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## LABOUR MARKET IN BALTIC COUNTRIES – THE CURRENT CONDITION AND PROSPECTS OF CHANGES

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**Abstract:** The paper includes analyses concerning *generation 50+*. The minute analyses are related to the parameters that characterise the labour market, their dynamics in the recent years as well as the forecasts of values for the nearest years. The basis of these analyses are the time series of values of relevant coefficients, derived from Eurostat data base – one of the most credible source of data, or the coefficients that have not been published in any data sources but have been determined on the basis of the age structure of population. The scope of analyses includes not only Poland but also other EU countries. The group of analysed countries involves Baltic countries; it means Poland, Lithuania, Latvia, Estonia, Denmark, Sweden, Finland and Germany. The selection was not random. First four countries are the countries newly admitted into European Union in 2004. The next four countries are the so called ‘old’ European Union countries, where the functioning of the social system is considered to be more employee-friendly and, consequently, the position of employees of *generation 50 +* on the labour market may differ from the position of employees in the countries regarded as new in the EU. With regard to the unavailability of some data, the period of analysis includes years 200-2008 and the coefficients which have been found the most important for the evaluation of the labour market condition are: the coefficient of occupational activity, the employment rate, unemployment rate as well as the long-term unemployment rate.

**Key words:** labour market, employment rate, unemployment rate, long-term unemployment rate.

### 1. Introduction

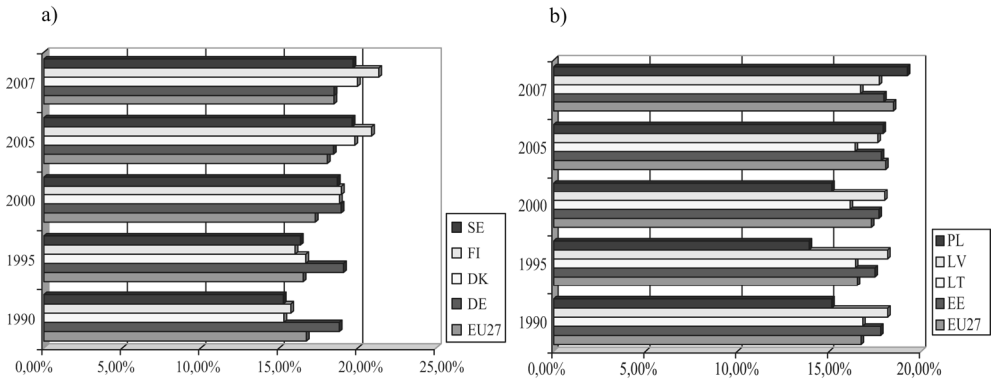
Europe and simultaneously Poland are getting older. Demographers estimate that in 2050 half of the population inhabiting our continent will reach the pension age, which will result in the lack of 160 million employees on the labour market. Such adverse forecasts incline us to make an attempt to construct detailed analyses within the scope of labour market, its current and future condition. The escalating problems such as decreasing group of occupationally active people, increasing expenditure on benefits for occupationally passive people who are the bulk of the population, deepening social marginalization of elderly people constitute huge threats for the future of social-economic systems in many European countries. The particularly distressing

are changes or, actually, the lack of changes in the perception of role and position of people at the pre-pension age on the labour market, it means the people who are at the close of their occupational career but are still the reliable background of work resources. The European Union countries in which the problem of population and work resources ageing is sorely visible took the action which was contractually called Lisbon Strategy. The aim of Lisbon Strategy is the increase of occupational activity in the society in total, and particularly age group 50-64 years. Due to the fact that both scientific and non-scientific publications pay more and more attention to this age group of employees, called *generation 50+*, the presented article will also include analyses concerning *generation 50+*. The minute analyses will be related to the parameters that characterise the labour market, their dynamics in the recent years as well as the forecasts of values for the nearest years. The basis of these analyses are the time series of values of relevant coefficients, derived from Eurostat data base – one of the most credible source of data, or the coefficients that were not published in any data sources but were determined on the basis of the age structure of population. The scope of analyses includes not only Poland but also other EU countries. The group of analysed countries involves Baltic countries; it means Poland, Lithuania, Latvia, Estonia, Denmark, Sweden, Finland and Germany. The selection was not random. First four countries are the countries newly admitted into European Union in 2004. The next four countries are the so called ‘old’ European Union countries, where the functioning of the social system is considered to be more employee-friendly and, consequently, the position of employees of *generation 50+* on the labour market may differ from the position of employees in the countries regarded as new in the EU. With regard to the unavailability of some data, the period of analysis includes years 200-2008 and the coefficients which were found the most important for the evaluation of the labour market condition are: the coefficient of occupational activity, the employment rate, unemployment rate as well the long-term unemployment rate.

## **2. *Generation 50+* – brief description**

The considerations concerning the labour market parameters should be preceded with a brief description of the age structure of *generation 50+* in the selected EU countries. It should be noticed that the youngest people within this age group were born in 1958 (taking into account the last year of the analysis, i.e. 2008), and the oldest people were born in 1944. Therefore, the range of births of the current *generation 50+* includes the war demographic low and the first post-war peak of births. The dynamics of changes within the subpopulation *generation 50+* number is different from the changes of number ratios in other age groups. Analysing the changes of number ratios of people at the age of 50-64 in relation to the whole population in the years 1990, 1995, 2000, 2005, and 2007 successively, we can conclude that the values of coefficients systematically grow in each of the analysed countries (Figure 1a, b). The

forecasts of the values of coefficients constructed on the basis of the forecast of the age structure show an upward tendency (Figure 2a, b).

