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Article

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WALENTYNA KWIATKOWSKA*

The Structure Of Unemployment In Poland And The European Union Between 2000 And 2012

Abstract

This paper has two main objectives. The first is to show changes in the levels of unemployment and unemployment rates in Poland and other European Union countries and to explain why the Polish rates are relatively high. The second is to analyse the structure of unemployment by gender, age, levels of education, and duration of unemployment. In order to assess the Polish unemployment structure it is compared with the analogous structures in the other European Union countries.

The analysis will indicate the groups of the labour force with high risk of unemployment. Among the groups of high risk of unemployment are women, youth, people with low skills, and the long-term unemployed.

Keywords: *unemployment, unemployment rate, the structure of unemployment*

1. Introduction

The main objective of this paper is to present the characteristics of unemployment in Poland in the years 2000-2012, including trends in the levels

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and rates of unemployment and its determinants, as well as shifts in the structure of unemployment according to different socio-economic and demographic criteria. This analysis is intended to demonstrate characteristics of Polish unemployment and identify the groups of people who are in a worse position in the labour market and those most at risk of unemployment. The analysis will make it possible to fight unemployment more effectively. The aspects of unemployment in Poland presented in the paper are compared with changes in unemployment in other member states of the EU-27.

The structure of the paper is as follows. Section 2 presents an analysis of the level and dynamics of changes in unemployment and the unemployment rate. Section 3 shows changes in the structure of unemployment according to selected criteria such as gender, age, educational level, and duration of unemployment. Section 4 contains the main conclusions of the paper.

2. Trends in levels of unemployment and the unemployment rate in Poland and the EU-27, in the years 2000-2012

The commonly held conviction that the unemployment is of a multi-faceted nature is an important starting point for the analysis of unemployment. It requires searching its determinants in different areas and economic processes: demand and supply side of the economy, institutional arrangements in the labour market, as well as socio-economic and demographic characteristics of individuals (Godfrey 1986, pp. 6-9; Kwiatkowski 2005, p. 46 et seq.).

In order to present the dynamics of changes in unemployment in Poland, the Labour Force Survey (LFS) method was taken into account, based on questionnaire surveys of the economic activity of the population. According to this method, since the first quarter of 2001, in accordance with the recommendation of Eurostat, persons aged 15-74 years are classified as unemployed¹ if they simultaneously meet three conditions: during the reference week they were without work, actively having sought employment, and available to start work within the next two weeks after the reference week, or were waiting to start work as they had already found a job (*Kwartalna informacja o rynku pracy* 2012, p. 1).

¹ Based on the Act of 20 April 2004 on employment promotion and labour market institutions, in force since 1 June 2004 (Journal of Laws No. 99, Item 1001 as amended), the second method of studying the size of unemployment is used, based on the statistical reporting of regional labour offices.

Table 1. Size, dynamics and unemployment rate according to LFS, in Poland, in the years 2000-2012

Year	Number of unemployed in thousands ^{a)}	Dynamics(2000 = 100)	Unemployment rate in%
2000	2,760	100.0	16.0
2001 ^{b)}	3,186	115.5	18.5
2002	3,375	122.3	19.7
2003	3,273	118.6	19.3
2004	3,081	111.6	18.0
2005	2,893	104.8	16.7
2006	2,076	75.2	12.2
2007	1,448	52.5	8.5
2008	1,154	41.8	6.7
2009	1,471	53.3	8.5
2010	1,649	59.7	9.3
2011	1,682	60.9	9.7
2012	1,757	63.7	10.1

^{a)} Data for the 4th quarter

^{b)} Since 2001, unemployed persons comprise persons aged 15 to 74; prior they included all persons aged 15 and over.

Source: *Kwartalna informacja o rynku pracy*, Central Statistical Office (GUS), Warsaw 2004, 2006, 2008, 2011, and 2013, pp. 1, 7, and 9, *Concise Statistical Yearbook of Poland 2007*, Central Statistical Office, Warsaw, p.254; *Aktywność ekonomiczna ludności Polski w latach 1992-2001*, GUS, Warsaw 2002, p. 21; 4th quarter of 2004, p. 46.

The data set forth in Table 1 shows that unemployment in 2012, compared to 2000, decreased by 1,003 thousand people (36.3%). The rate of unemployment also fell by² 5.9 ppt. However, compared to the highest unemployment rates in the years 2002-2003, the decline amounted to 9.6 percentage points (from 19.7% to 10.1%).

If we take into account changes in the unemployment levels and rates in the years 2000-2012, it should be noted that they did not have a uniform character. The period under consideration can be divided into the following specific sub-periods:

- 2000-2003 was a period of unfavourable trends in the labour market, reflected by rising unemployment and a rising unemployment rate,

² The LFS unemployment rate is calculated as the share of the unemployed (total or a group) in the number of economically active population (total or a given group), *Concise Statistical Yearbook of Poland 2012*, pp. 158 and 164.

- 2004-2008 was a period of economic recovery and improvement in the labour market, resulting in a downward trend in the number of unemployed and a declining unemployment rate;
- 2009-2012 was a period of declining economic growth and unfavourable trends in the labour market, and both the level and rate of unemployment increased again.

The number of unemployed in the first sub-period, which starts with the year 2000, was under 3 million people, while in subsequent years unemployment rose to over 3 million people, and in 2003 the number of unemployed was 513,000 persons higher than in 2000. The most unfavourable situation in the Polish labour market, not only during this sub-period but over the whole period under study, was in 2002, when unemployment reached its highest level. The number of unemployed amounted to 3,375,000 people, an increase of 615,000 over the base year 2000. This upward trend in unemployment in the sub-period contributed to a significant increase in the unemployment rate (by 3.3 ppt). The unemployment rate reached its highest level in Poland in 2002, when it increased to 19.7%.

