in the company meets these requirements. Representative organisations have a privileged position, e.g. in negotiating collective agreements or company regulations. However, according to the law, one company can have more than one representative organisation, which naturally leads to difficulties in dialogue and often lead to deadlocks. Some researchers (Wratny (2010), Gardawski (2009a), Latos-Miłkowska (2007)) indicate that one possible solution to reduce pluralism at the enterprise level could be referendums among workers to show the real representativeness of unions (American model), rather than just rely on the number of their members. In practice this would mean the emergence of a single representative organisation at the company, and avoiding a situation where talks with the employer are conducted by a few union representatives who often have different points of view and are not necessarily inclined to cooperate with each other.

2.2. Workers' organisations

In Poland, workers' organisations can be formed at enterprise level and higher. The latter can be classified as (i) nationwide associations that are representative under the Act on TC (see Box IV.7), and (ii) those that do not meet these criteria. Unions at enterprise level may be associated in sectoral organisations or may remain autonomous.

Three central trade unions currently meet representativeness criteria: Forum of Trade Unions (FZZ), All-Poland Alliance of Trade Unions (OPZZ) and Independent and Self-Governing Trade Union Solidarity (Solidarity). Their internal structures are quite different: Solidarity is a single union with a territorial-industry structure, while the OPZZ and FZZ are confederations of federations and single unions. Due to the fact that their constituent sectoral federations have the largest relative impact on the policies of OPZZ and FZZ, these two central unions have a very strong industry-level structure and a weak regional structure, in contrast to Solidarity.

Relations between the Polish trade unions have been largely determined by a long-term confrontation between two large trade unions that are almost equal in number: OPZZ and Solidarity (FZZ was founded as late as in 2002). In the last decade of communist Poland, OPZZ worked closely with the government, and the underground Solidarity union organised the democratic opposition (see Box IV.8). The division continued in the 1990s with the emergence of Solidarity-based right-wing parties, while OPZZ helped establish new left-wing parties: SDPR and then SLD. The ideological and political divisions, especially in the first period of transformation, were often carried to the enterprise level. It resulted in a model of conflictive pluralism which, alongside high unemployment and the privatisation process, strengthened the decline in unionisation during the first years of transformation (Gardawski 2009b). Conflicting pluralism was not only amplified by legislative solutions (no unambiguous definition of a representative union (see Box IV.7), the high ease of starting a union (see Box IV.8) and political disputes, but also by a trust deficit (typical for the post-war Polish society), undeveloped civil society, and a tendency toward particularism, impeding cooperation between citizens in a broader plane than the trade union movement itself.

[8] The full name of the Act: Tripartite Commission of Socio-economic Matters and Regional Commissions of Social Dialogue Act, 2001.

After 1989, Polish entrepreneurs did not favour the formation of enterprise-level trade unions. It usually resulted from the syndrome of 'small business paternalism', particularly widespread in the initial stage of transformation, which precluded partnership with employees (see Czarzasty 2009). On the other hand, the negative image of unions as highly politicised organisations with unrealistic claims and generating conflicts between the staff and management has effectively discouraged entrepreneurs to assume a neutral or positive attitude towards the possible emergence of these organisations at their company.

The number of union members decreased continuously from 1990 to 2002. It later stabilized at a relatively low level – in 2010 unionisation in Poland amounted to around 7 percent of all adult Poles(about 15 percent of employees, see Figure IV.4), and only one third of workers were employed in enterprises where trade unions operated (see Figure IV.5).

Figure IV.4. Declared union membership in CBOS surveys in 1990-2008 (percentage of total adult population in Poland).

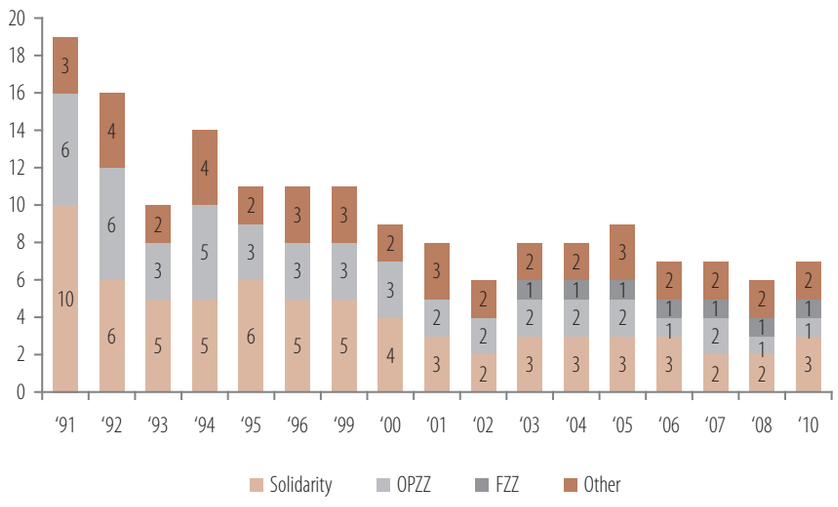
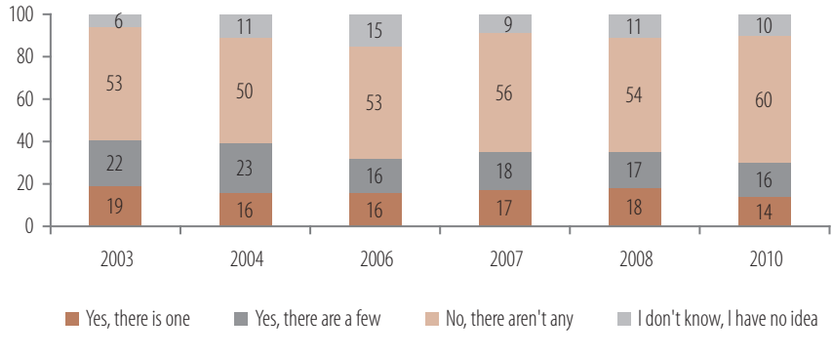


Figure IV.5. Percentage of unionised enterprises in 2003-2010 (percentage of respondents who positively answered the question: 'Are there any trade unions in your workplace?').



Source: Own calculations based on CBOS 2010.

Box IV.8. Evolution of the Polish trade union movement after 1945.

The evolution of the Polish trade union movement can be divided into four stages (see Gardawski 2009a, 2010b Wratny).

The first stage was associated with the operation of trade unions under the authoritarian socialist regime from the late 1940s until August 1980. After World War II, a Leninist-Stalinist monocratic model was imposed on Polish trade unions. Worker organisations were subordinate to the leadership of the Communist Party, and played a role of a 'conveyor belt'. Their main task was to communicate party guidelines to the public, and were treated mainly as a tool for assessing the mood of the working class, controlling their attitudes and for indoctrination. Unions were not, as in a traditional trade union movement, representing the interests of workers, but were an integral part of the power apparatus of the PRL. In the later period (after the Polish anti-Stalinist breakthrough in 1956), union activities started to include production tasks (mobilising workers to perform production tasks set centrally by the party) and those associated with welfare (the activity of unions focused on the management of social funds, such as the Employee Holiday Fund, Vocational Training Fund and others). The organisational model was monistic. At the enterprise level, there could be only one trade union and it had to belong to one trade association. The top of the organisational hierarchy was occupied by a single nationwide Central Council of Trade Unions (CRZZ).

The second stage of institutional changes in union environment was in the years 1980-1981, when most of the aforementioned assumptions of the leninist-stalinist model were challenged and invalidated as a result of a series of strikes which led to the so-called August Agreements in 1980, and the symbolic dissolution of the CRZZ. The principle of monism was forsaken, which enabled the formation of many unions at one company with the sole goal of protecting the workers at the company. On 10 November 1980, Solidarity was registered and quickly took up the majority of workers previously belonging to the CRZZ. As a result at the enterprise level there were two hostile trade unions: those associated with the Solidarity movement and unions supporting the regime. As stated by Gardawski (2009a), the second period of institutionalisation of the Polish trade union movement led to its ideological pluralism.

The third stage involved the introduction of martial law (1981) and undoing the changes made in 1980-1981. According to the decree of martial law, all trade unions were suspended and then cancelled. Solidarity was disbanded and its activists went underground until 1989. The communist party established new and trusted union structures. It was assumed that the rebuilt trade union movement would be fragmented and hence easier to control by the government. Accordingly, unions were created at the enterprise level asindependent legal entities which could be associated to federations without losing their legal independence (which were also legal entities) and then in confederations. In November 1984, the OPZZ was established and functioned unchanged until the end of the 1980s. It was this period that decided on the pluralistic character of future industrial relations in Poland.

Stage four, the final institutionalisation of the union movement, is connected with democratic changes after 1989, the legalisation of Solidarity and the adoption of the Law on Trade Unions in 1991. Under this law, unions were deprived of all their social welfare functions under the previous regime, and their role was limited to the protection and representation of workers. On the other hand, they maintained the institutional gains of the previous regime – premises at the enterprises, full-time employees (funded by the employers), and their leaders were legally protected against dismissal. The principle of pluralism was introduced and at the enterprise level there were no restrictions on the number of unions at an enterprise (the new requirement was that the union could be started by not less than 10 employees). As a result, the transformations from the early 1990s strengthened the legal and institutional environment of trade unions at enterprise level.

During the 1990s the process of pluralisation was increasing, especially within the already highly decentralised OPZZ. Some unions were leaving their parent industry organisations and creating their own structures at enterprise and higher levels, but within the OPZZ. As a result, some companies may have several independent unions affiliated to OPZZ, which could lead to conflicts. Divisions were also evident in the Solidarity movement with the emergence of new organisations: Solidarity 1980 and radical August 80. It should also be noted that in the 1990s, the Tripartite Commission included Solidarity, OPZZ and seven smaller confederations of trade unions, some of which had belonged to OPZZ before 1989. The new TC Act in 2001 introduced criterion of the number of members and contributed to the formation of the Forum of Trade Unions (FZZ), which then was allowed to participate in the Tripartite Commission.

Source: Gardawski (2009a), Wratny (2010b).

Strong and well-established relationships of the OPZZ and Solidarity with the political sphere may interfere with the effectiveness of the impact of both unions on socio-economic policy at national level. In situations where political declarations of the union activists are in opposition to the ruling coalition, the influence of the union is smaller, and rises again when the government coalition includes a friendly party. For the recent several years the politicisation of the unions seems to have been decreasing, especially in comparison with the 1990s, and the organisations themselves have become more pragmatic. However, the three central trade unions have so far failed to adopt a common long-term strategy and appoint a joint expert group, and, as noted by Gardawski (2009a), co-operation has been merely tactical in order to avoid conflicts, and there has been no cooperation on strategic issues. One notable exception was recent negotiations on the 'crisis package' at the turn of 2009/2010, which we discuss later in this chapter. Also at the enterprise level, ideological and political antagonisms between unions are losing in importance.

Box IV.9. Sources of primary data on social dialogue in Poland.

The analysis of industrial relations in Poland, i.e. the scale and structure of unionisation and the coverage of collective agreements, may be based on several complementary sources of data.

The evolution of the trade union density can be analysed on the basis of quantitative studies of the Public Opinion Research Center (CBOS) carried out each year since 1983 (except for the years 1997, 1998 and 2009). CBOS statistics are based on surveys conducted among a representative group of Poles (about 1000 people). The analysis is made on the basis of responses to two questions about membership in a trade union, and – if the answer is yes – an indication of the union. The questionnaire also includes questions (depending on the year of the survey) on the assessment of the unions at the level of the enterprise and reasons why the respondent does not belong to any unions. An almost identical structure of questions about membership in unions can be found in the questionnaire of the Polish General Social Survey (PGSS), although the list of questions is restricted almost exclusively to membership and trust towards unions.

The source of data on enterprise-level collective agreements is the National Labour Inspectorate (GIP), while information about the sectoral agreements is recorded by the Ministry of Labour and Social Policy (MLSP). The disadvantage of these data sets is their general nature – it is impossible to obtain data by region or by section. However, an important complement to GIP and MLSP data on collective agreements is the Wage Structure Survey (BSW). The BSW questionnaire includes questions on the earnings of employees and also a question whether the wage of the respondent is determined on the basis of a collective agreement (at the enterprise or sectoral level).

An important source of primary data used for the analysis of the union structure come from cyclical studies conducted by prof. Gardawski, 'Working Poles' (WP). This research focuses on employees, their relation to employment and working conditions. Because an important part of the questionnaire includes questions on the functioning of trade unions (the structure of their membership, the activity of the enterprise where the union operates, ownership sector, etc.) The WP may serve as an important addition to the CBOS research. An important characteristic of the PP surveys is their identical structure in time, which allows the assessment of the evolution of specific phenomena in the field of industrial relations in Poland.

The image of Polish trade unions among workers is not bad in itself, but worse than in the 1990s (see Figure IV.6). The CBOS research shows that in 2010, 38 percent or respondents rated trade union activities as beneficial to the country, and although almost one-third of adult Poles believe that their impact on the economy is negative, it is a much better rating than with regard to the President and both chambers of the Parliament. Also, as observed by Gardawski (2009a), reduced unionisation in Poland does not mean that employees think unions are unnecessary. In the 'Working Poles' survey from the end of 2007, the question 'Would the situation of workers deteriorate without unions?', 65 percent of adults in Poland replied 'yes', while only 20 percent felt that the situation would not change (among employees it was 72 and 12 percent, respectively). Trade unions at the enterprise are more accepted, although they are also perceived as weak and unable to respond effectively to the challenges of the contemporary labour market (Gardawski 2009b). As is apparent from Figure IV.7, most Poles think that enterprise-level unions are trying but usually fail, while just 14 percent believe unions operate effectively. These views are stable over time.

Figure IV.6. The opinions about unions at national level in 1994-2010 (percentage of respondents who replied the question: 'Are the activities of unions beneficial or not beneficial for the country?')

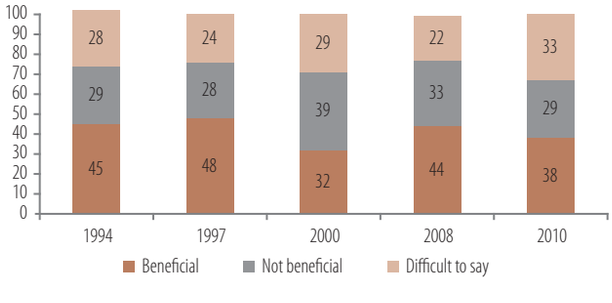
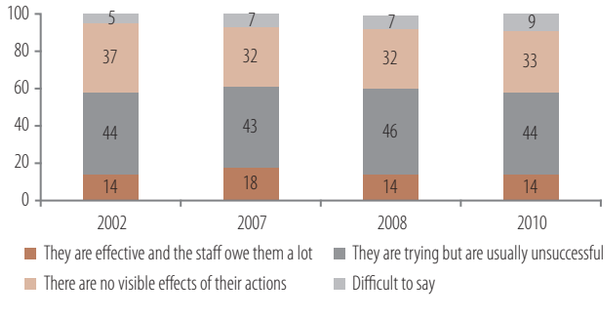


Figure IV.7. The opinions about unions at enterprise level in 2002-2010 (percentage of respondents who replied the question, 'How do you rate the activities of unions at your company?').



Note: The low ratings of unions in 2000 may be associated with the unpopularity of the AWS, the ruling party related to the Solidarity union. The AWS government had very low ratings which could affect the ratings of unions in general.

Source: CBOS (2010).