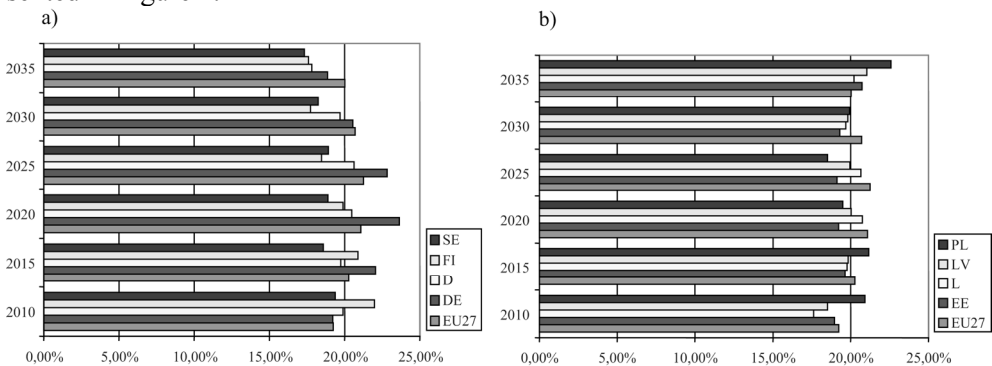


**Figure 1.** The dynamics of changes in the share of subpopulation 50-64 in relation to the whole society in the selected years

Source: own elaboration.

The above mentioned division of the group of analysed Baltic countries into two parts in accordance with the EU membership, it means the countries with the longest period of membership and the countries with a short, merely few-year-membership, was applied in the construction of graphs and further considerations.

The forecasts of values of the ageing coefficients for age group 50-64 are presented in Figure 2.



**Figure 2.** The forecasts of share of subpopulation 50-64 years in relation to the whole society for the selected years

Source: own elaboration.

Analysing Figure 1 in detail we may conclude that within the range of whole European Union, which embraces 27 countries, between 1990 and 2007 there was a

growth in the number of subpopulation of people at the age of 50-64 years by 2%; the strongest pace of growth was observed in Finland (the group of 'old' EU) by 5% and in Poland by more than 4% (the group of new EU members). In the analysed period of 17 years the percentage of the distinguished group of people in Germany and Estonia remained almost unchanged.

The forecasts of changes in the coefficient for the selected years up to the year 2035 show a peculiar regularity, namely in each of the analysed countries (with the exception of Finland and Sweden) the value of the coefficient is expected to increase until the year 2020 and later on it is expected to decrease. This is certainly the echo of the fluctuation of births which fell in the sixties and the seventies of the 20<sup>th</sup> century. We should also notice that, even though the ratios differ in particular countries, women predominate in this age group. We can distinguish three groups of countries. The first group includes Estonia, Lithuania and Latvia, where the feminization coefficient oscillates between 113 and 117 women per 100 men; the second group consists of Denmark and Sweden – with the coefficient value equalling approximately 101, and the third group includes Germany and Poland (105-107).

Demographic forecasts claim that in 26 years, i.e. in the year 2035, the population of people at the age of 50-64 years in the EU will equal almost 103 million people, which will constitute approximately 20% of the population that inhabits the territory of the current EU. At the same time the share of people at the age of more than 65 years will reach 25% of the total population. Altogether the population of people at the age of more than 50 years will equal 235 million people in 2035, which will constitute 45% of all EU inhabitants. This will be almost by 10% more than in 2007.

### **3. People at the age of 50 + on the labour market**

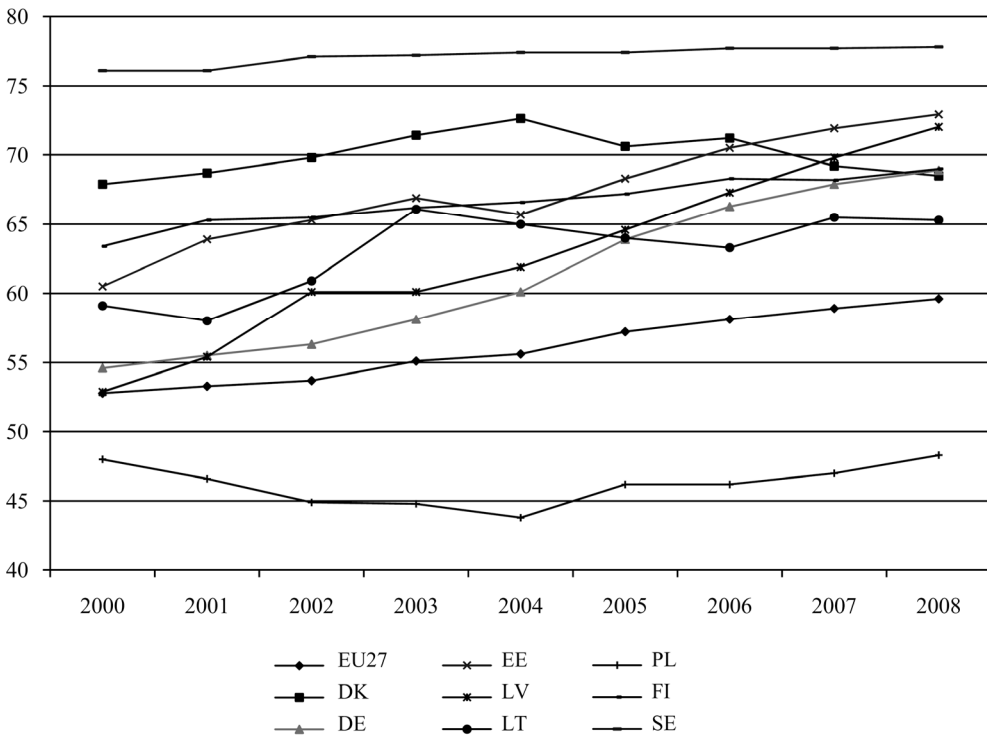
It is the best idea to present the evaluation of the labour market condition with the consideration of particular age groups of the employees by means of the basic statistical parameters, namely the rates that describe the occupational activity of the society and the possible level of unemployment. Taking into consideration the fact that Poland, similarly to whole Europe, is getting older and, according to long-term demographic forecasts, in the year 2050 half of the population of our continent will reach the pension age, which will cause the lack of more than 160 million employees on the EU labour market, it pays to focus particularly on the age group of employees who are threatened with the strongest occupational de-activation, i.e. the people at the age of more than 50 years, commonly called *generation 50 +*.