The reasons for the adverse trends in the labour market in the period 2000-2003 can be found in the deterioration of economic conditions. The slowdown in real GDP growth (*Statistical Yearbook of the Republic of Poland 2003*, p. 585) from 3.7% in 2000 to 1% in 2001 and to 1.4% in 2002 was a result of deflationary policies, the deficit in the international exchange of goods, as well as of economic stagnation in Western Europe.³ The increase in unemployment and in the unemployment rate in this period was closely associated with a decrease in the number of persons employed and the employment rate, which in 2002 reached its lowest level of 44.1%, according to the Labour Force Survey (*Statistical Yearbook of the Republic of Poland 2001*, p. 101, 2003, p.143).

Difficulties in the labour market were also a consequence of the reforms initiated in 1999 in the spheres of health, administration, and the social insurance system. This to a certain degree can be attributed to the fact that government paid social insurance contributions for the unemployed if they registered with the labour office, which resulted in an increase in the number of registrations with labour offices. From the beginning of 1999, as a result of the baby boom, the inflow of graduates into the labour market has increased, a fact not without significance for the growth of unemployment and the increase in the unemployment rate. At the same time the share of the youngest group (15-24

³ The "overheated" Polish economy, together with over-stimulated domestic consumption and investment demand came across a barrier of supply and capital constraints. It is true that a restrictive monetary policy reduced demand and reduced the inflation rate, but it also weakened economic growth.

years) in the employed as a whole was decreasing, from 10.5% in 2000 to 8.8% in 2002 and to 9.3% in 2003 (*Aktywność ekonomiczna ludności Polski*, IV kwartał 2000, p. 15; 2001, p. 15; 2004, p. 75).

Table 1 shows a noticeable improvement in the labour market in the second sub-period, spanning 2004 through 2008. This finds expression in the downward trend in unemployment and in the unemployment rate.

These downward trends in unemployment and in the unemployment rate were closely related to the economic recovery in the Polish economy and to job growth. The Polish GDP showed an increase in the period under study of 5.3% in 2004, 3.6% in 2005, and reached its highest growth rates in 2006 (6.2%) and 2007 (6.8%), with a slightly lower increase in 2008 (5.1%) (*Statistical Yearbook of the Republic of Poland 2011*, p. 684). The employment rate, according to the LFS, also showed an increasing trend, from 45.1% in 2004 to 51% in 2008.

An important role in accelerating the pace of economic growth and improvement in the labour market was played by Poland's accession to the European Union in 2004, and above all by the implementation of a pro-employment policy of economic growth, resulting from the requirements of the European Employment Strategy and the Lisbon Strategy (Kwiatkowska 2007, pp. 58-66).

The third sub-period, covering the years 2009-2012, again shows an increase in the number of unemployed and in the unemployment rate. These rising dynamics of unemployment can be assessed, however, as significantly weaker than in 2000-2003. In 2012, the number of unemployed had increased by 286,000 (19.4%) compared to 2009. The unemployment rate also increased by 1.6 ppt (to 10.1% in 2012). The deterioration of the situation in the labour market was due to the economic slowdown in Poland and in other European Union countries. In 2009, real GDP grew by only 1.6%, and although in the following years the growth was higher - 3.9% in 2010, 4.3% in 2011, and 1.9% in 2012 - nonetheless the growth rate was lower than in the previous years 2006-2008 (more than 5-6%) (*Statistical Yearbook of the Republic of Poland 2011*, p. 630; *Concise Statistical Yearbook of Poland 2012*, p. 476, *Roczne wskaźniki makroekonomiczne*, www.stat.gov.pl, 19.02.2014).

In assessing the situation in the labour market in Poland it is worth comparing the rate of unemployment in the Polish economy with unemployment rates in other countries of the European Union 27. Data in this regard is presented in Table 2.

Table 2. Unemployment rates in the countries of the European Union 27, years 2002-2012, in %

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU27	8.9	9.1	9.3	9.0	8.3	7.2	7.1	9.0	9.7	9.7	10.5
Euro area (17)	8.5	9.0	9.3	9.2	8.5	7.6	7.6	9.6	10.1	10.2	11.4
Belgium	7.5	8.2	8.4	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6
Bulgaria	18.2	13.7	12.1	10.1	9.0	6.9	5.6	6.8	10.3	11.3	12.3
Czech Republic	7.3	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0
Denmark	4.6	5.4	5.5	4.8	3.9	3.8	3.4	6.0	7.5	7.6	7.5
Germany	8.7	9.8	10.5	11.3	10.3	8.7	7.5	7.8	7.1	5.9	5.5
Estonia	10.3	10.1	9.7	7.9	5.9	4.6	5.5	13.8	16.9	12.5	10.2
Ireland	4.5	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7
Greece	10.3	9.7	10.5	9.9	8.9	8.3	7.7	9.5	12.6	17.7	24.3
Spain	11.4	11.4	10.9	9.2	8.5	8.3	11.3	18.0	20.1	21.7	25.0
France	8.3	8.9	9.3	9.3	9.2	8.4	7.8	9.5	9.7	9.6	10.2
Italy	8.5	8.4	8.0	7.7	6.8	6.1	6.7	7.8	8.4	8.4	10.7
Cyprus	3.6	4.2	4.7	5.5	4.7	4.1	3.8	5.5	6.4	7.9	11.9
Latvia	12.8	11.3	11.2	9.6	7.3	6.5	8.0	18.2	19.8	16.2	14.9
Lithuania	13.8	12.4	11.3	8.0	5.2	3.8	5.3	13.6	18.0	15.3	13.3
Luxembourg	2.6	3.8	5.0	4.6	4.6	4.2	4.9	5.1	4.6	4.8	5.1
Hungary	5.6	5.8	6.1	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9
Malta	7.4	7.7	7.2	7.3	6.9	6.5	6.0	6.9	6.9	6.5	6.4
Netherlands	3.1	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3
Austria	4.2	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3
Poland	20.0	19.7	19.1	17.9	13.9	9.6	7.0	8.1	9.6	9.6	10.1
Portugal	5.7	7.1	7.5	8.6	8.6	8.9	8.5	10.6	12.0	12.9	15.9
Romania	7.5	6.8	8.0	7.2	7.3	6.4	5.8	6.9	7.3	7.4	7.0
Slovenia	6.3	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9
Slovakia	18.8	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.6	14.0
Finland	9.1	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7
Sweden	6.0	6.6	7.4	7.7	7.1	6.1	6.2	8.3	8.4	7.5	8.0
Great Britain	5.1	5.0	4.7	4.8	5.4	5.3	5.6	7.6	7.8	8.0	7.9