In Polish trade unions a clear dominance of certain occupations exists with the absence of others. Currently, they associate primarily two categories of workers: skilled workers and white-collar workers of the public sector, i.e. public administration, teachers and doctors. Employees of the fast-growing service sector and low-skilled workers are under-represented. According to CBOS (2009), the highest union membership rate can be observed in education, science and health, where union membership is declared by 25 percent of the employed, followed by transport and communication (22 percent) and mining and manufacturing (21 percent). However, the unions are virtually absent in services, both modern and financial ones, and in trades (4 percent). Union density rates increase with the size of the company (see Table IV.4). There is a similar situation with the structure of enterprises with at least one trade union. Trade unions operate in most educational institutions and in health care (68 percent of those employed in this sector declare that there is at least one union in the workplace), as well as in administration (55 percent).The least unionised are construction and services (see Table IV.4).

Table IV.4. Trade union density in Poland in 2008 by industry and size of enterprise.

	Union density by sector and enterprise size (in percent)	Percentage of employees declaring at least one union at the enterprise
Sector		
Mining, manufacturing	21	43
Construction	11	13
Transport and communication	22	49
Trades and services	4	11
Education, science, health	25	68
Administration	16	55
Size of the enterprise		
Below 50 employees	5	10
From 50 to 249 employees	18	54
250 or more	31	75

Note: Declarations of workers employed in agriculture, forestry and fishing were not included due to the small sample size.
Source: CBOS 2009.

Ownership of the company is an important factor affecting union membership in Poland. In the public sector membership is declared by 35 percent of employees, in mixed-ownership 15 percent, while in the private sector (excluding agriculture) only 3 percent declared union membership (CBOS 2008).

As in other European countries, unions are 'aging'. Unionisation is lowest among young people (younger than 35, see Table IV.5). The average trade union member in Poland is more than three years older than a non-member. In 2009 union members were on average 41 years old (41.1), compared to less than 38 years old (37.6) for non-unionised employees (CBOS (2009)). Statistical analysis of Polish trade unions confirms data from literature mentioned in the previous chapter – the lower the competition in the sector and the less bound it is by rules of free market economy, the stronger the position of trade unions. On the other hand it seems that similar to Western Europe, both the relative overrepresentation of older workers and those employed in the public sector in Polish trade unions may affect their attitude towards public policies, especially those concerning the social security system.

Table IV.5. Union membership, by age category in 2008.

Are you a member of a trade union?	Age				
	18-24	25-34	35-44	45-54	55 years and older
Yes	0*	8	21	33	23
No, although I am employed.	100	92	79	67	77

Note: 100% included all employed workers. * below 0.5%
Źródło: CBOS (2008).

The Polish trade union model is characterised by one of the lowest levels of coordination and cooperation in Europe (see Section 1.3). The relatively low index of horizontal centralisation is due to the scattered centres of decision-making. At the central level there are three organisations, while a relatively large proportion of unionised people are not represented by any central union. The low vertical centralisation stems from the fact that trade unions at higher levels have little influence on unions at lower levels. As stated by Gardawski (2009a), the foundation of the Polish trade union movement is an enterprise, and also the main source of funds for central and branch organisations. This mainly applies to large companies, which in addition to their contributions often provide additional funds to organisations at the sectoral/regional level, which increases the likelihood of dependency on specific companies.

The paradigm based on enterprise-level organisations naturally leads to weaker trade unions, both at industry and national levels. Hence, the whole trade union movement in Poland is relatively weak, and the unions have problems reaching new groups of workers and organising new activities, including financing development, long-term planning, or organising their own expert base, i.e. areas key to the effective representation of employees. Although trade unions have attempted to attract new members in private companies. As early as the mid 1990s, Solidarity in cooperation with the American Federation of Labor and Congress of Industrial Organizations, the AFL-CIO (regarded as a precursor of the development strategy for the revitalisation of the union movement) established the organisational structure of DRZ (Department of Union Development), with the task of formulating a strategy and a program of activities aimed at recruiting new members (see Czarzasty 2009). OPZZ set up a Confederation of Labour for similar reasons. The Polish trade union movement also began to actively benefit from international experience and financial assistance from EU funds. Although the unions have succeeded in recruiting some new members (see Czarzasty 2009, Mrozowicki et al. 2010), in particular in trades (especially in hypermarkets), national surveys show it stopped the decrease in the number of trade unionists rather than reversed the long-term downward trend.

The dependence of central associations on enterprise-level unions also stiffens their structures and makes them less flexible to economic changes. In Poland, sections which have lost their former position in the output structure still retain strong positions in national-level organisations. The emerging sectors are relatively weak, not only because of low unionisation, but also due to the exclusivity of the existing groups in the union movement (Gardawski 2009a). The same is with territorial structures, which is particularly evident in Solidarity. As indicated by Anacik et al. (2009), the territorial structure of Solidarity is highly fragmented and still corresponds to the administrative division into 49 provinces, valid before 1999. It makes it difficult to represent the various structures of the union against the regional administration or at meetings of the Regional Commisions for Social Dialogue (WKDS). The fragmentation of worker organisations, the low level of unionisation and the weak position of trade unions in mobilising its members, result in the situation where the trade union movement in Poland lacks sufficient resources to balance the position of the government in tripartite bargaining. As a result, as we show in subsequent sections of chapter, the dialogue between the government and social partners depends primarily on the good-will of the government.

2.3. Employer organisations

In Poland, national-level employer organisations include the Business Centre Club - Związek Pracodawców (BCC - Union of Employers), Pracodawcy RP (Employers of Poland, formerly Konfederacja Pracodawców Polskich - KPP), PKPP Lewiatan, and the Związek Rzemiosła Polskiego (Polish Craft Association) (see Table IV.6). Similar to trade unions, the employer organisations can be divided into two categories: (1) confederations and (2) single organisations. The confederations (Polish Employers and Lewiatan) include primarily industry associations (e.g. Union of Employers in the Alcohol Industry in Lewiatan) and territorial associations (e.g. Gdańsk Employers' Union in Polish Employers), although sometimes there are also individual members (the largest firms, such as TP SA, PZU in Polish Employers). The Business Centre Club gathers only individual members.

Table IV.6. Employers' organisations.

Name	Year of establishment	Number of associated organisations	Number of employees
Employers of Poland	1989	28; about 7,000 firms	2,000,000
Polish Craft Associations	1989 (based on Craft Chambers founded in 1933)	27 chambers of craft and enterprise; 479 guilds and 222 craft cooperatives.	700,000
BCC – Union of Employers	1991	about 1,200 enterprises	700,000
PKPP Lewiatan	1999	60 organisations with about 3,500 enterprises	600,000

Source: Own elaboration based on Gardawski 2009a and information presented at the websites of the organisations.

In the Polish model of employers' organisations, unlike for example in the Estonian model (see Box IV.10), there is no clear separation between business organisations, and organisations of employers participating only in the social dialogue. The exception is the Business Center Club, which is a formally two-dimensional organisation. On one hand, it acts as a lobbying organisation directed at the interests of its members, and on the other hand as an organisation of employers (Business Centre Club – Union of Employers) to represent them in social dialogue. All its members are included in the lobbying organisation, but not all members have joined the organisation of employers. As stated by Gardawski (2009b), the BCC duality affects the dialogue, especially at the central level, where the lobbying activities are increasingly separated from the subject matter covered by the Tripartite Commission. As indicated earlier in this Part of the Report, any such distinction among employers' organisations in the broad sense, generally leads to imbalance between (i) lobbying oriented at the transfer of resources to its members at the expense of other companies and (ii) solving economic problems and improving the environment of enterprises in Poland.

Box IV.10. Employer organisations in Estonia.

The Estonian model of employer organisations involved in social dialogue is characterised by a rather high uniformity (there is only one confederation of employers), and a strong demarcation between the lobby organisations and those participating in social dialogue.

ETTK (Estonian Employer Confederation) is the only confederation of employers' organisations recognised by the trade unions and the government as a social partner. ETTK is politically independent and unrelated directly to any party. Its statute prohibits the ETTK board to include members that take an active part in political life. Since March 1998 ETTK has been the member of the International Organisation of Employers, and since 2003 has worked with BUSINESSEUROPE (formerly UNICE) and the International Labour Organisation.

In Estonia, there are other business organisations, such as the Estonian Chamber of Commerce and the Estonian Union of Small and Medium-sized Enterprises, but they do not participate in social dialogue, and represent the interests of their members through direct bargaining with administration.

Source: Bukowski, Dębowski (2009).

Polish employers' organisations have little ability to influence the activities of their members, and actually represent the interests of a relatively small group of employers (firms affiliated to central employer organisations employ around 40 percent of all employees). Employers generally treat their representatives instrumentally, as providers of services, even if they somewhat value the prestige resulting from the affiliation (Gardawski 2009b). Under Polish law, companies may simultaneously belong to several employer organisations, which makes it more difficult for their elites to support policies beneficial to public interest that are unpopular among their constituent companies.

Employers' organisations in the Tripartite Commission also differ in terms of membership structure, although none of them (except for ZRP) have specific criteria for membership. In practice a company may become a member of any organisation of employers, which must inevitably lead to competition for new members between central organisations. In this respect, the Polish employers' organisations differ from trade unions. It can be and often is a major source of conflict between various organisations, and competition often dominates over collaboration. We should also note that Lewiatan and BCC, which associate with only private companies, who are relatively most similar. In the initial period of dialogue, they were opposed by the Confederation of Polish Employers (now the Employers of Poland), which included the major state-owned companies. Thanks to the progressive process of privatisation and restructuring this difference is not as pronounced now, but still – if only because of the size – public employers play a very important role in this federation. Another case is the Polish Craft Association (ZRP) associating craft enterprises, distinct from other employers. The vast majority of the members of the ZRP are in fact micro-enterprises, sometimes family companies, thus the role of craft cooperatives and guilds is higher than in other organisations.

Analysing the ownership structure of companies associated in employer organisations, one should pay attention to the large discrepancy with the analogous structure of trade union members. As mentioned above, very few union members work in private-sector enterprises (only 3 percent unionisation). Hence, employers have limited incentive to join broader organisations because there are no trade unions in their enterprises. On the other hand, reaching an agreement between workers and employers in tripartite dialogue can be difficult, because their interests often relate to other areas of economic life. In such a situation, it is more difficult to create conditions for mutually beneficial change and almost impossible to conclude industry-level collective agreements. As observed by Gardawski and Meardi (2010), the low representativeness of employers' organisations may also stem from their strategy. Lacking coordinated structures may be due to their reluctance and fear to conduct a sectoral dialogue (at least with regard to some organisations and sectors), rather than the particular inability to organise. A good example is the metallurgy industry which created a confederation of employers in the early 1990s, but in the face of a potential necessity to negotiate a multi-enterprise/sectoral collective agreement, it was quickly dissolved (see Gardawski and Meardi 2010). On the other hand, legal regulations in the 1990s discouraged concluding collective agreements, as we will discuss later.

2.4. Infrastructure of social dialogue in Poland

Social dialogue in Poland is well institutionalised and structured around three interrelated levels – central, intermediate (sectoral and regional) and enterprise levels (see Figure IV.5). The impact of different levels, however, is diverse. At the central level, dialogue is conducted mainly in the Tripartite Commission for Socio-Economic Affairs (in short – Tripartite Commission). Regional dialogue in all sixteen voivodeships is carried out in the Regional Commissions for Social Dialogue, and at the industry level – by Tripartite Sector Teams (not mentioned in legislation). At the lowest level – enterprise – social dialogue is based on bilateral agreements between individual employers and representatives of employees, such as trade unions and the recently established works councils.[9]

At the central level, social dialogue is organised mainly by the Department of Social Dialogue and Partnership in the Ministry of Labour and Social Policy,[10] and its subordinate institution – CPS Dialog (see Box IV.11). Their competences include: coordinating the work of individual institutions, providing meeting places for dialogue partners, contacting the International Labour Organisation, registration of sectoral collective agreements and the implementation of corporate social responsibility programmes (CSR).

Box IV.11. CPS DIALOG as the institution for the promotion of social dialogue.

Among other things, the effectiveness of social dialogue depends on expert support. In Poland, this task is performed by the Andrzej Bączkowski Centre for Social Partnership DIALOG (CPS Dialog), founded in 1994 and subordinate to the Minister of Labour and Social Policy.

CPS Dialog carries out promotional and educational activities, issues publications on dialogue (including the quarterly journal 'Dialog'), and organises training and seminars for participants. In addition, it owns buildings in which Tripartite Commission meetings are held (and talks of some industry-level groups), along with conferences on dialogue, training for social partners and facilitators of the dialogue from the government or local authorities (e.g. from Regional Commissions for Social Dialogue).

Originally, the CPS Dialog was created as an advisory body and expert base for the participants of social dialogue, similar to the Dutch Social and Economic Council (SER) (see Box IV.12). It was meant to be provider of factual support for the social partners at all levels and expertise that could be used to solve the problem of credibility of reports. Currently, support of social dialogue in Poland is fragmented and is rather based on existing organisational structures within individual social partners and on commissioned analyses from external entities. Apart from the fact that this fragmentation makes it impossible to use economies of scale and consequently reduces the effectiveness, insufficient trust between partners automatically puts the commissioned reports in question, on the grounds of a lack of objectivity. As a result, any report prepared on behalf of workers' or employers' organisation is often negated by the other party. Unfortunately, an IDI research[3] and also other studies (cf. Zybała 2009a) show that the expert function of CPS is implemented in a very limited way, and the activities of this institution primarily focus on providing conference facilities and boarding for the representatives of social partners. As a result, apart from organisations operating in the TC, who may count on dedicated funds from the state budget and the ESF, there is no system for expert support for social dialogue, especially at lower levels: regional, sectoral and in enterprises.

Box IV.12. Expert support in the Netherlands.

One of the most developed institutions of expert support in Europe is the Social and Economic Council of the Netherlands (Sociaal-Economische Raad – SER). It is an independent research institute which prepares reports on macroeconomic policy. In 2008, SER was approximately 120 people strong (see Zybała 2009a) and had an annual budget of EUR 15 million. Interestingly, the institute is fully funded by mandatory contributions paid by entrepreneurs. As stated by Zybała (2009b), social partners in the Netherlands want to maintain their independence from the government and 'cannot imagine using public money'.