As it has been shown in the first part of the elaboration, in the near future the percentage of people at the age of 50-64 years will increase and, consequently, such problems as a decreasing group of occupationally active people, increasing expenditure on the benefits for occupationally passive people, who constitute the majority of the population, as well as the intensifying social marginalisation of elderly people will escalate, which constitute a huge threat for the future of social-economic systems in many European countries. A separate problem is a growing rate of unemployment

in this age group of employees. Yet, in many cases this is a structural unemployment, i.e. the unemployment forced by the changing economy and its structure. Below, one can find the results of the detailed analyses that enable us to evaluate the level of occupational activity and the scale of unemployment in the group of selected Baltic countries.

### 3.1. Occupational activity of people at the age of 50 +

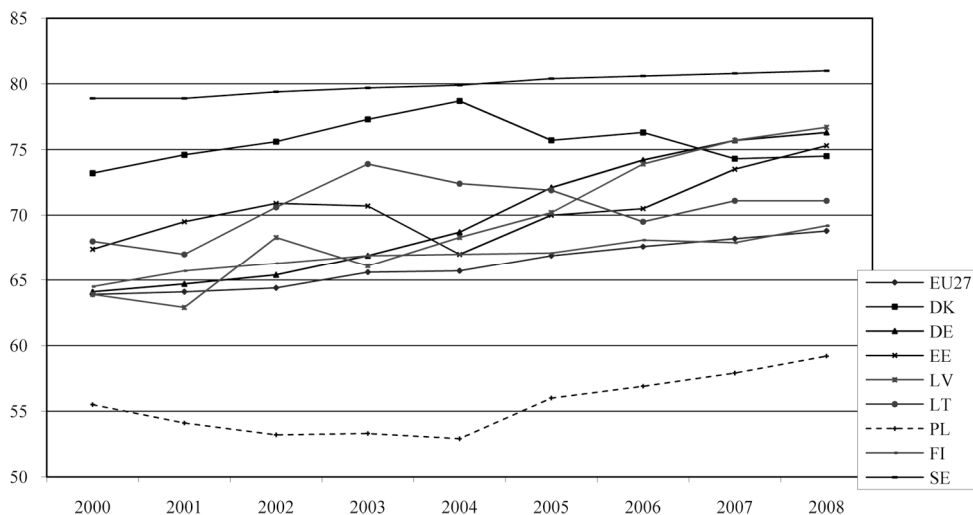
Data derived from Eurostat data base enable us to evaluate the dynamics of changes in the coefficients of occupational activity for the previous years. Geometrical interpretation of empirical trend lines of the coefficients for the general number of employees and with the consideration of their gender, presented in Figures 3-5 allows for the formulation of many interesting conclusions.



**Figure 3.** The dynamics of changes in the occupational activity coefficient in Baltic countries in the years 2000-2008 for the total number of employees at the age of 50-64

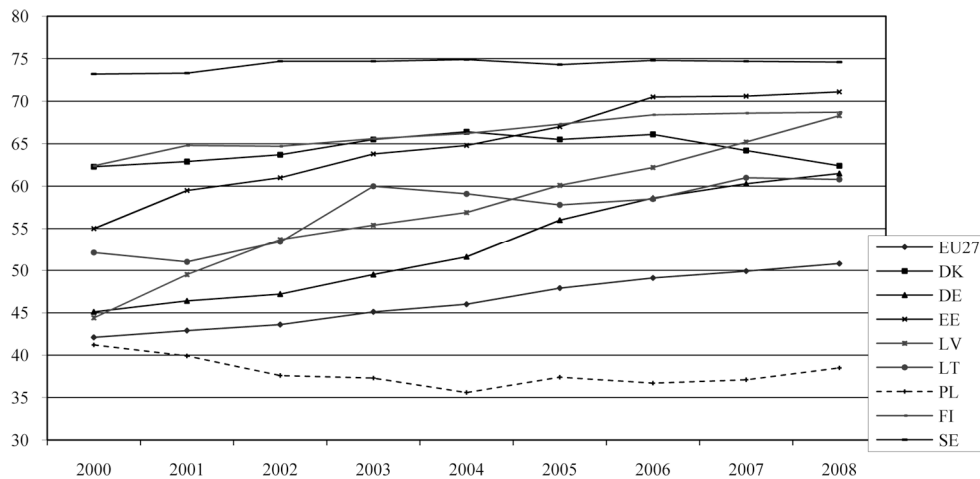
Source: own elaboration.