Source: Eurostat data, [http://epp.eurostat.ec.europa.eu/statistics_explained/index.php? Unemployment_](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?Unemployment_statist)
statist (18.02.2014).

The data in Table 2 shows that in the period under study (2002-2012), changes in average unemployment rates in the EU-27 also make it possible to identify the same three sub-periods as in the case of the Polish economy. The sub-periods are characterized by a diversified trend of changes in these rates. Between 2002 and 2004, there was an upward trend in unemployment rates (from 8.9% to 9.3%), between 2005 and 2008 - a downward trend in unemployment rates (from 9.0% to 7.1%), while between 2009 and 2012 unemployment rates again increased (from 9.0% to 10.5%).

Between 2002 and 2007, the unemployment rates in the Polish economy significantly exceeded the average unemployment rates in the EU27, and it was not until 2008 that they reached almost the same level. In 2009-2012 the rates were lower than the EU average by 0.9 ppt, 0.1 ppt, and 0.4 ppt, respectively.

Taking into account the last year under study (2012), there is a clear difference in terms of unemployment rates between Poland and some, especially the highly developed, countries of the EU-27. The unemployment rates in 13 member states were lower than in the Polish economy (also in comparison to the average rate for the EU27). Among these countries one should mention in particular: the Netherlands (5.3%), Austria (4.3%), and Luxembourg (5.1%), with unemployment rates around 5%. In many member states, the unemployment rate was higher than in Poland, and ranged between 11-25%. In 2012 the highest unemployment rate was in Spain (25%), but high rates of unemployment were also observable in Greece (24.3%), Portugal (15.9%), Latvia (14.9%), Ireland (14.7%), and Slovakia (14 %).

Based on the above data it can be concluded that the fight against unemployment is still an important priority for the governments of the member states. It is necessary to strengthen the pro-employment mechanisms of economic growth and labour market institutions, to improve the effectiveness of activation programs for the unemployed, and to introduce more flexible forms of employment. To improve the situation in the labour market a new long-term program for the development of the European Union for the period 2010-2020 was formulated. It was designated "Europe 2020 - A strategy for smart, sustainable and inclusive growth", and continued the objectives of the Lisbon Strategy for the years 2000-2010, which due to the economic crisis were not achieved.⁴ According to the Europe 2020 Strategy, the employment rate in the EU-27 should reach 75%, and for Poland a rate of 71% was adopted, which means a necessity for a significant reduction in the unemployment rate.

⁴ The employment rate in the EU27 was 64.1% in relation to the 70% target set by the Lisbon strategy, Eurostat, 2011.

3. The structure of unemployment in Poland and the European Union 27

A strong diversity of unemployment among different groups of the workforce is a characteristic feature of the Polish labour market. We are particularly interested in which groups dominated in unemployment, and which were most at risk of unemployment. Recognition of these groups of unemployed is essential in order to take effective measures to prevent and reduce unemployment.

Table 3. The structure of unemployment and unemployment rates by gender in Poland, 2000-2012, based on the LFS, in %

Year	Unemployment total = 100		The unemployment rate	
	Men	Women	Men	Women
2000	48.2	51.8	14.2	18.1
2001	50.6	49.4	17.3	20.0
2002	52.3	47.7	19.0	20.6
2003	51.8	48.2	18.4	20.3
2004	50.5	49.5	16.7	19.5
2005	50.1	49.9	15.4	18.3
2006	49.2	50.8	11.0	13.7
2007	49.7	50.3	7.8	9.4
2008	48.4	51.6	6.0	7.6
2009	52.8	47.2	8.2	8.8
2010	52.0	48.0	8.8	9.9
2011	50.1	49.9	8.8	10.8
2012	50.9	49.2	9.3	11.1

Source: Aktywność ekonomiczna ludności Polski IV kwartał 2001, p. 32, XXIX; 4th quarter of 2003: XXXII; Kwartalna informacja o rynku pracy 2011, pp. 7, 9, Statistical Yearbook of the Republic of Poland 2006, p. 252, 2007, p. 244, 2010, p.238; Kwartalna informacja o aktywności ekonomicznej ludności 2013, pp. 7-8.

Gender is the main distinguishing demographic feature of the unemployed. The data in Table 3 shows that in 2001-2005 the share of males in overall unemployment was higher than females. During this period however, economic activity rates for women were lower than for men and in addition, women dominated among the unemployed. A change in the dynamics of the shares of both sexes took place in 2006-2008, a period of a relatively high rate of economic growth, causing a decrease in the share of males in unemployment at the expense of an increased share of women. This effect reversed during the economic downturn, in the years 2009-2012, when again the share of males in overall

unemployment rose. This is due to the fact that men were more often employed in the private sector, which is characterized by a greater sensitivity to changes in economic conditions (Kalinowska-Sufinowicz 2013, p. 138). Due to different trends in the shares of both sexes in unemployment (increasing percentage of women and declining percentage of men), the share of men in relation to the share of women was higher (0.2 ppt in 2011), and rose to 1.7 per cent in 2012.