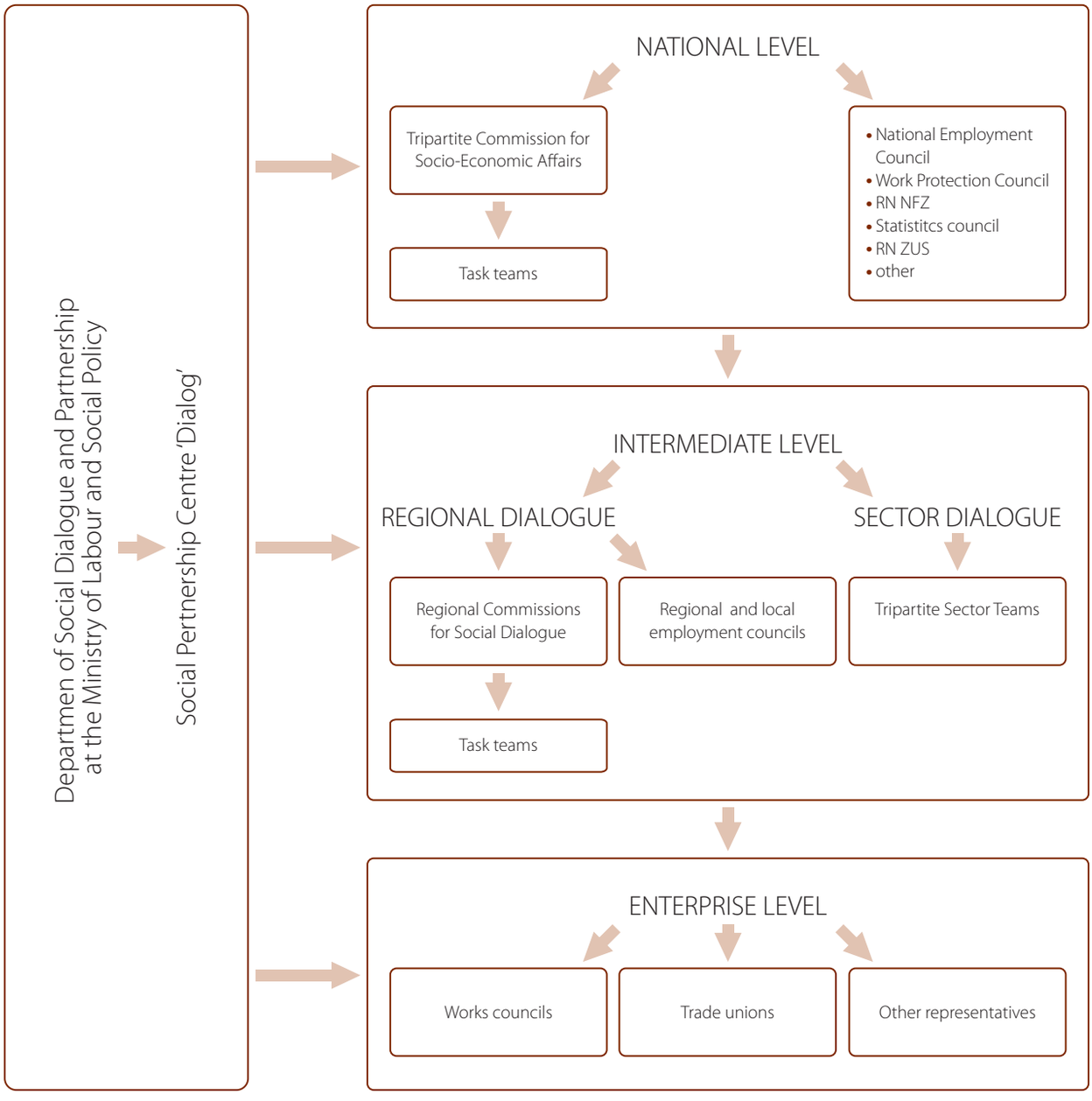
Annually, SER publishes approximately 15-20 papers on such diverse issues as the effects of nanoparticles on health and safety, an analysis of the Lisbon strategy, consumer rights, and also those concerning the economic policies of environmental protection, or on social security and the pension system. The Dutch government has the right to submit suggestions for research topics, but more importantly the 1997 Act requires the government to respond to the results of a report prepared by the SER within a period of three months. Moreover, a principle exists whereby the government must present a justification of their decision when it does not comply with the recommendations of the Council. SER is managed by a 33 person council, with equal representation of employers, employees and experts indicated by the government, including independent experts, such as the President of the Bank of the Netherlands.

Source: Based on Zybała 2009, SER materials.

[9] In this Report we do not discuss representative organisations other than unions, such as European Works Councils, workers' councils in state-owned enterprises, representatives of workers in the fields of work safety, etc.

[10] The Department of Social Dialogue is also at the Ministry of Health; it deals with social dialogue in health care.

Diagram IV.5. Diagram of institutionalisation of social dialogue in Poland.



Source: Own elaboration.

2.5. Social dialogue at national level

The Tripartite Commission for Socio-Economic Affairs (TC) is the most important body of Polish social dialogue at the national level. The work of TC is regulated by a separate Act from 2001, which gave it a range of new powers and determined through amendment of other legislation, a list of issues that the government is obliged to submit in a debate with social partners. These are: (i) the wages in the public sector Act (the subject of bargaining is the average annual growth of wages), (ii) Minimum Wage Act, (iii) the Social Welfare Act (income criteria), (iv) family benefits Act (unemployment benefits and family benefits), and (v) pensions from the Social Insurance Fund Act (indexation of pensions). The TC Act also regulates the fundamental principles of its operation such as the appointment of the Commission members and its chairman (the responsibility of the Prime Minister), and the principle of consensus in the Commission's vote.[11] This means that a resolution on any matter requires the consent of all social partners and government.

[11] In a situation where three parties achieve a consensus on a certain matter (which is an exception rather than the rule), the government has no right to change such a decision (Ministry of Labour and Social Policy 2010a). A precedent in that matter occurred in September 2010 when the government of Donald Tusk decided to reduce the previously agreed minimum wage, as an anti-crisis measure.

Detailed and technical issues related to the work of the Commission are defined by its rules of procedure adopted in March 2002. This determines the tasks of the Bureau of the Commission, the process of convening sessions of the Commission and its task groups, and criteria for their remuneration (TC Vice-President receives a monthly fee of 76 percent of the average wage, and other members receive 53 percent).

Box IV.13. Origins of the Tripartite Commission.

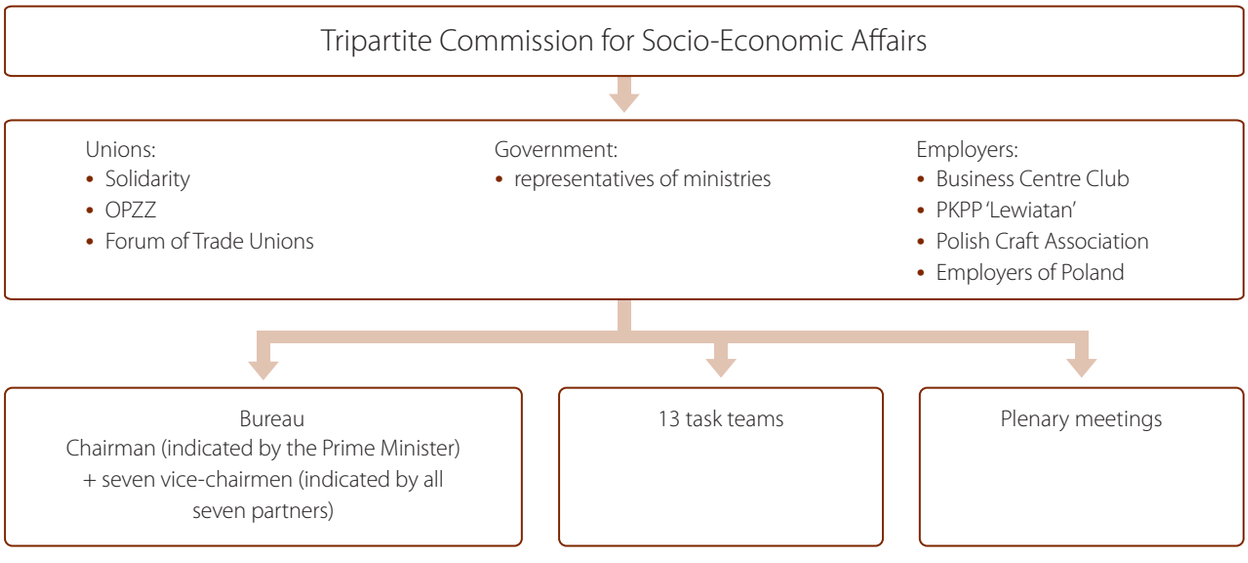
The history of the central institution of dialogue in Poland can be divided into two stages: 1994-2001 and from 2001 until today. The first stage is connected with the 1993 Pact on Enterprise,[4] which ended a wave of protests in 1990s and contained a provision on the formation of the Tripartite Commission. The establishment of a central forum for dialogue, similar to the neocorporatist solutions in Western European countries (see Box IV.1),was to give additional legitimacy to the government and help reduce conflicts related to restructuring and the progressive transformation of the system.

Government support for tripartite social dialogue coincided with a sharp decline in trade union membership. Although unions were losing social support and influence among workers, they obtained a comparatively large influence over restructuring programs and the choice of economic policies. At that time, the two major unions OPZZ and Solidarity were always an important part of the ruling coalition and its main political opposition. As a result, trade unions which participated in the ruling coalition did not see the need for dialogue with other trade unions in TC. The union 'opposition' did not want to strengthen the government and often left the Commission in protest, making it difficult or even impossible for the Commission to function. As a result, tripartite dialogue was not used to seek an agreement but to seek additional resources that would strengthen the position of a given union and its activists against its competitors (Hausner 2007). It was one of the key reasons for the weakness of central social dialogue in Poland at that time. Social dialogue did not encourage the introduction of efficiency changes, but rather inhibited them instead (see e.g. Frieske et al. 1999, Hausner 2007, Gardawski 2009a).

Changing the procedure of central dialogue occurred in 2001, together with the TC Act (TC functioning was previously regulated by government resolutions). The new law, in addition to the basic tasks and competences of the TC, introduced the principle that the presence of even one organisation acting on behalf of a party (trade unions or employers' organisations) is a sufficient representation for the requirements of central social dialogue. Resignation in the work of the Commission (as it was in 1999 when OPZZ left the TC) thus became unprofitable, since it would not break the work of the TC. Furthermore, remaining in the TC gives the right of veto, because the resolution of TC in each case requires the consent of all participants.

Since that time, there has also been a decrease in politicisation of the work of the Tripartite Commission. Nowadays it is even more clear as the ruling party does not have a union background. For the first time since 1989, the government is thus not directly associated with any central trade union organisation and not positioned on the dividing line of communists – anti-communists. Thus OPZZ and Solidarity are no longer enemies in the TC, which allows them to focus on representation of their members rather than on political activity (see Gardawski, Meardi 2010).

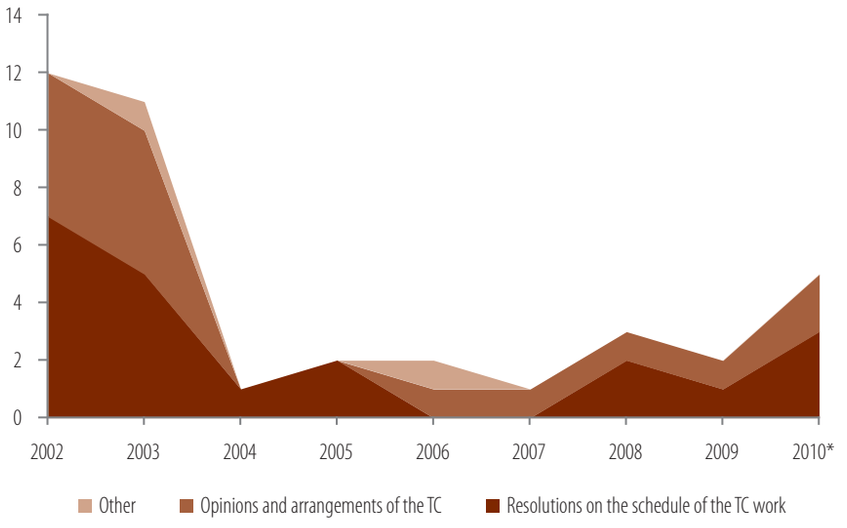
Diagram IV.6. Composition of the Tripartite Commission for Socio-Economic Affairs.



Source: Own elaboration based on Ministry of Labour and Social Policy (2010a).

The Tripartite Commission has the right to issue resolutions which regulate its own conduct (e.g. rules of procedure), or to present the positions of its members (e.g. on draft laws, minimum wage, etc.). Resolutions can be issued under the condition of common agreement of all participants. Figure IV.8 shows the annual number of resolutions by the TC between 2002 and 2010. Most of the resolutions concerned the internal affairs of the Commission, i.e. its rules of conduct, creating a task team, etc. The vast majority of resolutions (more than 50 percent) were issued in the first two years of its existence, when the Commission was discussing its own rules and during the negotiations on the 'Pact for work and development' when the TC chairman was Jerzy Hausner.[12]

Figure IV.8. Tripartite Comission resolutions in 2002-2010, by subject.



Note: * – as for July 31

Source: Own elaboration based on Ministry of Labour and Social Policy (2010a)

The Bureau of the Commission, on the basis of TC resolutions, has the right to appoint task groups which discuss and consult legislation and policies on specific issues of socio-economic development. As of July 2010 there were nine permanent task teams and one temporary team (see Figure IV.9).

Figure IV.9. Number of meetings of task teams 2007-2009.

Note: * Task team on self-government workers was created in 2009.

Source: Own elaboration based on Ministry of Labour and Social Policy (2010a).

Figure IV.9 shows the activity of individual task groups in 2007-2009. Since the founding of the TC, most activity has been from teams on social security, economic policy, labour legislation and the budget, salaries and social benefits. The first two are directly related to the statutory powers of the TC. According to experts (see Gardawski 2009a), as well as participants in the dialogue (expressed during

[12] In the end, Pact was not signed, for more information see: Gardawski (2009a), Gardawski, Meardi (2010).

IDI interviews) problem teams operate more efficiently than the TC as a whole. This comes primarily from the fact that they have strictly defined tasks not directly related to current political disputes. At the same time, the surveyed social partners indicated a trend in which decisions taken in the problem groups on the basis of consensus were not accepted in plenary sessions, because the political accountability of partners in relation to their own members forced them to reject the concessions.

While the institutionalisation of Polish social dialogue at the central level may be regarded as satisfactory in a European context (although it lacks dedicated expert support), the TC extremely rarely achieves consensus. This is due to several reasons. Firstly, the social partners have opposite interests, and in addition to objective reasons (employer-employee relations, different groups/sectors represented by the partners) there is also a matter of mutual antagonistic attitudes and personal disputes. Therefore, despite the relatively high activity of the TC task teams, in recent years it has failed to come up with relevant agreements. As a result, the social dialogue at a national level in Poland is mainly consultative. Although the social partners share their knowledge with the government during the various meetings, the government has the initiative and the decisive vote, choosing which elements will be implemented in the legal system. According to Andrew Zybała (Zybała 2009), 'the practice of Polish dialogue induces fewer formal agreements in which the parties formally agree to take certain actions or refrain from certain activities (e.g. protests). In this model of dialogue, the partners do not reach the level of mutual commitments and fail to formulate a specific plan of discussion. Instead, it is dictated by current events and challenges. There is also no process of building a common understanding with regard to these events and socio-economic terms.' In other words, dialogue mechanisms provide the connection of the government and corporate entities of dialogue, which is a value in itself, but not sufficient to foster the modernisation of the country and to contribute to the implementation of long-term reforms (see Hausner (2007), Zybała (2009a), Gardawski, Meardi (2010)). Dialogue over the labour market issues has been relatively more efficient and underlined by several important agreements, particularly concerning legislation (temporary work, tele-work, or the anti-crisis package, see Box IV.14).

Box IV.14. Negotiations of the anti-crisis package in Poland.

Although the financial crisis after the collapse of Lehman Brothers affected the Polish economy much less than most European countries, in 2009 Poland's economic growth slowed significantly (from 5.1 percent in 2008 to 1.7 percent in 2009), the Polish currency fell, the volume of exports declined, and the number of unemployed increased.

These adverse changes increased fear of the consequences of the global crisis in Poland. This gave a new impetus to the work of the bipartite social dialogue in the Tripartite Commission. Negotiations between employers and trade unions at central level began in February 2009 and in less than two months the crisis package was signed. It included 13 points on areas where anti-crisis measures should be developed. The agreement covered three areas: (1) wages and social benefits, (2) labour market and employment relations, and (3) economic policy. The partners emphasised the word 'package', i.e. a comprehensive document including concessions from the unions (e.g. more flexible working time) and also employers (e.g. restrictions on fixed-term contracts).

The government, which was not a party to the agreement and did not participate actively in the negotiations, initially expressed approval of the document. A few months later, however, when it was preparing relevant legislation, it implemented only some of the records of the 13 point package, which led to major discontent mainly on the side of the trade unions.

Signing the bilateral agreement was an important precedent for the central Polish dialogue, not only because of the contents of the package, but primarily because of the very fact that the parties managed to come to an agreement. This proves that dialogue in Poland has reached a certain maturity (previously in similar circumstances, the conclusion of the agreement turned out to be impossible) and confirms that the institution of the Tripartite Commission can serve as an effective mechanism for negotiation and consultation between the dialogue partners, concluding with important agreements.