The level of occupational activity is significantly different in particular countries. In the countries of ‘old European Union’, i.e. in Germany, Denmark, Sweden and



**Figure 4.** The Dynamics of changes of the coefficient of men's occupational activity in Baltic countries in the years 2000-2008 for the employees at the age of 50-64 years

Source: own elaboration.



**Figure 5.** The dynamics of changes of the coefficient of women's occupational activity in Baltic countries in the years 2000-2008 for the employees at the age of 50-64 years

Source: own elaboration.

Finland, the coefficients of occupational activity exceed the average level in the whole EU; in the countries of the former Soviet Union the coefficients oscillate closely around the general union level, while in Poland the coefficients of occupa-

tional activity are significantly lower than in other countries. Unfortunately, Poland is one of the EU countries with the lowest coefficient of occupational activity both in general and in the distinguished age group 50+. Lower level of the coefficient can be found only in Malta.

Similar trends are visible in more detailed analyses, when the employee's gender is taken into consideration. The values of coefficients for women are lower than for men; however, the general tendency of dependence does not change. By means of the time series of coefficients for the above mentioned years and with the consideration of their regularity the theoretical trend lines of the coefficients' changes were determined and then, on their basis, the analyses concerning the coefficient values for the nearest years were constructed. The obtained trend functions are presented in Table 1.

**Table 1.** Theoretical trend functions of the coefficients of the general occupational activity

European Union (27 countries)	$y = 0.915t + 51.458$	$R^2 = 0.985$
Denmark	$y = -0.2267t^2 + 2.3656t + 65.34$	$R^2 = 0.8396$
Germany	$y = 2.0033t + 51.272$	$R^2 = 0.9698$
Estonia	$y = 1.4233t + 60.206$	$R^2 = 0.9476$
Latvia	$y = 2.3083t + 51.136$	$R^2 = 0.9832$
Lithuania	$y = -0.1706t^2 + 2.539t + 55.729$	$R^2 = 0.7145$
Poland	$y = 0.2162t^2 - 2.0557t + 49.631$	$R^2 = 0.8446$
Finland	$y = 0.6283t + 63.492$	$R^2 = 0.9529$
Sweden	$y = 0.2167t + 76.083$	$R^2 = 0.8383$

Source: own elaboration.

The trend functions presented above are, as a rule, the linear functions with a good or even very good adjustment of the theoretical line to empirical data. Only in case of Poland, Lithuania and Denmark the linear functions with a weaker adjustment extent were obtained and, therefore, a theoretical trend function was chosen as a second-degree polynomial.

Tables 2 and 3 present values of the measure forecast for the years 2009-2011 in total. The forecasts were constructed by means of two methods – both on the basis of trend function as well as harmonic weights method, i.e. adaptive method, where the forecasting results react intensively to newly coming information.

**Table 2.** The forecasts of the general occupational activity coefficients for selected EU countries for the years 2009-2011 (harmonic weights method)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	60.48	67.61	70.81	74.34	74.40	66.36	48.90	69.37	77.91
2010	61.35	66.93	72.61	75.72	76.76	67.02	49.58	69.88	78.03
2011	62.22	66.26	74.42	77.10	79.11	67.68	50.27	70.40	78.16

Source: own elaboration.

**Table 3.** The forecasts of the general occupational activity coefficients for selected EU countries for years 2009-2011 (on the basis of trend function)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	60.61	66.32	71.31	74.44	74.22	64.06	50.69	69.78	78.25
2010	61.52	63.92	73.31	75.86	76.53	63.02	53.18	70.40	78.47
2011	62.44	61.08	75.31	77.29	62.44	61.63	56.10	71.03	78.68

Source: own elaboration.

The occupational activity of people at the age of 50-64 years with the consideration of the employee's gender was also presented in the form of theoretical trend lines and, similarly to the case of general occupational activity, the expected level of measures for the nearest years was determined.

**Table 4.** Theoretical trend functions of the coefficient of men's occupational activity

European Union (27 countries)	$y = 0.66t + 62.833$	$R^2 = 0.9781$
Denmark	$y = -0.2298t^2 + 2.366t + 71.024$	$R^2 = 0.73$
Germany	$y = 1.7433t + 61.072$	$R^2 = 0.9639$
Estonia	$y = 0.1445t^2 - 0.7431t + 69.674$	$R^2 = 0.65$
Latvia	$y = 1.7483t + 60.814$	$R^2 = 0.9195$
Lithuania	$y = -0.2012t^2 + 2.3536t + 65.214$	$R^2 = 0.5227$
Poland	$y = 0.215t^2 - 1.5454t + 56.362$	$R^2 = 0.8943$
Finland	$y = 0.4867t + 64.533$	$R^2 = 0.9288$
Sweden	$y = 0.2867t + 78.522$	$R^2 = 0.9818$

Source: own elaboration.