The analysis of unemployment rates indicates that the risk of unemployment among women is higher than among men. This is evidenced by higher rates of female unemployment throughout the entire period under study in relation to male unemployment rates and to total unemployment rates (see Table 1). This confirms that throughout the period under study it was harder for women to find work than for men. Numerous studies show that women are losing the competition with men, due to their social entitlements (good legal protection of motherhood and work) and women's lesser, according to employers, availability and frequent absences due to caring for sick children and other family members (Socha, Sztanderska 2000, p. 254; Matysiak 2009, p. 203). These are the main causes of discrimination against women in the labour market. Being unemployed, they are in addition discriminated against in terms of available jobs and wages.

The impact of gender on the risk of unemployment is also reflected in the share of men and women among the long-term unemployed (over 12 months). In 2000, the proportion of women seeking work for over a year in the total number of unemployed women was 45.9% (the corresponding proportion of men was 36.1%). Women accounted for 57.8% of the total number of the long-term unemployed (*Concise Statistical Yearbook of Poland 2005*, p.151). In 2005, the percentage of long-term unemployed women increased to 55.3% of all unemployed women. The proportion of long-term unemployed men also rose to 44.3%, but was still lower than that of women. In 2011, the proportion of long-term unemployed women decreased to 33.9%, but was still higher compared to the percentage of men (32.5%), although this difference was small (*Aktywność ekonomiczna ludności IV kwartał 2011*, 2012, pp. 72-73). The data confirms that women find it more difficult to find work and are affected by its negative consequences in the form, among others, of depreciation of human capital, social isolation, and low income (or lack thereof) (Kalinowska-Sufinowicz 2013, pp. 163-180).

This is especially confirmed when we compare the unemployment rates for men and women in Poland and other countries in the EU-27. This data is presented in Table 4.

Table 4. Unemployment rates for men and women in the European Union in the years 2000, 2005, and 2012, in %

Country	Women			Men		
	2000	2005	2012	2000	2005	2012
EU-27	10.0	9.8	10.5	7.8	8.4	10.4
Belgium	8.5	9.5	7.4	5.6	7.6	7.7
Bulgaria	16.2	9.8	10.8	16.7	10.3	13.5
Czech Republic	10.3	9.8	8.2	7.3	6.5	6.0
Denmark	4.8	5.3	7.5	3.9	4.4	7.5
Germany	8.4	11.0	5.2	7.7	11.6	5.7
Estonia	12.7	7.1	9.3	14.5	8.8	11.0
Ireland	4.1	4.1	11.0	4.3	4.6	17.7
Greece	17.1	15.3	28.1	7.4	6.1	21.4
Spain	16.0	12.2	25.4	7.9	7.1	24.7
France	10.8	10.3	10.4	7.5	8.4	10.1
Italy	13.6	10.1	11.9	7.8	6.2	9.9
Cyprus	7.1	6.5	11.1	3.1	4.4	12.6
Latvia	12.9	8.7	13.9	14.4	9.1	16.0
Lithuania	14.1	8.3	11.5	18.6	8.2	15.1
Luxembourg	2.9	6.0	5.8	1.8	3.6	4.5
Hungary	5.6	7.4	10.6	7.0	7.0	11.2
Malta	7.4	8.9	7.3	6.4	6.6	5.9
Netherlands	3.9	5.8	5.2	2.4	4.9	5.3
Austria	4.3	5.5	4.3	3.1	4.9	4.4
Poland	18.2	19.2	10.9	14.4	16.6	9.4
Portugal	5.2	9.1	15.8	3.8	8.1	16.0
Romania	6.3	6.4	6.4	7.2	7.7	7.6
Slovenia	7.0	7.1	9.4	6.5	6.1	8.4
Slovakia	18.6	17.2	14.5	18.9	15.5	13.5
Finland	10.6	8.6	7.1	9.1	8.2	8.3
Sweden	5.3	7.6	7.7	5.9	7.7	8.2
Great Britain	4.8	4.3	7.4	5.9	5.2	8.3

Source: *Unemployment Rate, Annual Average, by Sex and Age Groups (%)*, Eurostat Database, Luxembourg, <http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do> (Accessed 16.11.2012), *Unemployment rate by gender and age, 2007-2012 (%)*, png, <http://epp.eurostat.ec.europa.eu/statistics> (Accessed 18.02.2014).

In 2000-2005, the unemployment rate for women in Poland was one of the highest in the EU-27, and it did not decline to close to the EU average until 2012, when it exceeded it by only 0.4 ppt. In 2012 women's unemployment rates close to the rate in Poland (10.9%) could be observed in countries such as Ireland, France, Hungary, and Bulgaria. The highest unemployment rates of women, amounting to over 20%, were characteristic of Greece and Spain, countries particularly affected by the financial and economic crisis. In 2012, the lowest women's unemployment rates were in Austria (4.3%), and also in the Netherlands, Germany, and Luxembourg (5.2-5.8%).

In the vast majority of member states, not only in Poland, the unemployment rate for women was higher than the unemployment rate for men. The biggest differences between these rates in the period under study were in Greece, but in Spain only in the years 2000 and 2005. In some countries, the unemployment rate for men was higher than the unemployment rate for women, particularly in Bulgaria, Estonia, Ireland, Latvia, Lithuania, Romania, Great Britain, and Sweden. It is believed that in the process of improving the situation of unemployed women a major role is played by the development of flexible forms of employment, the implementation of active labour market programs for women, and effective implementation of the concept of gender equality in the labour market as a result of legal and institutional anti-discrimination solutions. Unemployment among men rose because men lost their jobs in the fields of the economy most vulnerable to economic fluctuations, especially in the private sector, construction, and industrial production, in which a large percentage of men work.

Another criterion for the analysis of unemployment in Poland is the age of the unemployed. The data in this regard is presented in Table 5.