The attitude of the government is a more difficult problem. First of all, the government is subject to considerable fluctuation, a different ruling coalition may have different sympathies and also a different approach to dialogue itself. It is important how great the personal commitment of the Minister responsible for social dialogue is, and to a lesser extent, how great the involvement of the Prime Minister is. Whether the government thinks about social dialogue seriously or rather as a sad duty, it is a key factor for the intensity and authenticity of the dialogue as a tool for shaping public policy. This is even more important within the Polish institutional environment, due to the weakness of social partners. In fact, the government has the right (and temptation) to not agree to any proposal of the partners and, when consensus is not reached, come up with the final decision even if other parties have reached an agreement in the TC (as in the case of the anti-crisis package). As indicated earlier, such a solution is justified by law, in so far as the democratically elected government should be able to press ahead with its own political line, even contrary to the social partners, provided that it does not explicitly treat social dialogue as a pure facade.

A compromise is not always possible, and in many cases the positions of the parties are too distant from each other, or too fundamental to be approximated. However, if the government does not take into account the opinion of partners, it is obliged to explain its reasons. Furthermore, in many respects, partners must make a lot of decisions on the basis of bilateral dialogue without the participation of the

autonomous government, as in many Western European countries. It should be noted that in many respects, the tripartite dialogue can be convenient for social partners, who can always pass the responsibility for the results of dialogue back onto the government. For the social dialogue in Poland to reach European standards, worker and employer organisations must learn to negotiate and abide by the agreements concluded in the bilateral dialogue, and must also be able to convince their members to accept the agreements (see Czarzasty 2009).

On the other hand, in the present institutional regime, partners cannot propose their own counter-proposals when they have managed to develop a common position. This problem may be solved by a formal legislative initiative. Social partners, unions and employer representatives often complain that they do not have the right to come up with a legislative initiative. Importantly, participants in the dialogue do not have such a right, although formally they represent more than 300 thousand people, while a 'regular' civic initiative requires only more than 100 thousand signatures. This also means that the autonomous (bipartite) dialogue may have no legal significance: in a situation in which employers and employees reach a consensus, its effect on legislation depends only on the will of a third party – the government. Representatives of employers and employees have therefore relatively fewer incentives to seek bilateral autonomous agreements.

It is frequently recommended that the work of the Commission should be more representative in respect to the general public through the inclusion of representatives of other communities, particularly NGOs, as discussions within the TC often concern topics directly related to other social groups than employers or employees (for example, indexation of pensions for retirees). However, in this context, the potential effectiveness of such arrangements in the Polish institutional order may raise some doubts. The TC Act makes it possible for the representatives of other institutions to voice their opinion, but they surprisingly rarely use their right to do so. This can be caused by either a low awareness of the existence of this instrument, for example among NGOs, and the sense that it gives them insufficient influence in the TC. As a result, entities unrepresented in the TC may perceive their potential impact on the outcome of the dialogue to be ineffective in practice. It seems that the government should be more involved in raising the representativeness of the TC. As a representative of the general public, the government is indirectly obliged to represent the public interest against the positions of the traditional social partners, limited to the protection of the respective interest groups.

In contrast to the negligible participation of non-governmental organisations in social dialogue, local government is starting to play an increasingly important part. Local governments should be partners of central institutions in a discussion about the key issues of economic and political reforms, and also assume the role of public representatives at the local level – they organise debates with the residents of the region, workers and entrepreneurs. The absence of the non-governmental sector and other social groups that by definition are difficult to represent in the TC (e.g. taxpayers, consumers, young people etc.) significantly reduces the legitimacy of TC arrangements, at least with regard to matters concerning the interests of social groups not represented in the TC. It discourages those groups to take responsibility for the result of these arrangements and somewhat exempts them from the necessity of their observance.

It is up to the responsibility of the government to seek a compromise which takes into account equally those citizens directly represented in the TC and those that are not represented in social dialogue. As shown by the arguments presented in the previous chapter, social dialogue can lead to the modernisation of the economy and thus to rapid economic growth. In order to make this happen, the government should try to ensure that social dialogue is focused primarily on the question of development, job creation, and institutional and legal conditions for rapid economic growth, rather than around the consumption of fruits of this growth. In other words, the government should strive to ensure that the social partners, especially trade unions, are more than before interested in the policies for economic growth and adaptation to economic changes, such as those expressed by the Lisbon Strategy, Poland 2030 report, or the National Regional Development Strategy. It is worth noting that the social pacts which in the past have been concluded in European countries, and which best contributed to increased prosperity, focused on the priorities that were fully convergent with the priorities of the Lisbon Strategy, see Box IV.15.

An important aspect of the TC work is the evaluation/assessment of the impact of the proposed policies. Although government proposals are generally well-defined, in the sense that they have a specific form of draft legislation or institutional arrangements, in Poland they are rarely accompanied by well-explained reasons for intervention and assessment of their effects on the economy and labour market (see Zubek 2008). For that reason, according to our IDI research, social partners in Poland cannot adequately relate to a specific project in the short period of time usually reserved for the debate. In particular, they are unable to accurately assess the pros and cons of the proposal of the government from the perspective of the whole economy, and are unable to assess who and to what extent will lose or benefit from its implementation at the micro level. Unfortunately, it is often the case with particularly sensitive amendments, such as changes in social spending and taxation, i.e. public finances. This situation can be beneficial to the government and to those participants in the discussion for which hiding the actual costs and actual benefits of the proposed solutions is currently useful, but it can mean the imposition of significant burdens on the rest of society, including future taxpayers.

Box IV.15. Social pacts in Europe – Dutch and Irish examples.

Over the previous 20-30 years, social pacts have been concluded many times in Western countries. They were motivated by the necessity of reforms in the face of growing international competition and the desire to maintain the gains of the European social model (OECD 2006, Pochet et al. 2010). Simultaneously, the central idea of these pacts was the participation of social partners, involving the inclusion of trade unions and employers' organisations in developing the country's development strategy. Social agreements were concluded in Denmark, the Netherlands, Ireland, Spain, Slovenia and Italy, each time reaching a broad social consensus (which ensured the sustainability of the agreements). They included issues related to the labour market and the entire area of political and structural reforms that were critical for the development of those countries in the long term.

The Netherlands has one of the longest traditions of social dialogue, and its experiences are a model example of cooperation between the government and representatives of various social groups in making many important socio-economic decisions. A very important step was the Wassenaar agreement of 1982 which considerably helped overcome the crisis of the late 1970s and early 1980s associated with the oil shock and the 'Dutch disease' (see e.g. Zybała (2009b), van der Meer, Visser (2010), Visser, Hemerijck (1997). In the bilateral Wassenaar agreement with employers, unions agreed to suspend the indexation of wages and reduce wage growth below the productivity growth. In addition, in 1984, they agreed to lower the minimum wage by 3 percent and then freeze it for the next 6 years. In the following years there were altogether 15 agreements and pacts on the following: protection of workers, increasing the flexibility of labour market, reduction of inequalities in the labour market between the employed and the unemployed and inactive, or those with an unstable job situation (outsiders in the labour market), pensions, maternity leave and child care system in the situation of the increasing rate of employed women, and traditional areas of wage growth and competitiveness of the economy. As stated by van der Meer, and Visser (2010), partners and the government reached an agreement in all these areas, although negotiations were often difficult and a compromise was concluded after a long time.

In Ireland, since 1987,wage growth has been coordinated by central agreements concluded every 3 years, in which unions accepted a relatively slower wage growth (initially at 2.5 percentage points). In return, the government lowered the tax burden for employees. The pacts, which were initially treated as a means of coping with the difficult economic situation of the country (the unemployment rate in 1987 was 16.6 percent, inflation was 12 percent, deficit – 8 percent, public debt 117 percent of GDP), in consecutive years developed into a comprehensive mechanism for introducing political reforms. It is important to mention the expert support of the Irish dialogue. Any negotiations were preceded by a report from the National Economic and Social Council (NESC), which presented the country's current economic situation and forecasts of future developments, and also the context of necessary reforms. An important innovation of Irish social dialogue is the inclusion of NGOs as social partners and their active participation in national-level negotiations (O'Donnell et al. 2010).

This situation may contribute to the treatment of the social dialogue by the participants as a façade. If the government does not provide well-justified calculations that precisely determine the impact of their proposal on the economy and labour market as a whole and for individual social groups and businesses, there is no reference point on which the opinions of participants can be based. At the same time, with the usually short time for discussion and lower availability of relevant data than the government, social partners cannot prepare their own evaluations, and even if they do it is easy for other participants in the dialogue to challenge them. As a result, all arguments presented in the discussion, regardless of their actual content, can be easily ignored. In this way the important goal of public debates, i.e. finding the most adequate and effective solutions in the field of socio-economic policy and gaining public acceptance for them, can never be achieved, even approximately. For the public consultation process to be a substantial support to the legislative process, to provide greater social legitimacy to the decisions taken by the authorities and improve their quality, it is essential that all participants in the debate are well-prepared. This requirement does not only mean technical knowledge of the proposals under discussion, but above all the ability to subject them to a thorough and substantive analysis.

Polish social partners are beginning to come up with their own initiatives and pay close attention to in particular these potential areas and directions of the debate, which are ignored or inadequately defined by the government. Such actions are particularly important when in spite of the increasing problems, the government is not coming out with proposals to solve them or inappropriately identifies the growing threat, and in effect leaves them outside the debate. In this case, it is important to draw the attention of public opinion to the point of view of employers and trade unions and other interest groups – in modern social dialogue access to reliable and comprehensive information is thought to be a basic civil right. It is particularly important that such initiatives are extensive and balanced documents, supported by reliably documented and logical arguments.

2.6. Dialogue at the regional level

Regional social dialogue commissions (WKDS) are the most important institutions of political dialogue at the regional level. They are appointed under the Tripartite Commission Act and the detailed rules for their operation are determined by the Order of the Prime Minister on Regional Commissions for Social Dialogue. The Act specifies that the committees are established at the initiative of representatives from organisations representing employers and employees on matters that they think relate to local issues. The commissions are appointed on their behalf by the governors. Similar to the TC, the Regional Commissions include representatives of the regional

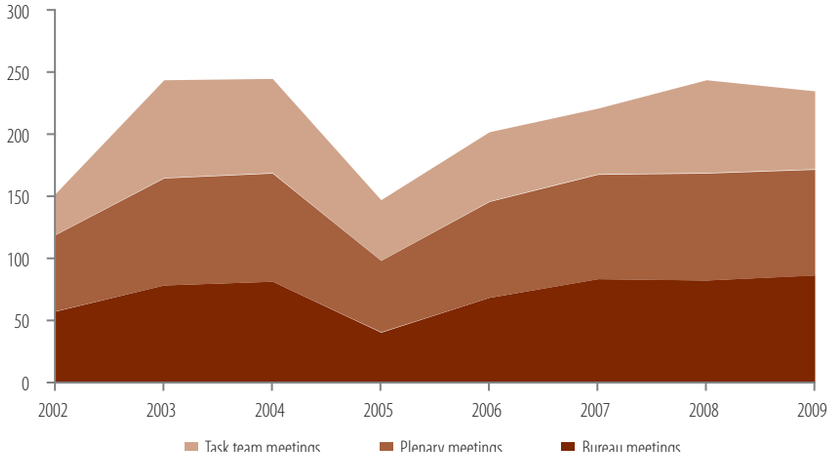
structures of representative organisations of employers and workers, representatives of the governor as part of the government, and representatives of the Speaker of the regional parliament. Each party nominates three representatives (see Ministry of Labour and Social Policy 2010b).

Diagram IV.7. Organisation of work at the Regional Commissions for Social Dialogue.

Source: Own elaboration based on the Ministry of Labour and Social Policy (2010b).

Similar to the Tripartite Commission, the regional commissions have the right to appoint task groups, but unlike the central TC teams are not very active in most provinces (in 4 regions in 2009 there were no meetings of any task team). The TC Act gives the regional commissions for social dialogue the right to hear cases that cause conflicts between employees and employers of enterprises located in the region. The commissions may review the details of the case or pass resolutions on the need of appointing a person with a mission of goodwill (for example, among people who are on a nationwide list of mediators), whose task is to mediate between the parties.

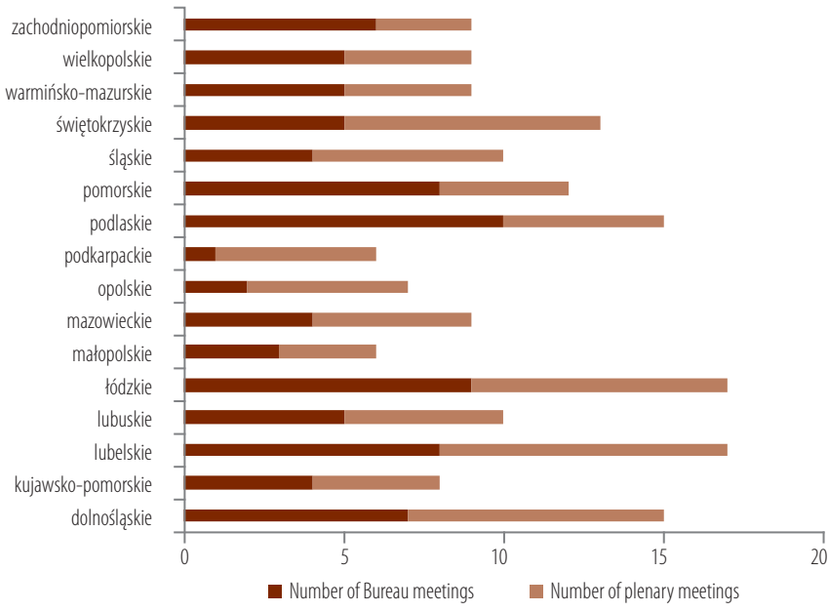
Figure IV.10. The total number of meetings of the Regional Commissions for Social Dialogue in 2002-2009.



Source: Own elaboration based on the Ministry of Labour and Social Policy (2010b).

The most common complaints about the work of regional commissions (see e.g. Sroka 2009, Gardawski 2009b) concern not clearly defined objectives, lack of cooperation and coordination of the Regional Commissions with the Tripartite Commission and with the representatives of local self-governments, resulting in low prestige and almost complete anonymity. Undoubtedly, this situation adversely affects the efficiency of dialogue at the regional level. As noted by Sroka (2009), at this level the dialogue often focuses only on the resolution of current local conflicts and disputes, which in itself is very desirable, but far from enough. The Regional Commissions do not undertake strategic activities that are important from the perspective of regional development. One of the reasons is the underfunding of such institutions, a significant fluctuation of staff and lack of substantial expert support.

Figure IV.11. Plenary and bureau meetings of the regional commission for social dialogue in 2009, by region.



Source: Own elaboration based on Ministry of Labour and Social Policy (2010b).

This state of affairs was discussed at the meeting of regional commissions in Lublin in September 2009, attended by representatives of five different Commissions and the Bureau of the TC. The result of this meeting was common position on proposed changes in regional dialogue. The most important resolutions concerned the need for redefined tasks of regional commissions, a new system in which the decisions of the regional dialogue are binding to the government, improved communications between regional commissions and the TC (one good example is a fact reported during the meeting, that the TC has never sent any case to the regional commission in Lublin for consideration) and changing the rules of funding the regional commissions. [13]

2.7. Dialogue at sector level

Sectoral dialogue is the third pillar of social dialogue in Poland. Due to its restriction to part of society it does not have such an influence as the TC. At the same time, however, thanks to its greater effectiveness in purely practical terms, it can influence economic processes at regional or even national level. Its advantage over the central and regional dialogue lies primarily in the fact that sectoral negotiations are always targeted. In comparison with the dialogue conducted at enterprise level, the advantage of sectoral dialogue is based on different bargaining power; on the one hand social partners are much stronger (especially the employees), and on the other hand the negotiations at the company level have no real influence on legislation. It is hard to imagine the involvement of the government in a dialogue at the enterprise level that would be conducted similarly to sectoral bargaining.