**Table 5.** Theoretical trend functions of the coefficient of women's occupational activity

European Union (27 countries)	$y = 1.16t + 40.578$	$R^2 = 0.9897$
Denmark	$y = -0.2295t^2 + 2.4471t + 59.367$	$R^2 = 0.8607$
Germany	$y = 2.2767t + 41.528$	$R^2 = 0.9729$
Estonia	$y = 1.9983t + 54.819$	$R^2 = 0.9575$
Latvia	$y = -0.076t^2 + 3.4997t + 42.207$	$R^2 = 0.9847$
Lithuania	$y = -0.1457t^2 + 2.67t + 48.34$	$R^2 = 0.7928$
Poland	$y = 0.2103t^2 - 2.4511t + 43.519$	$R^2 = 0.8964$
Finland	$y = 0.7617t + 62.492$	$R^2 = 0.9413$
Sweden	$y = -0.0569t^2 + 0.7293t + 72.512$	$R^2 = 0.7537$

Source: own elaboration.

As mentioned before, the theoretical trend functions were the basis for determination of the coefficients' forecasts for the nearest years. At the same time, the forecasts of the measures' value were determined by means of harmonic weights method. The obtained values are shown in Tables 6-9.



**Table 6.** The forecasts of the coefficients of men's occupational activity for the selected EU countries in the years 2009-2011 (harmonic weights method)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	69.46	73.61	77.99	77.04	78.60	71.60	60.19	69.47	81.25
2010	70.12	73.09	79.53	78.58	80.37	71.83	61.22	70.00	81.49
2011	70.77	72.57	81.08	80.12	82.14	72.06	62.26	70.52	81.74

Source: own elaboration.

**Table 7.** The forecasts of the coefficients of men's occupational activity for the selected EU countries in the years 2009-2011 (on the basis of trend function)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	69.43	71.70	78.51	76.69	78.30	68.63	62.41	69.40	81.39
2010	70.09	69.24	80.25	78.98	80.05	66.76	65.38	69.89	81.68
2011	70.75	66.32	81.99	81.56	81.79	64.48	68.78	70.37	81.96

Source: own elaboration.

**Table 8.** The forecasts of the coefficients of women's occupational activity for the selected EU countries in the years 2009-2011 (harmonic weights method)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	51.83	61.54	63.61	72.30	71.08	62.25	38.67	69.21	74.62
2010	52.88	60.70	65.63	73.57	73.88	63.24	39.01	69.71	74.63
2011	53.93	59.85	67.66	74.84	76.68	64.24	39.35	70.21	74.65

Source: own elaboration.

**Table 9.** The forecasts of the coefficients of women's occupational activity for the selected EU countries in the years 2009-2011 (on the basis of trend function)

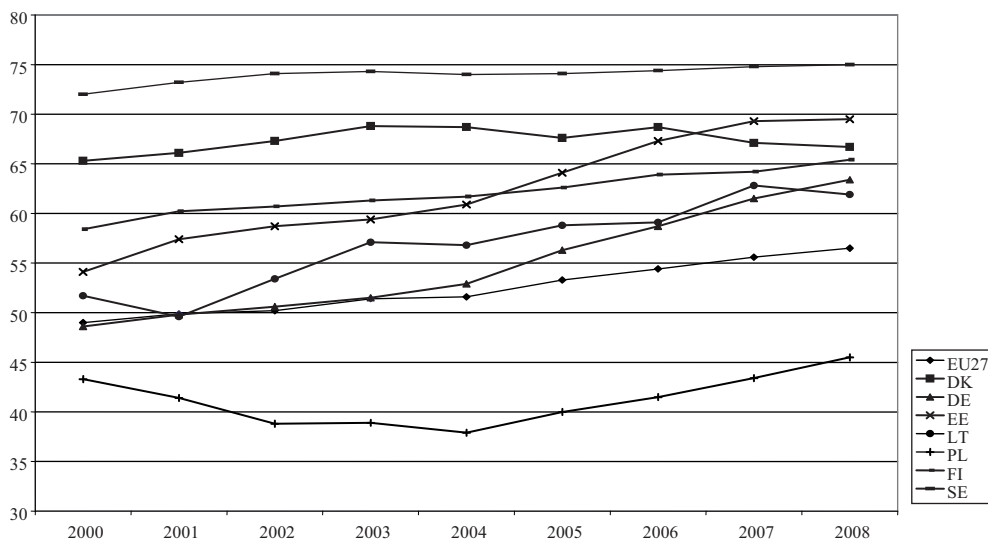
Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	52.18	60.89	64.30	74.80	69.60	60.47	40.04	70.11	74.12
2010	53.34	58.52	66.57	76.80	71.51	60.08	42.00	70.87	73.65
2011	54.50	55.68	68.85	78.80	73.26	59.40	44.39	71.63	73.07

Source: own elaboration.