The analysis of unemployment rates by age groups confirms that unemployment in Poland affects mainly young people. Persons aged 15-24 constitute the group which is particularly vulnerable in the labour market. The unemployment rate in this age group was more than twice higher than among those aged 25-34 years. A particularly high unemployment rate, above 40%, could be observed in 2001-2003. In subsequent years it showed a downward trend, reaching its lowest value in 2008, (17%), but since 2009 began to rise again, up to over 27% in 2012. Despite the overall decline in the unemployment rate in the youngest age group (by 6.7 ppt in the years under study), it still remains very high, almost three times higher than the overall unemployment rate in Poland in 2012. The situation of young people in the labour market is undoubtedly difficult. Their chances are determined by the level and type of education, which determine both the effectiveness of job searches and the ability to adapt to changes in the labour market. In addition to knowledge, employers require such skills such as computer skills, knowledge of software, driving license, foreign languages, etc. Most often

unemployment affects young people with the lowest qualifications and without professional training or work experience, i.e. those who have not performed any summer, part-time, or voluntary work.

Table 5. Unemployment rate in Poland by age in the years 2000-2012 (the 4th quarter), in%

Year	Age Groups			
	15-24	25-34	35-44	45 and over
2000	34.1	16.2	13.2	10.7
2001	41.1	18.0	16.0	11.8
2002	43.6	20.0	15.8	13.6
2003	41.1	19.4	15.7	13.7
2004	37.3	18.0	14.6	13.6
2005	34.6	16.7	13.8	12.8
2006	15-19 27.9 20-24 26.9	25-29 13.8 30-34 9.8	9.6	9.9
2007	18.7	8.9	5.6	7.2
2008	17.1	6.4	5.0	5.2
2009	22.3	8.7	5.9	6.1
2010	23.6	9.7	6.6	7.1
2011	26.4	10.1	7.0	7.1
2012	27.4	10.7	7.5	7.3

Source: Kwartalna informacja o rynku pracy 2005, p. 9, 2006, p. 9, 2008, p. 9, 2011, p. 9, 2013, p. 9; Statistical Yearbook of the Republic of Poland 2007, p. 254.

Since 2006, the unemployment rates in other age groups were relatively lower compared to previous years. The unemployment rates in the age group ranging from 35-44 years, and in the age group of 45 years or older, were very similar and in 2012 stood at a level which was over 7 ppt lower than the overall unemployment rate.

Youth unemployment doesn't only concern Poland; it is also a major concern of the European Union. The data for the EU is presented in Table 6.

Table 6. Unemployment rates among people under 25 years of age in the member countries of the EU-27 in the years 2002-2012, in %

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU27	17.8	18.6	19.0	18.8	17.5	15.7	15.8	20.1	21.1	21.4	22.8
Euro area (17)	15.9	17.3	18.2	18.3	17.0	15.5	16.0	20.3	20.9	20.8	23.1
Belgium	17.7	21.8	21.2	21.5	20.5	18.8	18.0	21.9	22.4	18.7	19.8
Bulgaria	35.2	26.6	24.3	21.0	18.3	14.1	11.9	15.1	21.8	25.0	28.1
Czech Republic	16.9	18.6	21.1	19.3	17.6	10.8	9.9	16.7	18.4	18.1	19.5
Denmark	7.4	9.2	8.2	8.6	7.7	7.5	8.0	11.8	14.0	14.2	14.1
Germany	9.9	11.6	13.8	15.6	13.8	11.9	10.6	11.2	9.9	8.6	8.1
Estonia	17.8	20.8	21.6	16.1	11.9	10.1	12.1	27.5	32.9	22.3	20.9
Ireland	8.4	8.7	8.7	8.6	8.7	9.1	13.3	24.0	27.6	29.1	30.4
Greece	26.8	26.8	26.9	26.0	25.2	22.9	22.1	25.8	32.9	44.4	55.3
Spain	22.2	22.6	22.0	19.7	17.9	18.2	24.6	37.8	41.6	46.4	53.2
France	17.2	19.1	20.8	21.3	22.4	19.8	19.3	24.0	23.6	22.9	24.3
Italy	22.0	23.6	23.5	24.0	21.6	20.3	21.3	25.4	27.8	29.1	35.3
Cyprus	8.0	8.8	10.2	13.9	9.9	10.2	9.0	13.7	16.6	22.4	27.8
Latvia	23.6	19.9	20.0	15.0	13.5	11.9	14.5	36.2	37.2	31.0	28.4
Lithuania	22.9	24.7	22.1	14.9	8.6	6.8	12.2	29.0	35.3	32.2	26.4
Luxembourg	7.0	11.2	16.4	14.6	15.5	15.6	17.3	16.5	15.8	16.4	18.1
Hungary	11.9	13.2	15.5	19.4	19.1	18.1	19.9	26.5	26.6	26.1	28.1
Malta	17.1	17.4	16.6	16.8	15.8	13.9	12.2	14.4	13.1	13.8	14.2
Netherlands	5.4	7.3	9.0	9.4	7.5	7.0	6.3	7.7	8.7	7.6	9.5
Austria	6.7	8.1	9.7	10.3	9.1	8.7	8.0	10.0	8.8	8.3	8.7
Poland	42.5	41.9	39.6	36.9	29.8	21.6	17.2	20.5	23.6	25.7	26.5
Portugal	14.3	17.8	18.9	19.8	20.1	20.4	20.2	24.8	27.7	30.1	37.7
Romania	21.0	19.5	21.0	19.7	21.0	20.1	18.6	20.8	22.1	23.7	22.7
Slovenia	16.5	17.3	16.1	15.9	13.9	10.1	10.4	13.6	14.7	15.7	20.6
Slovakia	38.1	33.8	33.4	30.4	27.0	20.6	19.3	27.6	33.9	33.5	34.0
Finland	21.0	21.8	20.7	20.1	18.7	16.5	16.5	21.5	21.4	20.1	19.0
Sweden	16.4	17.4	20.4	22.6	21.5	19.2	20.2	25.0	25.2	22.9	23.7
Great Britain	12.0	12.2	12.1	12.8	14.0	14.3	15.0	19.1	19.6	21.1	21.0

Source: Eurostat: *Unemployment rate, annual average by age groups: less than 25*, <http://epp.eurostat.ec.europa.eu> (accessed 16.11.2012) Unemployment rate by gender and age, 2007-2012 (%), <http://epp.eurostat.ec.europa.eu> (accessed 18/02/2014).