Appointing the Tripartite Sector Teams (TZB), similar to the TC, dates back to the first half of the 1990s and initially was associated with restructuring of the sectors of the Polish economy. Later, the teams were used to negotiate sectoral agreements, but it mainly concerned sectors with the dominant role of state enterprises. The first of the teams, the Tripartite Team for the Social Security of Mine Workers, was the result of agreements between the government and employees in 1992. Since then more teams have started to appear, and in 2009 there were 13 teams in total. Most teams (9) are established in the Ministry of Labour and Social Policy, others are in the Ministries of Infrastructure and Health [14] (see Table IV.7).

Although during nearly twenty years of sectoral dialogue in Poland many new teams have been established in new and/or fully privatised industries, the lack of such teams in many other areas is clearly noticeable. This is particularly important in the context of dialogue at the level of the European Union. The EU is intensively developing sectoral dialogue, which is reflected in the existing around 30 sectoral commissions. The main reason for this is that teams are grassroots initiatives, and almost always are initiated by employees (MLSP 2010d). Therefore, the sectoral teams first appear in industries with traditionally well-organised networks of unions (usually in state-owned sectors), and do not exist in most industries of the private sector. The second reason is reluctance on the part of both social partners and government, connected with the widespread belief in some circles that the current number of sectoral teams is sufficient, despite regular requests from new sectors to create more teams.

[13] Position no 3/2009 of the Regional Commission for Social Dialogue in Lublin, the representatives of the Bureau of the Tripartite Commission for Socio-Economic Affairs, and the representatives of the Bureaus of the Polish Regional Commissions in Eastern Poland, date 21 Sept 2009 on solutions for stronger institutions of social dialogue at the regional level.

[14] The following teams work at the Ministry of Labour and Social Policy: Tripartite Team for Social Security of Mine Workers, Chemical Workers, Energy Sector, Social Conditions of Restructuring Metallurgy, Restructuring Mining and Sulphur Processing, Light Industry, Restructuring the Defence Industry, Lignite Sector, and Shipyard Industry. Teams at the Ministry of Infrastructure are as follows: Team for Ship Transport and Marine Fishing, Construction and Municipal Services, and Rail Transport. The Ministry of Health has a Tripartite Team for Health Care.

Awareness of the existence of sectoral teams is low. Gardawski (2009b) showed that only 29 percent of employees in industries with Tripartite Sector Teams were aware of their existence. The activities of the teams are not regulated by law [15] (each team operates under different rules), hence the need to unify the principles of their work, including the ability to create new teams. In the absence of an appropriate law, the teams are governed by internal regulations, which also include the list of organisations involved in their work.

Table IV.7. Tripartite Sector Teams.

Name of the team	Year of establishment	Representatives	Affiliation
Tripartite Team for Social Security of Miners	1992	4 representatives of ministries 13 unions Association of Employers in Coal Mining	Ministry of Labour and Social Policy
Tripartite Team for Social Conditions of Metallurgy Restructuring	1995	4 representatives of ministries 5 unions Association of Employers in the Metallurgy Sector in Poland	Ministry of Labour and Social Policy
Tripartite Team for Energy Sector	1998	5 representatives of ministries and the representatives of Energy Sector Regulation Office 5 unions 5 employers' organisations	Ministry of Labour and Social Policy
Tripartite Team for Socio-Economic Conditions in Restructuring Mining and Sulphur Processing	1998	5 representatives of ministries 5 unions 4 representatives of boards of companies in the industry	Ministry of Labour and Social Policy
Tripartite Team for Socio-Economic Conditions in Restructuring Defence Industry	1998	5 representatives of ministries 3 unions 1 employers' organisation	Ministry of Labour and Social Policy
Tripartite Team for Light Industry	1999	3 representatives of ministries 2 unions 2 employers' organisations	Ministry of Labour and Social Policy
Tripartite Team for Ship Transport and Marine Fishing	2002	5 representatives of ministries 3 unions Polish Ship Owners Association	Ministry of Infrastructure
Tripartite Team for Chemical Sector	2003	4 representatives of ministries 6 unions 3 employers' organisations	Ministry of Labour and Social Policy
Tripartite Team for Rail Transport	2003	3 representatives of ministries 15 unions Rail Transport Employers' Association	Ministry of Infrastructure
Tripartite Team for Health Care	2005	6 representatives of ministries 3 unions 4 employers' organisations	Ministry of Health
Tripartite Team for Shipyard Sector	2006	3 representatives of ministries (and ARP S.A.) 3 unions 2 employers' organisations	Ministry of Labour and Social Policy
Tripartite Team for Construction and Municipal Services	2005	7 representatives of ministries 4 unions 5 employers' organisations	Ministry of Infrastructure
Tripartite Team for Lignite Industry	2006	4 representatives of ministries 5 unions Employers in Lignite Industry	Ministry of Labour and Social Policy

Source: Own elaboration based on the Ministry of Labour and Social Policy (2010c).

Unlike the other institutions of social dialogue in Poland, the Tripartite Sector Teams are not obliged to determine their composition on the basis of representativeness within the meaning of the Tripartite Commission Act (2010C MLSP), and their composition is rather

[15] According to an idea from 2001/2002 the sector teams were to work at the Tripartite Commission. This solution was to give them legal context and increase their abilities. The idea was rejected by the representatives of unions and it was decided that the sector teams would be independent and not connected with the TC, remaining the major independent forum for Polish sectoral dialogue.

determined by the usual rules.[16] Any change in their composition requires the consent of all parties. This rule resulted in preventing some organisations from entering teams, e.g. PKPP Lewiatan (employers' organisation) has been blocked in several teams. As a result, some teams include representatives of trade unions (especially 'August 80') and employers' organisations (e.g. the Polish Union of Developers) that are not represented at a national level, and also representatives of the boards of major companies in an industry, not affiliated to any organisation (e.g. the Board of 'Siarkopol' Mines). On the other hand, this formula does not guarantee the participation of representative organisations.

This fact and the specificity of sectors with tripartite teams have resulted in a situation where out of all representative employers' organisations only Employers of Poland are present in most teams, while the other three organisations are represented from only two (the Polish Craft Association) to five teams (PKPP Lewiatan). Apart from the reluctance of unions to extend the composition of the teams, this situation is also caused by the fact that PKPP, BBC and Polish Craft Union associate mainly private entrepreneurs, while sectoral dialogue takes place mostly in the state sectors that undergo restructuring. At the same time the only sector team which brings together representatives of all the representative organizations is the Tripartite Group on Health Care. It is worth noting that the Tripartite Team for Social Security of Miners includes representatives of the government, social partners and also institutions such as the Mining Authority and the Central Mining Institute.

Despite all the objections concerning the sector teams, it must be said that some of them work very effectively. Sectoral dialogue resulted in development strategies or successful restructuring of several industries (e.g. iron and steel, coal, sulphur, chemical industry, light industry), agreements such as agreement on the conclusion of the strike at the Budryk mine in 2008, and social protection in the metallurgy industry.

2.8. Dialogue at enterprise level

Collective bargaining between employers and employees, i.e. autonomous dialogue, is a key element of social dialogue and industrial relations at the enterprise level (Towalski 2007). In many European countries, collective agreements are the primary source of labour law on the rights of workers and the relationship between employers and trade unions. In Poland, however, only a small percentage of workers are covered by collective agreements, i.e. only about 35 percent of employees (see Figure IV.1 and IV.16 Box), and the number of agreements is falling each year. According to data of the National Labour Inspectorate, as many as 1,464 agreements were signed in 1996 (and 1,717 additional protocols). In 2009 only 123 collective agreements were concluded (plus 1,732 additional protocols). The number of multi-enterprise agreements is among the lowest in Europe. According to data from the Ministry of Labour and Social Policy in 2010, there are only 169 multi-enterprise collective agreements which cover approximately 390,000 workers, mostly employed in the public sector or privatised enterprises.

The most important restriction in the conclusion of agreements in Poland, which we have shown earlier, is the absence of unions at enterprises (mainly in the private sector), and only unions have the right to represent workers in such agreements with the employer. Another problem is the avoidance of collective agreements by employers.

In Poland, collective agreements can regulate labour issues, but only when they raise standards set by the Labour Code (or other laws), and under the relatively high labour standards in Poland this considerably narrows the potential scope of autonomous dialogue. If the Labour Code included the possibility of regulating the employment relationship on the principles of deregulation, i.e. allowing for the deviations in certain areas from the Labour Code, then it would create a wider space for this type of bargaining. According to Męcina (2009b), this could include such issues as working time, or for example the possibility of exchanging long periods of notice for indemnation. And as a result the narrow scope of bargaining results in the presence of agreements primarily in public sector or privatised enterprises, which in a sense 'inherited' their collective agreements.

As noted by Męcina (2009a), aversion to collective agreements among Polish employers may have resulted also from regulations. Before 2001 they virtually did not allow termination of any agreement without the consent of trade unions. This made employers reluctant to sign collective agreements, i.e. obligations to their employees without the possibility of termination, especially under the dynamically changing conditions of the Polish economy. Nowadays, there is also a regulation which prevents an employer belonging to an employers' organisation that is party to a multi-enterprise agreement from terminating this agreement after leaving the employers' organisation.

The studies of Gardawski (2009a), Czarzasty (2009) show that despite the absence of collective agreements, trade union activities in many enterprises can contribute to improving working conditions. One model example is the hypermarket trade in which unions have reached relatively most, achieving better health and safety conditions, timely payment of wages, improved calculation of working time and reduced risk of mobbing.[17] As stated by Gardawski (2009a), trade unions in Poland serve as a kind of 'scarecrow' for the employers who must expect that in a situation when they exceed a certain limit for anomalies, the staff will establish a trade union at the enterprise and will assert their rights in a conflict.

[16] In most case it was assumed that Tripartite Sector Commissions include social partners (unions and employers' organisations) who have signed sectoral agreements.
[17] Importantly, very intense controls of the National Labour Inspectorate (GIP) also had a role in improving the working conditions at hypermarkets.

Apart from the low level of participation and coverage of collective agreements, defects in Polish autonomous dialogue include the fact that only rarely does it relate to topics such as non-standard working arrangements, support of work-life balance, or investment in human capital, and is limited primarily to wages (see Figure IV.13). As demonstrated in Part Two, unions can play an important role in providing educational services and advice on the labour market. It seems that this feature has not yet fully developed in Poland.

Box IV.16. Collective agreements in Poland according to a BSW survey.

The primary source for the analysis of collective agreements, with regard to spatial distribution, by PKD section and ownership, is Remuneration Structure Survey (BSW). In this questionnaire there are questions on earnings of those employed, and also a question about whether the respondents' wage is is determined on the basis of a collective agreement (distinguishing between enterprise-level and multi-enterprise/sectoral level).

In Poland, the wages of 39 percent of employees (in companies employing more than 10 people) are regulated by collective agreements: 36 percent of employees are covered by the enterprise-level collective agreements, and 3 percent by multi-enterprise agreements. In the public sector the coverage is 43 percent, and in the private sector 37 percent. Most people whose wages are regulated by a collective agreement are employed in the energy sector (Section D) and mining (Section B), and fewest in education (Section P) and public administration (Section O) – see Table IV.8.

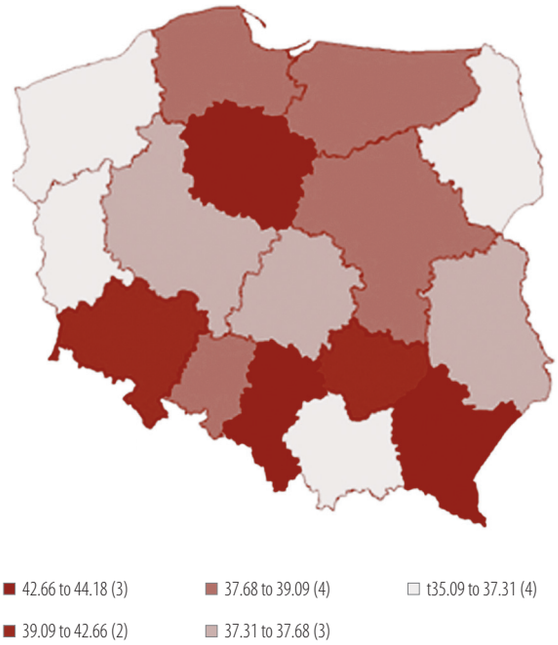
Table IV.8. Percentage of employed workers whose wages are regulated by collective labour agreements, by PKD section, in 2008.

Section	A**	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
percentage	62	84	46	93	56	40	30	70	26	20	48	54	35	38	7	20	39	36	21

Note: *data concern enterprises with more than 10 employees; ** the given sections are in accordance with the PKD classification from 2007.
Source: Own calculations based on BSW.

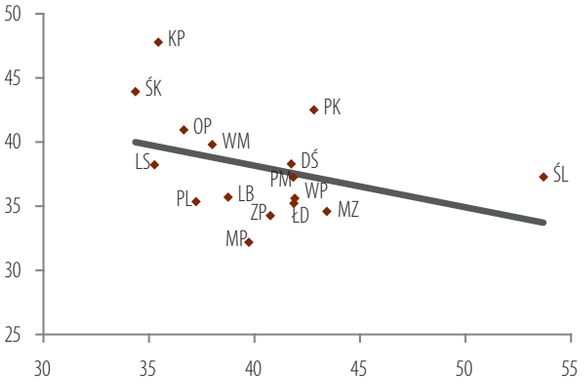
In spatial terms, the largest percentage of workers whose wage issues are covered by collective agreements is in the Śląskie voivodeship and Kujawsko-Pomorskie voivodeship, where the rate is above 43 percent – see Map IV.1. Interestingly, regions with a high rate of collective agreements in the public sector have generally low coverage in the private sector – this inverse relationship is illustrated in Figure IV.12

Map IV.1. Percentage of employees whose wages are regulated by collective agreements, by region.



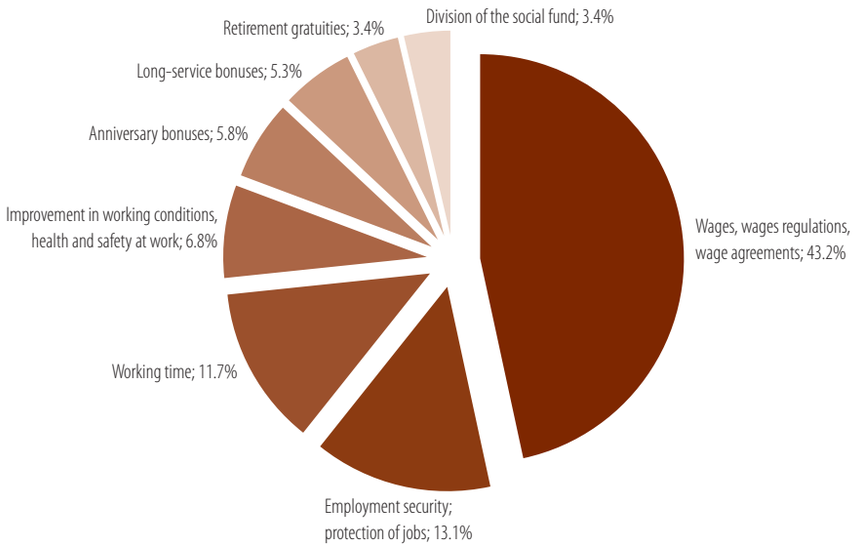
Source: Own calculations based on BSW.

Figure IV.12. Percentage of employees whose wages are regulated by collective agreements in the public sector (horizontal axis) and in private sector (vertical axis).



Source: Own calculations based on BSW.