The results of the applied forecasting procedures are surprising. It is visible in case of some of the analysed countries that the forecasts obtained by means of separate methods differ significantly. For example, for Lithuania the harmonic weights method gives the forecasts that indicate the increase in the value of measure while the trend function (the second degree polynomial) determines the forecast of the coefficient with a decreasing level. In case of other Baltic countries there are no such significant changes in the values of forecasts obtained by means of indicated methods. The direction of changes remains unchanged; only the values of forecasts are

different. Therefore there remains the issue concerning the selection of the coefficient forecast for the specified country for a given year. Having no chance to determine precisely the error of the forecast we are inclined to accept the result of forecasting obtained by means of harmonic weights method. The basis of such a decision are the results of the analyses carried out with regard to other economic or demographic phenomena.

In the analysis of labour market, apart from the level of occupational activity, a very important role is played by the measure that enables us to evaluate the actual intensity of labour force, i.e. the employment coefficient. This is the measure with a very strong dynamics of changes and its value enables us to assess the actual level of occupational activity within the society, especially in case when the evaluation of occupational activity in particular age groups is important. Figure 6 shows the dynamics of changes of this coefficient. Similarly to the case of the coefficients that characterise the occupational activity, also for the employment coefficient we determined theoretical trend functions (mostly linear) as well as the forecasts of its values for the nearest years. This is shown below.



**Figure 6.** The dynamics of the employment coefficient in the group of people at the age of 50-64 years for the selected EU countries for the years 2000-2008

Source: own elaboration.

The forecasts of the employment coefficient for the nearest three years for Baltic countries are shown in Table 11. This is the result of forecasting based upon the harmonic weights method. The values of forecasts obtained by means of trend function cannot be considered as credible (in spite of a good adjustment of theoretical trend function to empirical data) with regard to their strong dynamics of changes.

**Table 10.** Theoretical trend functions of the employment coefficient in the group of people at the age of 50-64 years (in general)

European Union (27 countries)	$y = 0.9567t + 47.65$	$R^2 = 0.9781$
Denmark	$y = -0.1649t^2 + 1.8194t + 63.493$	$R^2 = 0.8385$
Germany	$y = 1.9217t + 45.203$	$R^2 = 0.9555$
Estonia	$y = 1.9867t + 52.367$	$R^2 = 0.9719$
Latvia	$y = 2.68t + 43.578$	$R^2 = 0.9717$
Lithuania	$y = 1.5583t + 49.008$	$R^2 = 0.9061$
Poland	$y = 0.3661t^2 - 3.3063t + 46.126$	$R^2 = 0.9532$
Finland	$y = 0.795t + 58.069$	$R^2 = 0.9768$
Sweden	$y = -0.042t^2 + 0.7066t + 71.786$	$R^2 = 0.8358$

Source: own elaboration.

**Table 11.** The forecasts of the employment coefficients in general for the selected EU countries for the years 2009-2011 (harmonic weights method)

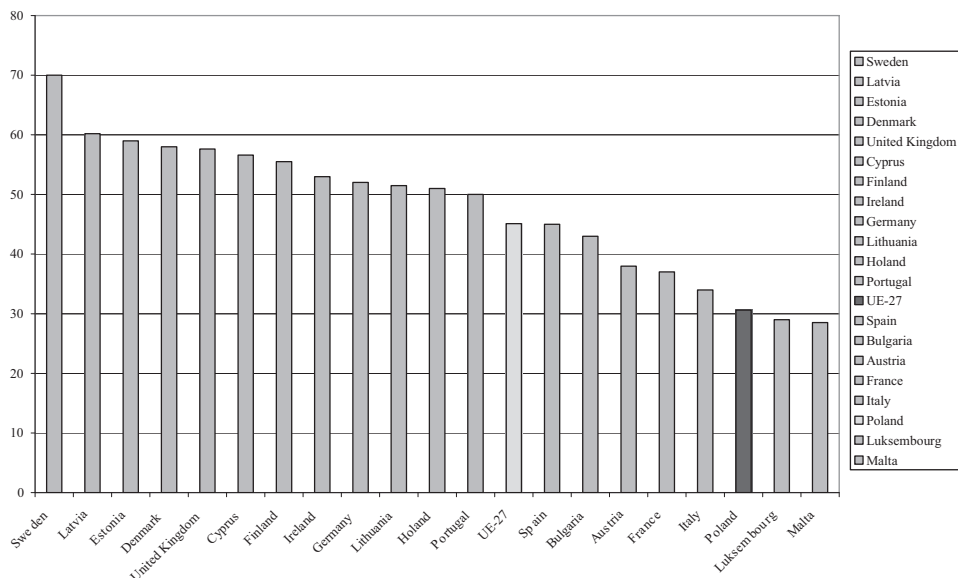
Year	EU27	DK	DE	EE	LV	LT	PL	FI	SE
2009	57.60	66.09	65.81	71.52	70.49	64.06	46.85	66.06	75.29
2010	58.64	65.68	68.07	73.23	73.13	65.45	48.23	66.86	75.56
2011	59.69	65.27	70.34	74.95	75.78	66.84	49.61	67.67	75.82

Source: own elaboration.

The problems concerning a low occupational activity of *population 50+*, and particularly a part of this group, i.e. people at the age of 55-64 years, characterise the labour market not only in Poland but also in other EU countries. Majority of European countries face the same problems. In order to solve at least part of these problems, in March 2000 EU countries took the common action which was named Lisbon Strategy. The significant aim of that initiative was occupational activation of people from generation 50+. The EU countries decided that by 2010 the average age of retirement would have been prolonged from 58 to 63 years. At the summit meeting in Lisbon it was also decided that at the same time the employment coefficient for people at the age of more than 55 years would grow up to 50%. The employment coefficient in the European Union in the discussed age group equalled 45.1% in 2007. Only 12 out of 27 EU member countries managed to fulfil Lisbon assumptions. As shown in Figure 7, Poland remains at one of the last positions in this classification. The share of employed people in the general number of population at the age of 55-64 in our country was at the level of 30.6% in the last months of 2007.