The data in Table 6 shows that the unemployment rate among people under 25 in the EU-27 was of a diversified character, due to changes in the overall unemployment rate. In 2002-2006, this rate reached 17-19%, in 2007-2008 decreased to 15.7-15.8%, only to once again increase during the 2009-2012 period to more than 20-22%. In every year the unemployment rates of young people exceeded twice the overall unemployment rate in the EU-27. Within the EU-27 member countries the trends in the changes of unemployment rates among people under 25 years were different in the period under study, but in most of them at the end of 2012 there was an increase in unemployment rates of young people in relation to the base year of 2002. In 2002, the highest unemployment rate among young people was in Poland (42.5%) and Slovakia and Bulgaria (38% and 35% respectively). In 2012, the highest rates of youth unemployment were in Greece (55.3%) and Spain (53.2%), where they increased more than double compared to 2002. In 2012 the lowest unemployment rates among young people, amounting to 8-9%, were in Germany, the Netherlands, and Austria, while in 2002 there were more such countries, including, in addition to the above mentioned: Denmark, Ireland, Luxembourg, and Cyprus.

The deterioration of the situation of young people in the labour market is closely linked to economic and financial crisis in the EU, but youth unemployment is structural in nature. In order to improve this situation, many documents of the European Union stress the need to ensure adequate vocational training and conditions to achieve the highest qualifications, according to each young persons' intellectual and physical capabilities. It is recommended to introduce special vocational training programs for all persons under 25 years of age who do not attend school and are unemployed or threatened by unemployment.

The unemployment rates of persons in age groups between 25-74 years were significantly lower than the unemployment rates of young people (up to 25 years). Table 7 shows average unemployment rates of persons aged 25-74 years in the EU-27 in the years 2003-2012.

Table 7. Average unemployment rates of persons aged 25-74 in the EU-27, 2003-2012, in %

2003	7.8	2008	6.0
2004	7.9	2009	7.6
2005	7.7	2010	8.3
2006	7.1	2011	8.3
2007	6.1	2012	9.1

Source: <http://epp.eurostat.ec.europa.eu/>, Unemployment_rate,_EU27,_2003-2012_(%).png (18.02.2014).

The unemployment rates among the 25-74 age group were more than two times lower than the unemployment rates of people younger than 25 in the years

under study. The rates and trends of their changes were varied. In 2003-2006, they were at the level of more than 7%; in 2007-2008 the average unemployment rate for people aged 25-75 years was the lowest (6%). Since 2009, with the economic downturn, these rates showed an upward trend, rising from 7.6% to 9.1% in 2012.

The level of education is the critical factor which determines people's chances in the labour market. Table 8 presents data on the structure of the unemployed, registered with labour offices in Poland, by level of education.

Table 8. The structure of unemployment by level of education in Poland in the years 2000-2012 (as of 31 December), in % of the total number of registered unemployed

Year	Education				
	Tertiary education	Post-secondary and secondary vocational	Secondary school	Basic vocational	Lower secondary, primary and incomplete primary ^{a)}
2000	2.6	20.8	6.2	37.0	33.4
2001	3.2	21.4	6.2	36.7	32.5
2002	3.9	21.2	6.2	36.2	32.5
2003	4.4	21.2	6.5	35.5	32.4
2004	4.9	21.9	7.0	33.8	32.4
2005	5.5	21.9	7.6	32.6	32.4
2006	6.1	22.0	8.4	30.9	32.5
2007	6.9	22.1	9.1	29.6	32.3
2008	8.5	22.3	10.2	28.6	30.4
2009	9.4	22.1	10.8	28.9	28.8
2010	10.5	22.0	10.9	28.4	28.2
2011	11.5	22.2	10.8	28.0	27.5
2012	11.7	22.1	10.6	28.3	27.3

^{a)} Lower secondary education since 2002.

Source: *Statistical Yearbook of the Republic of Poland* 2006, p. 251, 2007, p. 253, 2003, p. 161, 2005, p. 248; *Concise Statistical Yearbook of Poland* 2008, p. 154, 2010, p. 156, 2012, p. 160, 2013, p. 164, Author's own calculations.

The analysis of the data shows that throughout the period considered persons with lower levels of education predominate among the unemployed, in particular those with vocational education and primary or incomplete primary (and since 2002 also secondary education). In 2000-2007, they accounted for a total of more than 60% of the unemployed (70% in 2000), although during the period 2008-2012 their share fell below 60% (to 55-58%), which should be

viewed positively. The large representation of persons without qualifications and low-skilled in the community of the unemployed people requires, first of all, that they be included in vocational training and retraining programs based on the new needs of the labour market. It also requires qualitative changes in the system of vocational education.

It is worth noting that people with post-secondary and secondary vocational education account for a relatively large and stable share of unemployment, of 20-22%. The large representation of these individuals in the total general unemployment suggests that the quality and structure of this education does not fully meet the requirements of the modern labour market, and that they have too little experience in professional practice. The percentage of the unemployed with secondary education was relatively small, although it showed an increasing trend in the examined period from more than 6% in 2000-2003 to about 11% in the years 2009-2012. Most of these people probably continue their studies at a higher level to gain qualifications and vocational training.