Figure IV.13. The most important subjects of collective agreements (according to employees), in percent.



Source: Męcina 2009.

The activity of works councils (see Box IV.17a), the institution introduced by the European Parliament, is very limited. According to data from the Ministry of Labour and Social Policy in 2010, works councils operate in just 3,006 enterprises, compared to about 34 thousand companies employing over 50 people. A number of studies (see Gardawski 2009a, Wratny 2009) show that works councils occur almost exclusively in unionised companies. On one hand it comes from the insufficient knowledge of employees on their rights and general principles of organising workers' representatives at the workplace, and not understanding the reasons for the appointment of councils. There is also a psychological barrier (fear of being misunderstood by employers) and an organisational barrier connected with the requirement that elections to the council should be signed by at least 10 percent of employees.

Box IV.17. Works councils in Poland.

A works council is a body composed of representatives of the workers at companies employing more than 50 people, established under the Information and Consultation Law (2006), which is the fulfilment of Directive 2002/14 of the European Parliament on the terms of informing and consulting employees. The works council may include 3, 5 or 7 employees, in companies employing 50 to 250, from 251 to 500, and more than 500 people, respectively; the number may be greater if agreed with the employer. In order to appoint a council, at least 10 percent of employees must submit an application to hold elections to the council. Until the end of 2009, there was a provision that members of the works council were designated by trade unions, and elections are held only in the case where unions do not exist in the enterprise, but this has been challenged by the Constitutional Court, and now work councils can be created also by non-unionised employees.

The works council and employer agree on the way of informing employees about the situation in the company, the manner of consultation, and solving disputes. Costs of elections and activities of councils in their entirety are covered by the employer. Although this form of workers' organisation was created to provide workers' representation in non-unionised companies, in most cases councils are created in firms with unions.

Summary

Polish social dialogue is unambiguously institutionalised. The strong position of social partners at the central level within the Tripartite Commission for Socio-Economic Affairs (TC) is accompanied by very limited dialogue in regions and sectors, and a small scope of bargaining at the enterprise level. Coordination and coherence are poor among the institutions at each of these levels, especially between the TC and the Regional Commissions for Social Dialogue (WKDS).

Although the TC has considerable powers in relation to labour law, minimum wage, social security, services, and the central budget, in practice it very rarely reaches a required consensus. Dialogue mechanisms provide connection between the government and social partners, which is a value in itself, but far from enough for the social dialogue to foster modernisation of the country and contribute to the implementation of long-term reforms. It has not developed the sufficient expert support that exists in Western European countries; in Poland it is based mainly on the efforts of social partners in the TC. The positive aspects of social dialogue in Poland include a large number of task teams and their relatively high activity, as well as the ability to achieve compromise. It indicates a high potential of the TC for the future.

The role of government and local authorities is a key factor that determines the intensity and authenticity of the dialogue as a tool for joint preparation of public policies. This is particularly important because the government is the strongest in the Polish institutional order. In fact, it has the right (and temptation) not to agree to any proposal of social partners and, in the absence of tripartite consensus, it can alone come up with a final decision even if the other parties have reached an agreement within the TC. In the current institutional regime partners cannot formulate their own counter-proposals when unions and employers have found a common ground. This problem may be solved if they are given the right to come up with legislative initiatives.

The evaluation of taken actions or proposed policies is an important aspect of the dialogue. In Poland it is an exception rather than the rule. Projects presented by the government and social partners are rarely accompanied by sufficiently well-prepared analyses that justify and assess the effects of introduced regulations on the economy and labour market. As a result, the other participants of social dialogue cannot fairly address the proposals. As we indicated in this report, this situation may be detrimental to the general public in favour of narrow interest groups with strong incentives to hide the real costs of their solutions.

Autonomous dialogue is another key element of social dialogue and industrial relations. In Poland, it is very decentralised and poorly coordinated primarily due to the weak position of social partners, trade unions and employers' organisations. With only a part of workers unionised, unions are also almost absent in the private sector, are very dispersed and do not cooperate well ('confrontational pluralism'). It is reinforced not only by the current legislative solutions (no clear definition of a representative union at the enterprise level) but also by the typical post-war Polish trust deficit, lack of civil society, and a tendency to particularism, that impede cooperation between members of the society in a broader plan than the trade union movement. The image of Polish trade unions among workers is not so bad, and reduction in unionisation does not mean that employees do not perceive the need for unions. There is some evidence that trade unions in the workplace contribute to the observance of the principles of fair play. Also, employers' organisations, in terms of number of members and the proportion of employment in affiliated companies are not very representative and the coordination of their activities is moderate. In their case, the lack of coordination may also result from their deliberate strategy to defend against the 'threat' of higher-level bargaining.

As a result, collective agreements are concluded in a small number of companies, mainly the state-owned ones, and they rarely relate to topics such as non-standard working arrangements, support of work-life balance, and investment in human capital. The agreements are mainly confined to the issue of wages. The existing legal solutions do not provide much space for bilateral negotiations which cannot deviate from the statutory regulations in many key areas of labour relations, in particular working time. It significantly narrows the field of negotiations and also reduces the incentive to participate in this process for the employers.

Polish social partners participating in the social dialogue have little influence on changes in the labour market. In other European countries, social dialogue often has a key role in shaping labour market institutions in order to ensure sufficient flexibility, adaptation to structural changes, absorption of shocks and intensification of modernisation, while maintaining the security of the participants in the labour market according to the European social model.

Any attempt at changing the model of social dialogue in Poland should take into account challenges posed by the modern economy. The high speed of structural changes is accompanied by the high heterogeneity of labour. At the same time the need of work-life balance induces a growing need for autonomy in the workplace and the capacity of social partners to cooperate with each other and the government. This means that traditional autonomous dialogue should be reconstructed and extended to issues such as lifelong learning and flexible work organisation, and secondly, that at the central level, social partners should be able to seek a constructive compromise in the area of labour market institutions and regulations.

Table IV.9. SWOT analysis of social dialogue in Poland.

S	1. Fairly well-functioning institutional environment at the national, sectoral and regional levels. 2. Good legal situation, definition of social dialogue in the Constitution, activities of dialogue institutions determined by Acts, but no regulations on sectoral dialogue. 3. Relatively good image of unions among employees.
W	1. Weak organisations of social partners. Low number of employees in unions and employers' organisations. Poor cooperation and coordination, and a relatively high dispersion. 2. Unions focus on the enterprise level, as the firms are the main source of funds for the central organisations, and the employers' organisations have little influence (increased by the possibility of membership of a given enterprise in several different organisations). 3. Inability to compromise at the national level, no TC resolutions. Dialogue is politicised, although much less than a few years ago. 4. Weak expert support, no central institution providing substantive support for partners and no cooperation with independent think-tanks, dispersion of resources for expert studies. 5. Insufficient coordination between different levels of dialogue, especially between the TC and Regional Commissions.
O	1. Revitalisation, including international cooperation and the EU financial support. 2. Promoting social dialogue in the UE. 3. Expansion of unions in the private sector. 4. Smaller animosities and increased cooperation between social partners. 5. Gradual increase in social trust in Poland and increase in civil activity among Poles.
T	1. Aging of union members. 2. Inability of unions to reach some social groups, including young or well-educated people. 3. Increasing differences in preferences between insiders and outsider in labour market. 4. Unsolved legal issues of Tripartite Sector Teams.

Recommendations for social and economic policy

Recommendations for social and economic policy

In 2008, majority of the world's developed countries experienced the most serious economic crisis since WWII. This crisis serves as a reminder that the market economy develops in cycles and the periods of exceptional prosperity are always followed by periods of necessary adjustment. This does not necessarily mean the end of the Great Moderation – period of relatively small economic fluctuations and therefore moderate social costs of crises, that has lasted for few decades. Nevertheless, even a single episode of a deep and prolonged recession on a global scale has an impact on the prospects of economic growth. This is true even in the case of countries such as Poland, relatively slightly affected by the downturn of 2008-2009.

The challenge for the Polish public policy in the years to come is not only to efficiently stimulate the post-crisis economic growth but also to enhance the adaptability of the economy – its ability to deal successfully with economic slowdowns that may occur in the future. As emphasised in Part I of this study, achieving positive economic growth throughout the crisis to some extent resulted from the confluence of several advantageous (but not permanent) factors. They included, in particular, a very strong acceleration of public investment made possible by the implementation of a comprehensive investment program financed by the European Union's cohesion policy. This investment boom, supported by public finances, came at the price of the significant weakening of the Polish fiscal stance. This, due to the crowding-out effect, intensified the weaknesses of the Polish economic system: low (for a country at such level of economic development) savings and investment rates. The recent consumption-oriented structure of public expenditure has also remained largely unchanged.

Low fiscal discipline in the post-crisis period may erode the future ability of government to implement effective counter-cyclical policies using fiscal, especially expenditure, instruments. In the current crisis, the economic shock-absorber (also alleviating the decline in the demand for labour) was the EU-financed increase in public expenditure by 1 percent GDP. These exceptional circumstances are unlikely to occur again and therefore Polish economic policy should be based on fiscal recovery – balancing public expenditure with the tax revenue, combined with the reduction of the public deficit over the next few years (from the current 7-8 percent GDP to no more than 2 percent GDP during prosperity). It is important that balancing public finances in the short and medium term should never be achieved at the expense of future taxpayers, since the ageing of the population will significantly change the proportion between the number of taxpayers and various benefit recipients as soon as in the next decade.

The imbalance is most acute in the disability fund; the current gap between the revenue from contributions and the expenditure exceeds 1.2 percent of GDP. In the long term, the goal of social security policy should be to reduce the share of disability benefit recipients in working age population and to increase the age threshold at which the likelihood of disability starts to grow rapidly. At the same time, the disability pension formula should be harmonised with the rules of retirement pension calculation in the new system (annuitisation). In the short term, however, it seems crucial to return to the level of the obligatory disability fund contribution that would balance the current expenditure – the current imbalance is due to the government's decision a few years ago to reduce the contributions. Another tool for the achievement of fiscal balance could be equalling retirement age for men and women, at least at 65 years of age, which would improve the balance in the pension fund by about 1.5 percent GDP in 10 years.

Apart from macroeconomic stabilisation, the package of reforms should take into account a number of other regulatory reforms, aimed at increasing the adaptability of companies and workers to ever-changing social and economic conditions. The adaptability should be understood here as part of a larger project – the re-organisation of economic, labour and social security policies in the model of the workfare state and workfare society, in which prosperity is based on work and individual responsibility (while maintaining the key elements of a security system), in contrast to the traditional model of the welfare state.

One of the conclusions drawn in Part III of this edition of *Employment in Poland* is that as much as 1/3 of new jobs are created by companies that enter the market. Therefore, in countries where it is easy, quick and cheap to start a business, the chances of unemployed to find jobs are higher than in countries where setting up a business is tedious and expensive. The creation of enterprises is affected by legal regulations that create barriers refraining some individuals from starting the business. In the light of these regularities and very low flows of the unemployed to employment in Poland throughout 1993-2009, it seems particularly important to improve regulations associated with starting a business. Especially that in this area Poland is the worst in the EU, according to the World Bank data.

Another sensitive area in which the current regulations impair the adaptability of the Polish economy is the model of social policy. In this model, unemployment benefit serves only a social function (preventing a severe income loss) and does creates incentives to seek employment. In order to change it, unemployment benefits should be based on remuneration before the job loss, as is the case in most EU countries. At the moment, only Poland and Latvia still do not have remuneration-based systems, as mentioned in Part III. The amendment introduced in 2010 that grants a higher benefit for the first 3 months is a step in the right direction, but unfortunately an insufficient one. The insurance aspect of the unemployment benefit should be strengthened. This issue is closely associated with the stabilisation of the public finance sector, since in the current (as well as previous) economic downturn the Labour Fund became an easy source of additional income for the Ministry of Finance. It may be argued, therefore, that Labour Fund contributions do not function as insurance against job loss and are simply a direct tax, similar to the CIT or PIT.

Due to the wide diversity of situations in regional labour markets (in some of them low income per capita coincides with a low rate of employment), the fact that the minimum wage have risen by 5 percentage points in relation to the average wage since 2007 must be considered highly disadvantageous. Currently it means that in some provinces the minimum wage exceeds 50 percent of the average wage (for example in the Warminsko-mazurskie and Podkarpackie provinces), whilst in others it amounts to only 30 percent (Mazowieckie). More flexible and varied minimum wage calculation appears to be necessary, particularly in times of relatively slower economic growth and weaker labour markets.

Effective modernisation policy requires social acceptance. As is presented in Part IV, social dialogue can play a key role in shaping labour market institutions so that they are sufficiently flexible and allow adaptation to structural changes, absorption of shocks and intensification of the modernisation processes, while ensuring security for labour market participants. In many European countries high co-ordination of collective bargaining, together with cooperation and trust between partners, have contributed to the creation of secure and flexible labour markets with low unemployment and high levels of economic activity.

In the Polish model of industrial relations, despite a fairly good institutionalisation of social dialogue, social partners still have little influence on how the labour market institutions and regulations are shaped. Their legal underpinnings at the central level are quite strong as they because of the Tripartite Commission for Socio-Economic Affairs (TC), but at the regional and sectoral levels the dialogue is very limited. Furthermore, the negotiations are relatively scarce at an enterprise level. Importantly, the poor coordination of activities performed by specific institutions at each of these levels, particularly the between the Tripartite Commission and the Regional Committees for Social Dialogue, constitutes an important obstacle.

The model of social dialogue model in Poland should be adapted to the challenges posed by a modern economy. Given the high pace of structural changes, the heterogeneity of workforce is also high. The need to combine professional and parental duties translates into a growing need for individualised relationship in the workplace and the capacity of social partners to cooperate. This means the need for rebuilding and extending the traditional autonomous dialogue so that it covers issues related to lifelong learning and flexible work organisation. Secondly, it means that partners at the central level must be able to seek a constructive compromise in the area of labour market regulations and institutions.

The role of government and local authorities in the tripartite dialogue is immensely important for the intensity and legitimacy of the dialogue as a tool for shaping public policy. This is particularly important in Polish institutional environment which greatly favours the government. In fact, the government has the right (and therefore may be tempted) not to approve of any proposal put forward by the partners and when consensus is not reached, the final decision may solely depend on government, even if the remaining parties of the TC have managed to reach an agreement. In the current institutional regime the partners are deprived of the tool that would help in the creation of their own counter-proposals, should unions and employers find common ground. The solution to this problem could be a legislative initiative of the co-operating social partners. As shown by numerous studies and analyses (including *Employment in Poland*), at the central level the lack of financial resources and expert support is not as acute as at regional and enterprise levels, where insufficient funds and no access to quality analyses are a serious barrier.

As we show in the last part of the report, collective bargaining at an enterprise level (autonomous dialogue) can be vital for shaping relations in the workplace. However, in Poland it is very decentralised and poorly coordinated, primarily due to the weak position of the social partners – trade unions and employers' organisations. Only a small percentage of employees belong to unions, which are highly fragmented and find it difficult to cooperate. The image of Polish trade unions among workers is not so negative and the decreasing unionisation does not mean that employees believe that unions are unnecessary. In addition, it seems that trade unions in the workplace contribute to the acceptance of the principles of fair play. The organisations of employers are also poorly representative, both in terms of the number of members and employment in affiliated companies in relation to the total employment. The coordination of their actions is only moderate.

As a result, collective agreements are concluded in a small number of mainly state-owned or privatised companies which 'inherited' such system, and they also rarely touch on such issues as atypical work schedules, support for work-life balance or investment in human capital. Their prime focus is remuneration. The existing regulations need to be reconsidered as their current form does not provide any possibility for bilateral negotiations to deviate from the statutory provisions in many key areas of labour relations, in particular working hours. This significantly narrows the scope of bargaining, and reduces the motivation of the employers to participate in this process.