It is almost certain that Lisbon assumptions from the year 2000 that postulate the growth of employment of people at the age of 55-64 years up to the level of 50% will remain unrealized at the assumed time. Only few countries can boast of the efficient pro-activation and pro-employment policy directed towards the oldest citizens. Other EU members, including Poland, will not have managed to carry out the planned aims by 2010. According to the latest assumptions of Ministry of Labour and Social Policy

from February 2008 it is planned that the rate of people working at the age of 55-64 years will increase up to the level of 40% in 2010, and up to the level of 50% in 2020.



**Figure 7.** The employment rate of people at the age of 55-64 years in the selected EU countries in the fourth quarter of 2007 (data for the third quarter of 2007)

Source: own elaboration on the basis of Eurostat data.

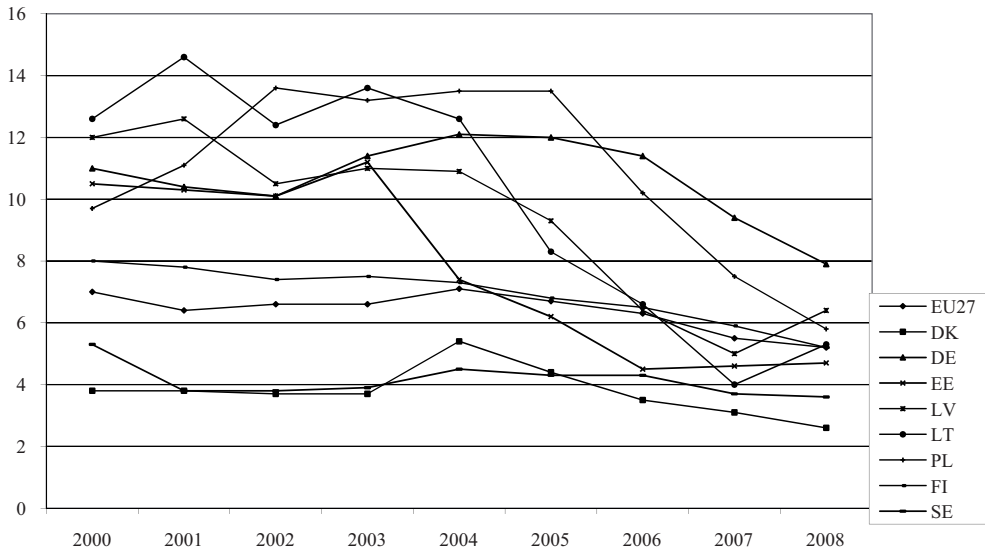
Generally, we can say that the assumptions of Lisbon strategy are carried out with more or less success. The highest values of the employment rate in the group of Baltic countries are expected in Sweden and the lowest, unfortunately, in Poland. A very dynamic growth in case of Baltic republics of the former Soviet Union seems to be a bit too optimistic, but, taking into consideration small populations of these countries, it may be real and attainable. In case of Poland, as mentioned earlier, we should not expect a sudden growth of the employment level in the nearest future. The decisions concerning its changes and the fact of occupational activation of age group 55-64 have not only economic but first of all political character and it is not easy to choose a proper economic strategy so that general social and political arguments could be simultaneously taken into account.

### 3.2. The unemployed at the age of 50+ as a specific category on the labour market

The unemployment level counterweights the level of occupational activity. Similarly to the level of occupational activity the evaluation of the unemployment level will be

based upon appropriate statistical rates, i.e. the measure of unemployment rate in general as well as with the consideration of the employee's gender. Due to the fact that the time of being unemployed is a specific problem, the so called long-term unemployment will be the subject of separate studies.

The following graph shows empirical trend lines for the measures of unemployment rate in the years 2000-2008 in the discussed Baltic countries.



**Figure 8.** The dynamics of changes in the general unemployment rate for the years 2000-2008 in the selected EU countries

Source: own elaboration on the basis of Eurostat data.

The detailed analysis of the above trend lines enables us to state that:

- For the EU countries the unemployment rate decreased slightly in the last decade both when considered in general as well as with the consideration of the employee's gender.
- In Scandinavian countries the unemployment level is lower than in the whole European Union, which is not surprising due to the fact that the occupational activity coefficients in these countries had a decidedly higher level than in the whole EU.
- In the years 2000-2004 the dynamics of changes of the coefficients was much less intensive than in other years of the analysed period and it was characterised by a higher stability. In the years 2005-2008 the decrease of the unemployment rate was much faster. The reason for this change can be found in case of age group 50-64, first of all in the change of the employee's status from the unem-

ployed to the one who enters the phase of occupational rest, i.e. the early retirement. Therefore, the number of the unemployed did not include the people who in accordance with the law were not unemployed; it means the people without job who receive the pre-pension benefit, old age pension or early retirement pay.