The relatively low percentage of those with tertiary education among the unemployed, especially in the early years of the analysis, as well as the growing trends of the share of these persons in the unemployed in the period under study, constitute important features of the structure of unemployment in Poland. The share of unemployed people with tertiary education in the total stock of unemployment in 2012 was 4.5 times higher (9.1%) than in 2000, when it was 2.6%. The overall increase in the number of people with tertiary education is considered to be an economic development opportunity, but their increasing in the share among the unemployed should be considered worrying. This situation can be explained not only by the lack of jobs and the rapidly growing number of college graduates, but also by the structural nature of this unemployment resulting from the choice of fields of study and specializations, in which some saturation of the labour market has already been observed. It is emphasized that it is necessary to increase the number of graduates in science and engineering (e.g., natural science, engineering) so that the project of building a modern economy will not encounter a barrier in terms of lack of qualified personnel.

These considerations clearly confirm the impact of the education level on the situation in the labour market in the Polish economy.

Table 9. Unemployment rates by level of education in Poland in the years 2000-2012 (4th quarter), in%

Year	Education				
	Tertiary education	Post-secondary and secondary vocational	Secondary school	Basic vocational	Lower secondary, primary and incomplete primary ¹⁾
2000	4.8	13.6	19.6	19.2	20.2
2001	6.4	16.1	22.9	22.4	22.6
2002	7.5	17.4	24.0	23.8	25.4
2003	7.7	16.9	22.9	23.5	26.0
2004	6.9	16.2	20.4	22.4	24.8
2005	7.3	14.5	21.0	20.6	25.1
2006	5.8	10.9	16.1	14.5	18.8
2007	4.5	7.6	11.5	10.0	13.0
2008	3.6	6.5	9.6	7.0	11.4
2009	5.0	8.0	10.3	9.3	15.9
2010	4.7	9.1	13.1	10.4	17.1
2011	5.2	9.3	13.7	11.3	16.9
2012	5.7	9.2	14.7	11.9	18.7

Source: Statistical Yearbook of the Republic of Poland, 2006, p. 253, 2007, p. 255; Kwartalna informacja o aktywności ekonomicznej ludności 2008, p. 10; Kwartalna informacja o rynku pracy 2013, p. 9, 2011, p. 9, 2004, p. 9.

The data in Table 9 on the unemployment rates, by level of education, in Poland confirms that the risk of unemployment is the lowest in the group with tertiary education. In 2006, the upward trend of this rate decreased from 6-7% in 2001-2005 to 3-5% in the years 2006-2012. The highest rate of unemployment and the associated risk of unemployment occurred among people with lower secondary, primary and incomplete primary education. Relatively high unemployment rates, of above 20%, were characteristic of those with basic vocational and general secondary education. Since 2006, the unemployment rates showed a downward trend, and the decrease in the unemployment rate was greater with respect to those with a vocational education, especially those with a specific profession which was sought after in the labour market.

The comparison of unemployment rates by education level in the EU-27 also shows that those most vulnerable in the labour market are those with the lowest level of education.

Table 10. Unemployment rates of population aged 25-64 by level of education in the EU-27 in 2000-2010, the annual average in %

Year	Level of education		
	Tertiary education	Secondary and post-secondary	Lower secondary, primary and incomplete primary
2000	4.5	8.1	10.8
2001	4.0	7.8	9.6
2002	4.3	8.2	10.1
2003	4.6	8.2	10.2
2004	4.7	8.4	10.6
2005	4.5	8.0	10.4
2006	4.1	7.2	10.0
2007	3.6	6.0	9.2
2008	3.4	5.6	9.8
2009	4.5	7.1	12.8
2010	4.9	7.8	14.2

Source: Eurostat data <http://epp.eurostat.ec.europa.eu> (accessed 07.12.2011).

Unemployment rates among people with the lowest levels of education stood in excess of 10% during most of the years under study. In 2009-2010, the rates increased to 12.8% and 14.2%. People with secondary and post-secondary education were less affected by unemployment, as evidenced by the unemployment rate between 5.6% and 8.4%. The lowest unemployment rates were characteristic of people with tertiary education; they were lower than 5% throughout the period under study, which confirms competitive position of persons with tertiary education in the labour market in relation to those with lower levels of education.

The job search duration is another criterion for analyzing the structure of unemployment. From the point of view of this criterion, unemployment can be broken down into:

- short-term unemployment, where the job search duration is up to 3 months,
- medium-term unemployment, where the job search lasts from 4 to 6 months,
- long-term unemployment, where the duration of unemployment is 7-12 months,
- very long-term unemployment,⁵ lasting longer than 13 months.

Data on the structure of unemployment by job search period is presented in Table 11.

⁵ The Act on Employment Promotion and Labour Market Institutions of 20 April 2004, defined the long-term unemployed as those persons remaining in the registry of the district labour office in total for a period of more than 12 months during the previous two years (Journal of Laws No. 99, Item. 1001).

Table 11. The structure of unemployment by job search time in Poland in the years 2000-2012 (4th quarter), in % of the total unemployed, based on LFS

Year	Job search duration in months				
	Up to 3 inclusive	4-6	7-12	13 and more	average time
2000	18.7	17.7	22.5	41.1	13.8
2001	17.5	15.9	21.2	45.4	14.6
2002	14.5	14.3	20.8	50.4	15.9
2003	16.3	14.7	18.6	50.4	16.7
2004	16.8	14.5	19.8	48.9	16.6
2005	14.8	13.9	18.9	52.4	18.4
2006	17.5	15.8	17.3	49.4	18.5
2007	22.7	17.0	17.3	43.0	17.0
2008	35.9	19.5	18.1	26.5	11.2
2009	36.2	20.5	18.1	25.2	11.2
2010	31.8	19.7	19.1	29.4	10.2
2011	47.0		19.7	33.2	11.1
2012	45.6		18.7	35.7	11.7

Source: Yearbook of Labour Statistics 2010, GUS, Warsaw, p.181; Statistical Yearbook of the Republic of Poland 2007, p. 255, 2008, p. 245, 2011, p.239; Kwartalna informacja o rynku pracy 2013, p. 7; 2005, p. 7; Aktywność ekonomiczna ludności Polski w latach 1991-2001, p. 194; 4th quarter of 2000, p. LV, 4th quarter of 2003, pp. 38, 43; fourth quarter of 2004, pp. 110, Author's own calculations.