Methodological Appendix

Appendix 1 – decomposition of productivity gap and convergence

Productivity gap is defined as the relative difference between the productivity level in Poland and the level of productivity in France, i.e. as $\frac{y_t^{FR} - y_t^{PL}}{y_t^{FR}}$, where y_t^{PL} denotes the labour productivity in the Polish economy, and y_t^{FR} denotes the productivity in France, an economy representative of the EU15. The productivity measures, y_t^{PL} and y_t^{FR}, are expressed as values added per hour worked and decomposed into weighted sums of sectoral productivities, i.e. $y_t^x = \sum_j a_{jt}^x y_{jt}^x$, $x \in \{PL, FR\}$, where a_{jt}^x denotes the share of the sector j in the total employment in the economy x, and y_{jt}^x is a productivity of the sector j in the economy x. This decomposition makes it possible to determine the productivity gaps in individual sectors. Then, according to the methodology of Caselli, Tenreyro (2005), the productivity gap is decomposed into (aggregate) within-industry component (i.e. a difference in the productivity of individual sectors) and (aggregate) between-industry component (i.e. gap resulting from the sectoral reallocation of inputs) using the equation:

$$\frac{y_t^{FR} - y_t^{PL}}{y_t^{PL}} = \sum_j a_{jt}^{PL} \left(\frac{y_{jt}^{FR} - y_{jt}^{PL}}{y_t^{PL}} \right) + \sum_j \left(a_{jt}^{FR} - a_{jt}^{PL} \right) \frac{y_{jt}^{PL}}{y_t^{PL}} + \theta_t$$

where θ_t denotes the residual.

An alternative decomposition was obtained using the following formula:

$$\frac{y_t^{PL} - y_t^{FR}}{y_t^{FR}} = \sum_j a_{jt}^{PL} \left(\frac{y_{jt}^{PL} - y_{jt}^{FR}}{y_t^{FR}} \right) + \sum_j \left(a_{jt}^{PL} - a_{jt}^{FR} \right) \frac{y_{jt}^{FR}}{y_t^{FR}}$$

The latter equation was used to decompose convergence into within-industry convergence, between-industry convergence, and convergence resulting from the reallocation of labour among sectors:

$$\Delta \frac{y_t^{PL} - y_t^{FR}}{y_t^{FR}} = \sum_j a_{jt}^{PL,*} \Delta \frac{y_t^{PL} - y_t^{FR}}{y_t^{FR}} + \sum_j \left(\frac{y_t^{PL}}{y_t^{FR}} \right)^* \Delta a_{jt}^{PL} - \sum_j \left(\frac{y_t^{FR}}{y_t^{FR}} \right)^* \Delta a_{jt}^{FR} + \sum_j \left(a_{jt}^{PL,*} - a_{jt}^{FR,*} \right) \Delta \left(\frac{y_t^{PL}}{y_t^{FR}} \right)$$

where for any variable x, x* is defined as follows: $x^* = \frac{x_t - x_{t-1}}{2}$.

Analogous decompositions were performed for the remaining NMS8.
In contrast to Caselli and Tenreyro (2005), we based the analysis on 30 economic sections (instead of 5). It was possible thanks to the use of EU-Klems data (unavailable in 2005) on value added and the number of hours worked. That is why values are different from those obtained by Caselli and Tenreyro. However, it does not affect the overall picture and the conclusions of our analysis.

Additionally, we used Eurostat data on purchasing-power parities, which increased the comparability of data between countries.

Appendix 2 – results of productivity gap decomposition

Table 1. Results of productivity gap decomposition into 3 parts.

	1995				2006			
	Total gap	Within-sector gap	Between-sector gap	Residual	Total gap	Within-sector gap	Between-sector gap	Residual
PL	1.925	0.626	0.103	-0.071	1.242	0.519	0.103	-0.067
HU	1.614	0.592	0.090	-0.065	1.222	0.492	0.075	-0.017
CZ	1.491	0.595	0.009	-0.005	1.210	0.579	-0.010	-0.021
EE	3.534	0.965	0.060	-0.246	1.682	0.938	0.132	-0.443
LT	2.939	0.732	-0.001	0.018	1.578	0.603	0.025	-0.006
LV	2.637	0.834	0.032	-0.141	1.499	0.810	0.017	-0.226
SI	1.246	0.443	0.341	-0.229	0.739	0.351	0.090	-0.015
SK	1.782	0.655	0.008	-0.022	1.373	0.586	-0.011	0.004

Source: Own calculations.

Table 2. Results of productivity gap decomposition into 2 parts.

	1995			2006		
	Total gap	Within-sector gap	Between-sector gap	Total gap	Within-sector gap	Between-sector gap
PL	-0.658	-0.626	-0.031	-0.554	-0.519	-0.035
HU	-0.617	-0.592	-0.026	-0.550	-0.492	-0.058
CZ	-0.599	-0.595	-0.004	-0.548	-0.579	0.032
EE	-0.779	-0.965	0.186	-0.627	-0.938	0.311
LT	-0.746	-0.732	-0.017	-0.612	-0.603	-0.019
LV	-0.725	-0.834	0.109	-0.600	-0.810	0.210
SI	-0.555	-0.443	-0.111	-0.425	-0.351	-0.074
SK	-0.641	-0.655	0.014	-0.579	-0.586	0.007

Source: Own calculations.

Table 3. Results of the labour productivity convergence decomposition.

	1995-2006				1995-2000				2001-2006			
	Total gap	Within--sector gap	Labour reallocation	Between--sector gap	Total gap	Within--sector gap	Labour reallocation	Between--sector gap	Total gap	Within--sector gap	Labour reallocation	Between--sector gap
PL	0.119	0.005	-0.021	0.103	0.011	0.013	-0.012	0.013	0.108	-0.008	-0.009	0.091
HU	0.078	0.010	-0.021	0.067	0.000	0.013	-0.014	-0.001	0.078	-0.003	-0.007	0.068
CZ	0.059	0.004	-0.012	0.051	-0.004	0.015	-0.006	0.005	0.063	-0.010	-0.007	0.046
EE	0.124	0.004	0.024	0.152	-0.004	0.024	0.019	0.038	0.128	-0.020	0.006	0.114
LT	0.143	-0.001	-0.015	0.127	0.008	-0.002	-0.015	-0.008	0.135	0.000	0.000	0.136
LV	0.085	0.024	0.016	0.125	0.001	0.025	0.013	0.039	0.084	0.000	0.003	0.086
SI	0.065	0.096	-0.031	0.130	0.011	0.061	-0.015	0.057	0.054	0.035	-0.016	0.073
SK	0.083	-0.005	-0.015	0.062	-0.009	0.013	-0.006	-0.002	0.092	-0.019	-0.009	0.064

Source: Own calculations.

Appendix 3 – logit model estimations

Table 4 presents the significant determinants of job satisfaction. The level of significance is denoted by the number of asterisks at a given odd ratio [1] that determines the direction and strength of impact. Positive impact is described by values from the interval (0;1). Negative impact is expressed by values higher than 1. The values can be interpreted as relative probability. For example – work in agriculture has a weak and negative impact on job satisfaction (at 1.30), [2] whereas nationality discrimination induces low levels of job satisfaction(4.29).

Table 4. Results of ordered logit model for job satisfaction.

Category		Variable	I	II	III	IV	V
Other	Section	agriculture	1.30*		1.30	0.56*	
		modern services					
		traditional services		1.24		0.92	
		public services					
		public administration			0.92		
		hotels and restaurants	1.25	1.47*	0.78		1.48
	Country	Denmark	0.34***		1.85***		
		United Kingdom	0.37***	4.49***	1.61***		
		Cyprus	0.38***	1.98**	1.71***		
		Austria	0.48***	3.07***	1.20		
		Belgium	0.51***	2.15***			
		Germany	0.56***	1.59*	2.66***		
		Estonia		4.11***	1.77***		
		Finland			2.05***		
		Luxembourg	0.75*	1.35	1.28*		
		Portugal	0.79*	2.94***	1.21		
		Latvia	1.76***				
		Poland		1.98**			
		Czech Republic		2.47***			
		Hungary	1.33*	1.81**	1.63***		
		Greece	1.25	2.39***	1.14		
		Ireland	0.87	6.46***	1.11		
		Italy	1.17	3.87***	1.34**		
		Lithuania	1.14	1.60*	1.52***		
		Malta	0.83	2.41**			
		Sweden	0.86	1.55	2.25***		
		Slovenia	1.24	3.99***	0.72*		
		Netherlands		0.69	2.25***		
		Spain	1.15	1.99**	1.43**		
		Slovakia	1.11	6.28***	0.76**		
Socio--demographic characteristics	Age and sex	Woman aged 15-29	0.81*	1.84***	0.52***	0.16***	0.15***
		Woman aged 30-49	0.86*		0.76***	0.23***	0.25***
		Woman aged 30-50+	0.88	0.60***	0.88	0.19***	0.34***
		Man aged 15-29	0.87	1.86***	0.53***	0.40***	0.61*
		Man aged 50+		0.58**	0.84	0.79*	0.57*

[1] Odds ratio for a given probability P is defined as $\frac{P}{1-P}$.

[2] In precise terms: for agricultural work, the odds ratio for job dissatisfaction is 1.3 times higher than for being either moderately dissatisfied, satisfied or very satisfied; odds ratio for slight dissatisfaction is 1.3 times higher than for (at least) moderate satisfaction, and odds ratio for moderate satisfaction is 1.3 times greater than for high satisfaction – in each case in comparison to work in other sections (excluding hotels and restaurants which is also controlled in this model).

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Socio--demographic characteristics	Education	No education (ISCED 0)		0.53	0.40**	0.57*	
		Primary (ISCED 1)			0.73*		
		Lower secondary (ISCED 2)					0.79
		Post secondary(ISCED 4)				1.47***	1.47*
		Tertiary– first level (ISCED 5)				2.60***	3.91***
		Tertiary–second level(ISCED 6)	0.59*	0.51**		5.18***	7.72***
	Occupation	Legislators, senior officials and managers		1.34	1.20	4.40***	4.71***
		Professionals	0.88	0.86	1.50***	2.80***	1.60*
		Technicians and associate professionals			1.41***	1.85***	1.81***
		Clerks		0.85	1.31**	1.29*	1.38
		Service workers and shop and market sales workers				1.14	1.21
		Skilled agricultural and fishery workers				2.24*	
		Craft and related trade workers				1.77***	1.63*
		Plant and machine operators and assemblers	1.11		1.26*	1.51*	1.89***
		Armed force					2.01
	Experience	Number of years worked in the current company or organisation				1.05***	1.03***
	Citizenship	Being a citizen of other country	0.66				
	Enterprise size	Self-employed		0.81	1.22		
		Microenterprise		0.88	1.27**		
		Large enterprise		1.22			
	Earnings	Fourth quartile in the country	0.70***				
		Third quartile in the country	0.87*				
Labour relations	Employment status	Fixed-term contract			1.09		0.66***
		Apprenticeship or training				0.25***	0.21*
		No contract	1.25*	1.52**	0.81	0.60***	0.35***
	Working time	Full-time	0.76*				
		Full-time, would not like to change it	0.78*				
		Permanent shifts					
		Daily split shifts	0.66*				
		Alternating/rotating shifts					
		Same number of hours each day	0.92	0.77**			
		Daily commuting time (in minutes)				1.00***	1.00***
		Changes in working schedule without notice					
		Changes in schedule with a day notice					
		Able to adapt working hours within certain limits		0.83	1.23*		0.70*
		Able to choose between several fixed working schedules					
		Changes in schedule with a few days notice					
		Working hours are entirely determined by the worker	0.74*	0.73*	1.14		0.70

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Labour relations	Remuneration	Payments based on the overall performance of the company	0.77*			1.21	1.96***
		Basic fixed salary/wage		0.83	1.14		
		Piece rate or productivity payments					1.60***
		Payments based on the overall performance of a group			0.75	1.25	1.50*
		Extra payments for additional hours of work			1.11		1.67***
		Other payments		0.73			
		Extra payments compensating for bad or dangerous working conditions		1.19		1.66***	1.52*
		Other extra payments	0.86*	0.89		1.69***	1.87***
		Income from shares in the company one works for	0.54*				
		Advantages of other nature	1.16	1.90***	0.88		
Quality of work	Form of work	Task rotation; tasks require different skills	0.93				
		Task rotation			0.81*		1.45*
		Task rotation; manager decides on division of tasks					
		Task rotation; team decides on division of tasks					0.88
		Task rotation; team members select head of team decide themselves?					
		Task rotation, team members decide on division of tasks		1.17		0.85*	
		Teamwork	1.12*	0.77*			1.22*
	Work-life balance	Job fits in with family or social commitments outside work	0.42***				
		Daily out-of-hours contact (via email or telephone) over the recent 12 months	0.55***				
		Out-of-hours contact at least once a week	1.18				
		Out-of-hours contact several times a month	1.09				
		Number of working Sundays in a month		0.96	1.04		
		Number of days per month with more than 10 working hours			0.99		
		Number of days in a month with evening work		0.99	1.02**		
	Speed and mode of work	Working to tight deadlines (at least ¾ of working time)	1.27***				
		Enough time to get the job done	0.62***		1.27**		1.21
		Working at a very high speed (always or almost always)					
		Meeting precise quality standards	0.82*		1.22**		
	Autonomy in the workplace	Can choose/change methods of work (at least often)					1.10
		Can choose/change the speed of work (at least often)		0.89		1.11	
		Influence over the choice of working partners (at least often)	0.78***				
		Can take breaks when one wishes (at least often)	0.86*				
		Can choose/change order of tasks	0.90		1.12	0.88	
		Free to decide when to take holidays or days off (at least often)	0.85*				

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Quality of work	Cooperation and control	Discussion on work-related problems with boss (in the previous year)	1.21*		1.10	1.07	1.15
		Assistance from superiors if asked (at least often)	0.66***				
		Assistance from colleagues if asked (at least often)					
		External assistance if asked (at least often)					
		Frank discussion n one's performance with boss (in the previous year)	1.11				
		Assessing quality of own work	0.90				
		Consulted about changes in work organisation and/ or working conditions					
		Discussion with a trade union representative about work-related problems (in the previous year)					
		Solving of unforeseen problems on one's own	1.12	0.80*	1.13		
		Formal assessment of performance (in the previous year)	0.87*				
	Professional fulfilment	Emotionally demanding work (at least sometimes)	1.13*		0.89		
		Intellectually demanding work (at least sometimes)	0.83*	0.82	1.08	1.23*	1.23*
		Feeling of work well done (at least sometimes)	0.55***				
		Feeling of doing useful work	0.55***	0.79	1.27		0.73
		Opportunity do one's best	0.77***				
		Able to apply own ideas to work	0.70***				
		Learning new things	0.88*	0.84	1.17*	1.13	
		Monotonous tasks	1.49***	1.36***	0.91	0.82*	0.69***
	Skills development	Job-skills match: need further training					
		Job-skills match: correspond well with present skills	0.85*				
		Job-skills match: could cope with more demanding duties	0.90				
		Has undergone on-the-job training					
		Has undergone other forms of on-site training and learning					
		Has undergone self-paid training					0.85
		Has undergone other training	1.23				
		Has undergone training paid for or provided by your employer, or by yourself if you are self-employed	0.87*				
Quality of work	Working conditions – nature of duties	Standing or walking(at least half of the time)	1.07		0.89	0.78*	0.76*
		Repetitive hand or arm movements(at least half of the time)	0.94	0.90	1.10	0.76***	0.85
		Working at company / organisation premises(at least half of the time)	1.13*				
		Lifting or moving people(all of the time or almost all of the time)		0.55	0.76		1.64*
		Lifting or moving people(at least half of the time)		1.32	0.72	0.85	
		Carrying or moving heavy loads			0.77**		
		Working at company / organisation premises(all of the time or almost all of the time)			1.21**		
		Teleworking from home with a PC				1.31	0.48*