The data presented in the Table shows that in 2000-2007 very long-term unemployment was a characteristic feature of the Polish labour market, lasting 13 months or longer. The share of the very long-term unemployed in the overall stock of unemployment ranged between 41% and 52%. The average job search duration was also long lasting, from about 14 to 18.5 months. The share of the very long-term unemployed among the unemployed did not decline until 2008. Their percentage was lower than 30% in 2008-2010, but in the period 2011-2012 it rose to 33.2% and 35.7%. The relatively high proportions of the very long-term unemployed confirms the structural nature of unemployment in the Polish economy. This phenomenon is very unfavourable from socio-economic point of view.

The reduction of the share of very long-term unemployment and long-term unemployment (7-12 months), which in the years under study was approximately 20%, is a major challenge for the Polish economy. It's about making work a real option for these long-term unemployed, and intensifying efforts aimed at establishing their economic activity.

The decline in the share of these two categories of unemployed persons in the overall unemployment (from 63.6% in 2000 to 54.4% in 2012) was followed by a slow change in the nature of Polish unemployment from long-term unemployment into short-term unemployment. A significant increase in the proportion of short-term unemployed occurred in the years 2008-2010, when they accounted for over 30% of all unemployed, and in the years 2011 and 2012, when their share increased to 45-47%. Also, the share of the unemployed seeking job for 4-6 months increased (to about 20%). In total, the share of these groups of the unemployed increased from 36.4% in 2000 to 64.3% in 2012. Such stable trends in the changes in the Polish labour market should be viewed positively. People who have been without work for a relatively short period are easier to activate, because it is not necessary to re-socialize them and to get them used to the very fact of performing work. In addition, the costs of their activation are relatively lower than in the case of the very long-term unemployed. As a result of these positive developments in the Polish labour market the average time for searching for a job has decreased to 10-11 months.

Table 12 presents the overall long-term unemployment rate (more than one year) and the rate of women and men, as well as the very long-term unemployment rate (more than two years) in the EU27 in the years 2003-2012.

Table 12. Long term and very long term unemployment rate in the EU-27 in the years 2003-2012, (%)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Long-term unemployment rate	4.2	4.3	4.1	3.7	3.1	2.6	3.0	3.9	4.1	4.6
Male	3.8	3.9	3.8	3.5	2.9	2.4	2.9	3.9	4.2	4.6
Female	4.6	4.7	4.5	4.1	3.4	2.8	3.1	3.8	4.1	4.6
Very long-term unemployment rate	2.4	2.5	2.4	2.2	1.8	1.5	1.5	1.8	2.2	2.5

Source: Unemployment_rate, EU-27, 2003-2012_(%).png (18.02.2014).

In 2003-2005, long-term unemployment rate stood at above 4%, showing a downward trend to the lowest level of 2.6% in 2008. Since 2009, the rate began to rise again, and in the years 2011-2012 reached more than 4%. Throughout the period under study the rate increased by 0.4 ppt. Since the beginning of the period under study till 2009, the long-term unemployment rate of women exceeded that of men. In subsequent years, 2010-2011, the rate for women was lower by 0.1 ppt than the unemployment rate for men, and in 2012 both rates converged at the level of 4.6%. The very long term unemployment rate was lower, and remained in the range of 1.5-2.5%.

4. Conclusions

The following conclusions can be drawn from the above considerations:

- Trends in the level and rate of unemployment in the Polish economy in the years 2000-2012 were closely related to changes in the economic situation. This is indicated by the three separate sub-periods.
- Similarly as in the Polish economy, there were three sub-periods trends in the unemployment rates in the EU-27.
- In 2002-2007, the unemployment rates in the Polish economy significantly exceeded the average unemployment rates in the EU-27, but since 2008 have been even slightly lower. However, compared with the highly developed countries of the EU, the unemployment rates in Poland were much higher.
- The analysis of the structure of unemployment and unemployment rates helped identify groups most at risk of unemployment in the Polish and EU labour markets, which is essential for taking effective measures to reduce unemployment. The analysis shows that a higher risk of unemployment affects women more than men, young people aged up to 25 years, people with lower levels of education, and the long-term unemployed. The dominance of these individuals in overall unemployment proves its structural nature.
- In order to improve the situation in the labour market it is essential to implement the requirements of a pro-employment economic policy by the governments of the member states of the European Union, and thus improve the quality of human capital and create more sustainable jobs.

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Streszczenie

STRUKTURA BEZROBOCIA W POLSCE I UNII EUROPEJSKIEJ W LATACH 2000-2012

Sformułowane są dwa główne cele opracowania:

- *po pierwsze, ukazanie zmian wielkości bezrobocia i stopy bezrobocia w Polsce i innych krajach UE27 wraz z określeniem przyczyn tych zmian;*
- *po drugie, dokonanie analizy struktury bezrobocia według takich kryteriów, jak: płeć, wiek, poziom wykształcenia i czas pozostawania bez pracy w Polsce i innych krajach UE27.*

Przeprowadzone analizy wykazały, iż do grup szczególnie zagrożonych na rynku pracy należy zaliczyć: osoby młode, kobiety, ludzi z niskim poziomem wykształcenia i długoterminowo bezrobotnych.

Słowa kluczowe: *bezrobocie, stopa bezrobocia, rodzaje struktur bezrobocia*