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Quality of work	Working conditions – nature of duties	Working at home (excluding telework) (at least 3/4 of the time)		1.74*			
		Working in places other than or company premises (all of the time or almost all of the time)		1.85**		0.82	1.60*
		Interaction with people other than colleagues (all of the time or almost all of the time)				0.75***	0.83
		Dealing directly with people other than colleagues (at least 3/4 of the time)					1.22
		Working with computers (all of the time or almost all of the time)		0.78	1.10	0.81	
		Use of Internet or email for professional purposes (all of the time or almost all of the time)		1.20	1.20		1.72*
		Wearing personal protective clothing or equipment (all of the time or almost all of the time)			0.85		
		Working at home (excluding telework) (at least half of the time)	0.75*		0.83		
		Working in places other than company premises (at least half of the time)	1.10	0.71*	0.90	1.22	1.20
		Dealing directly with people other than colleagues (at least half of the time)	0.83*	0.90	1.07		
		Working with computers (at least half of the time)	1.29*			1.43*	2.11***
		Use of Internet or email in professional purposes (at least half of the time)	0.76*			1.25*	0.75
		Wearing personal protective clothing or equipment(at least half of the time)	0.89	0.69***	1.24	0.92	
		Complex tasks		0.81*		1.29***	1.41***
		Short repetitive tasks of <10minute					
		Short repetitive tasks of <1minute	0.89				
	Working conditions – ergonomics	Tiring or painful positions (all of the time or almost all of the time)	1.50***		0.64**	1.13	0.78
		Tiring or painful positions(at least 3/4 of the time)	1.38***				
		Tiring or painful positions(at least half of the time)		0.79*	1.32**		
		Tiring or painful positions(from ¼ to ¾ of the time)	1.38***				
		Tiring or painful positions(almost never)	1.22*	1.12	0.88		
	Working conditions – surroundings	Vibrations from hand tools, machinery etc. (all of the time or almost all of the time)	0.85		1.43*	1.24*	
		Vibrations from hand tools, machinery etc.(minimum half of the time)		1.21	0.82		
		Noise so loud that one would have to raise one's voice to talk to people in the workplace (all of the time or almost all of the time)	1.29*	1.24	0.70**	0.78	1.19
		Noise so loud that one would have to raise one's voice to talk to people in the workplace (from ¼ to ¾ of the time),				1.12	1.28
		Low temperature, indoors and outdoors (all of the time or almost all of the time)					1.33
		Low temperature, indoors and outdoors (at least half of the time)			1.13		
		Breathing in vapours such as solvents and thinners(all of the time or almost all of the time)		0.73		0.74	1.57

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Quality of work	Working conditions – surroundings	Breathing in vapours such as solvents and thinners(from ¼ to ¾ of the time)				0.72	
		Exposure to chemical substances(all of the time or almost all of the time)		1.37		1.23	0.70
		Exposure to chemical substances(from ¼ to ¾ of the time)			0.86	1.21	
		Radiation (from ¼ to ¾ of the time)					1.36
		Tobacco smoke from other people (all of the time or almost all of the time)				1.22	
		Tobacco smoke from other people(at least half of the time)			0.87		
		Contact with infectious materials(all of the time or almost all of the time)				1.18	
		Contact with infectious materials(at least half of the time)		0.68	1.36*		
		Contact with infectious materials(from ¼ to ¾ of the time)		1.63	0.68	0.76	
		High temperatures which make you perspire even when not working at least half of the time	1.23*			1.11	0.71*
		Low temperature, indoors and outdoors (from ¼ to ¾ of the time)	0.84				
		No exposure to low temperature, indoors or outdoors	0.78***				
		Breathing in fume, dust etc. (at least half of the time)	1.16	0.82			
		Radiation (all of the time or almost all of the time)	2.15*		0.64		1.68*
		Radiation (from ¼ to ¾ of the time)	0.46***	0.71	1.41		
		Tobacco smoke from other people(from ¼ to ¾ of the time)	1.25*	1.32	1.26		
	Impact on health	Health-related absence	1.31***				
		Allergies				0.84	0.70*
		Anxiety				1.15	
		Headache		0.79	1.24*		
		Heart disease		1.51	0.65*		
		Irritability	1.48***	1.24	0.76*		1.41*
		Respiratory difficulties	1.33*		0.86		
		Sleeping problems	1.49*	0.79	0.78*		1.43*
		Stress	1.30*			0.90	0.83
		Problems with vision	1.20				
		Stomach ache	1.17	1.47*	0.74*	1.16	
		Muscular pains	0.91				0.85
		Backache	1.11	1.45**	0.66***		
		Hearing problems	0.84	0.74			0.74*
		Injury(ies)	1.15		0.85	0.83	1.27
		Other	1.35	0.57	0.76		0.53*
		Overall fatigue	1.28*	1.34*	0.81*	1.17	

Table 4. Continued.

Category		Variable	I	II	III	IV	V
Quality of work	Abuse	Age discrimination	1.90***	2.85***	0.68*		
		Discrimination linked to ethnicity	4.64***		0.65		
		Discrimination linked to religion		2.14			
		Discrimination linked to sexual orientation					
		Physical violence from people from one's workplace	0.80		0.79		
		Physical violence from other people		0.62*	1.20		
		Threats of physical violence			0.86		
		Unwanted sexual attention		1.31			
		Unpaid Sunday work					
		Bullying/Harassment	1.84***	1.54**			
		Number of observations	23156	22354	22354	10546	6293
		Wald chi2(131)	3090.72	948.91	1367.36	2111.04	1551.01
		Prob > chi2	0.0000	0.0001	0.0002	0.0003	0.0004
		Pseudo R2	0.2013	0.1457	0.1394	0.1458	0.1527

Notes: (***), (**), (*) denote significance levels:0.01, 0.05 and 0.1.
I –Ordered logit model explaining job satisfaction, II –Logit model–reluctance to work in the same workplace at the age of 60, III –Logit model– a belief that one will carry out their
current main job at the age of 60, IV –Ordered logit model–income decile in the EU15, V – Ordered logit model – income decile in the NMS
Source: Own calculations.

Appendix 4 – Methodology for estimating flow and hazard rates on the basis of aggregate data

The estimation of labour market flows from macroeconomic data was initiated by Shimer (2007), and subsequently developed by Elsby et al. (2008), who adapted the original method to the specificity of European countries where a smaller fraction of the unemployed than in the U.S. finds a job within a month and labour markets are less dynamic. In such case Shimer's assumption that the labour market is permanently in a flow steady-state is not fulfilled. Elsby et al. (2008) propose using additional information on the number of the unemployed for 2-3, 3-6 and 6-12 months, and applying the weighted average of estimates, so that the monthly hazard rates are more reliable.

1. Estimation of hazard rates of outflow from unemployment

Analytical framework for calculating flows in the labour market is based on the assumption that unemployment evolves in time according to the following equation:

$$\frac{du_t}{dt} = s_t \left(1 - u_t\right) - f_t u_t \tag{1}$$

where u_t – is a monthly unemployment rate, s_t – a monthly rate of inflow to unemployment, and f_t – a monthly rate of outflow from unemployment. In other words s_t, is the conditional probability that worker becomes unemployed during a month, and f_t – the probability that an unemployed person finds a job during the same period. Hereafter, they be referred to as hazard rates, respectively for inflows to and outflows from unemployment. At the same time, the unemployment rate in a month t can be expressed by the formula:

$$u_t = \lambda_t u_t^* + \left(1 - \lambda_t\right) u_{t-12} \tag{2}$$

Where $u^* = \frac{s_t}{s_t + f_t}$ is flow steady-state unemployment rate, and $\lambda_t = 1 - e^{-12(s_t + f_t)}$ is the annual rate of convergence to steady-state.

The probability that the unemployed leaves the unemployment within ***d*** months from losing a job is expressed by the formula:

$$F_t^{<d} = 1 - \frac{u_{t+d} - u_{t+d}^{<d}}{u_t} \quad (3)$$

Where u_{t+d} is the total unemployment rate in month ***d***, year ***t***, and $u_{t+d}^{<d}$ is the 'unemployment for less than ***d*** months' rate (the number of unemployed for less than ***d*** months divided by active population). This probability can be converted to a hazard that the unemployed finds a job within ***d*** months from losing a job for less than ***d*** months (being unemployed), according to the following formula:

$$f_t^{<d} = -\frac{ln(1 - F_t^{<d})}{d} \quad (4)$$

Available data (quarterly data on the number of unemployed, and information about the duration of unemployment) allow the estimation of hazard rates for d = 1, 3, 6, 12.[3] The hazard rates are then weighed according to the widely used method for the selection of optimal weights.[4] Hazard rates of inflows into unemployment are obtained by solving the equation (2). In conclusion, the hazard rates can be interpreted as the likelihood that an unemployed person who has not found a job (or has not been dismissed) in the earlier period, flows out of or into unemployment within the next month. With so defined hazard rates, gross flows are as follows:

$F_t = 12 f_t u_t^* - \lambda_t (1 - u_t^*)(u_t - u_t^*)$, for outflows from unemployment

$S_t = 12 f_t u_t^* - \lambda_t u_t^* (u_t - u_t^*)$, for inflows to unemployment.

2. Decomposition of changes in unemployment

The contribution of changes in hazard rates to and out of unemployment on the changes of unemployment rates has been isolated using the observation that the latter can be approximated in the following way (see Elsby et al., 2008):

$$\Delta ln(u_t) \approx \lambda_t \left\{ (1 - u_t^*)[\Delta ln(s_t) - \Delta ln(f_t)] + \frac{1 - \lambda_{t-2}}{\lambda_{t-2}} \Delta ln(u_{t-1}) \right\},$$

According to this equation, the cumulative impact of changes in the hazard rates on the unemployment rate, can be expressed by the respective recursive equations:

$$C_{ft} = \lambda_{t-1} \left[-(1 - u_t^*) \Delta ln(f_t) + \frac{1 - \lambda_{t-2}}{\lambda_{t-2}}) C_{ft-1} \right], \text{ where } C_{f0} = 0$$

$$C_{st} = \lambda_{t-1} \left[(1 - u_t^*) \Delta ln(s_t) + \frac{1 - \lambda_{t-2}}{\lambda_{t-2}} C_{st-1} \right], \text{ where } C_{s0} = 0$$

In addition, the impact of initial deviation of the unemployment rate from the steady-state is expressed by:

$$C_{0t} = \lambda_{t-1} \frac{1 - \lambda_{t-2}}{\lambda_{t-2}} C_{0t-1}, \text{ where } C_{00} = \Delta ln(u_0).$$

The results of this decomposition of changes in the unemployment rate for each country are shown in Figure III.14.

Source: Own elaboration based on Shimer (2007) and Elsby et al. (2008).

[3] Monthly unemployment rates are interpolated from quarterly data.

[4] Hazard rates are the same for d=1, 3, 6, 12 only when the negative dependence between the hazard of finding a job and the duration of unemployment (*duration dependence*) does not occur. In the estimation of hazard rates, the statistical tests were performed to test for such a dependence – it turned out that in most European countries it can be rejected. In the UK, for which estimated hazard rates were inconsistent, we decided to use only estimations for 1 month, similar to Elsby et al. (2008)

Appendix 5- sources of data and length of time seriesused in estimation of flows

The length of time series data and sources used in the estimation of flows is as follows:

1. Austria 1994-2009, Eurostat
2. Belgium 1999-2009, OECD (until 1991 inclusive), Eurostat, unemployment figures for quarterly interpolation of annual data for the period from 1983 to 1999
3. Bulgaria 2000-2009, Eurostat
4. Switzerland 1991-2009, OECD (1995 inclusive), Eurostat
5. Czech Republic 1993-2009, OECD (to 1996 inclusive), Eurostat
6. Denmark 1993-2009, quarterly unemployment data, interpolated from annual data for the period 1993 to 1995
7. Germany 1983-2009, OECD (to 1991 inclusive), Eurostat
8. 1993-2009 Estonia, Eesti Statistika (to 1996 inclusive), Eurostat
9. Spain 1977-2009, OECD (to 1992 inclusive), Eurostat
10. Finland 1995-2009, OECD (to 1992 inclusive), Eurostat
11. France 1975-2009, OECD (to 1991 inclusive), Eurostat
12. Greece 1998-2009, OECD (to 1991 inclusive), Eurostat quarterly unemployment data interpolated from annual data for the period from 1983 to 1997
13. Hungary 1992-2009, OECD (1995 inclusive), Eurostat
14. Ireland 1983-2009, OECD (to 1991 inclusive), Eurostat
15. Italy 1983-2009, OECD (to 1991 inclusive), Eurostat
16. Lithuania 2002-2009, Eurostat, unemployment figures for quarterly interpolation of annual data for the period from 1998 to 2009
17. Luxembourg 1983-2009, OECD (to 1991 inclusive), Eurostat, unemployment figures for quarterly interpolation of annual data for the period from 1983 to 1998
18. Latvia 2002-2009, Eurostat, unemployment figures for quarterly interpolated from annual data for the period from 1998 to 2001
19. Netherlands 2002-2009, OECD (to 1991 inclusive), Eurostat quarterly unemployment data interpolated from annual data for the period from 1983 to 1999
20. Norway 1983-2009, OECD (to 1994 inclusive), Eurostat
21. Poland 1992-2009, OECD
22. Portugal 1986-2009, OECD (to 1991 inclusive), Eurostat
23. Romania 1999-2009, Eurostat
24. Sweden 1971-2004, OECD (to 1994 inclusive), Eurostat
25. Slovenia 1999-2009, Eurostat
26. Slovakia 1994-2009, OECD (to 1997 inclusive), Eurostat
27. United Kingdom, 1983-2009, OECD (to 1991 inclusive), Eurostat

Wykaz stosowanych skrótów

ALMP – *Active Labour Market Policies*

BCC – *Business Center Club* – one of the employer's organisations In Poland

BSW – *Structure of Earnings Survey* – is a cyclical sample survey of enterprises to collect data on earnings in the Polish economy.

DSGE – *Dynamic Stochastic General Equilibrium* (model)

EC – *European Commission*

EIRO – *European Industrial Relations Observatory*

EPL – *Employment Protection Legislation* – a composite index calculated by the OECD

EU-Klems – an European Commission financed, industry level, growth and productivity research project, offering a database on Growth and Productivity Accounts

EU-SEPIA – structural DSGE model of Polish economy constructed by IBS (detailed description can be found in Box I.2.)

EWCS – *European Working Condition Survey*

FZZ – *Forum of Trade Unions* – one of trade unions federations in Poland

IBS – *Institute for Structural Research*

ICTWSS – *Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts* – a database on trade unions' characteristics, wage bargaining models and social pacts in 34 countries in the period 1960-2007

LFS – *Labour Force Survey* – is a quarterly sample survey of households focused on labour market issues, in Poland carried out by the Central Statistical Office (GUS)

NMS – *New Member States* – countries which joined the EU after 2004 (NMS12), in 2004 (NMS10), sometimes limited to Central European Countries (NMS8,and excluding Poland – NMS7)

OECD – *Organization of Economic Cooperation and Development* – is an international economic organization of 31 developed countries committed to promoting democracy and the market economy.

OPHC – *Operational Programme Human Capital*

OPZZ – *All-Poland Alliance of Trade Unions* – one of trade unions federations in Poland

PKPP Lewiatan – *Polish Confederation of Private Employers Lewiatan* – one of the employer's organisations in Poland

Pracodawcy RP – *Employers of Poland* – formerly Konfederacja Pracodawców Polskich – KPP, one of the employer's organisations in Poland

SOP HRD – *Sectoral Operational Programme Human Resources Development*

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Notes

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