- The separate analyses, carried out with the consideration of the employee's gender, confirm the conclusions drawn earlier; yet, the coefficients that determine the unemployment rate for women are lower than for men. This may result from the fact that women used the pre-pension benefits, offered by the modified retirement system, to a higher degree. It should be pointed out that in the nineties it was common to believe that occupational de-activation of people at the age of more than 50 years was a perfect way to lower the unemployment rate. It was also popular to claim that these people, by retiring earlier, leave the workplaces for unemployed young people. Moreover, such a policy was executed in Poland, what clearly proved that it was a false conviction. The unemployment did not decrease because the vacated workplaces were not designed for young people and most often they were simply liquidated. Thus the reduction of the unemployment rate in the group of people at the age of 50-64 was apparent and it did not turn out to be an effective cure for the problems of the labour market.
- Theoretical trend functions of measures of unemployment rate are shown below.

**Table 12.** Theoretical trend functions of the general unemployment rate for the group of people at the age of 50-64 years

European Union (27 countries)	$y = -0.0502t^2 + 0.3288t + 6.3238$	$R^2 = 0.7875$
Denmark	$y = -0.082t^2 + 0.7103t + 2.8238$	$R^2 = 0.5648$
Germany	$y = -0.1558t^2 + 1.3551t + 8.7929$	$R^2 = 0.6795$
Estonia	$y = -0.9417t + 12.431$	$R^2 = 0.834$
Latvia	$y = -0.0648t^2 - 0.2701t + 12.748$	$R^2 = 0.8597$
Lithuania	$y = -0.1568t^2 + 0.2698t + 13.617$	$R^2 = 0.8632$
Poland	$y = -0.3789t^2 + 3.2406t + 6.6952$	$R^2 = 0.9485$
Finland	$y = -0.3233t + 8.55$	$R^2 = 0.9171$
Sweden	$y = -0.095t + 4.6083$	$R^2 = 0.2354$

Source: own elaboration.

Taking into consideration a strong relation between the unemployment rate and the labour market, the economic and social level as well as the efficient functioning of the whole country it pays, similarly to the case of measures for the population economic activity discussed earlier, to construct forecasts for the unemployment rates for the nearest years for each of the analysed Baltic countries.

The construction of forecasts is a bit troublesome because the only method which gives relatively credible values is harmonic weights method. Methods that use trend function cannot be taken into consideration because the variable dynamics of values of measures in the years 2000-2008 does not enable us to construct the trend function whose adjustment to empirical data would be relatively good. Usually we obtain a fourth degree polynomial with a big residual variance, i.e. it is not very useful for further analyses.

**Table 13.** The forecasts of the general unemployment rate for the selected EU countries for years 2009-2011 (harmonic weights method)

Year	EU-27	DK	DE	EE	LV	LT	PL	FI	SE
2009	4.74	2.25	6.84	4.12	5.25	3.45	4.01	4.73	3.32
2010	4.36	1.89	5.86	3.55	4.56	2.25	2.38	4.24	3.13
2011	3.97	1.53	4.88	2.97	3.88	1.04	0.76	3.75	2.93

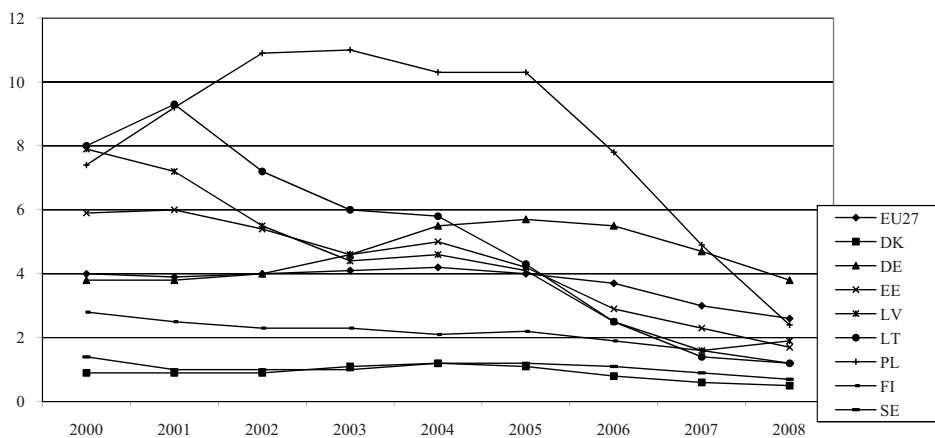
Source: own elaboration.

Table 8 includes the values of forecasts of the unemployment rate in the group of people at the age of 50-64 years. However, the obtained forecasts should be approached cautiously. In many cases the forecasts achieved for the year 2011 indicate a very low level of the unemployment rate in the group of people at the age of 50-64 years while we should expect stabilisation of its level or a slight decrease (decrease with a slight intensity). In Poland the decrease of unemployment level to the level equalling 0.67% is absolutely unreal. The knowledge of economic and social conditions in our country does not induce us to find this forecast reliable.

### 3.3. Long-term unemployment

As it was mentioned before, a separate problem concerning the considerations related to unemployment is the long-term unemployment, i.e. a situation when an employee is vainly looking for a job within the period of more than one year. Long-term unemployment is a peculiar form of unemployment and differs significantly from its other forms. This can be shown as follows: firstly, there is a characteristic ‘professionalisation’ of the unemployed status, so unemployment becomes, to a higher degree, a way of living; secondly, activation of the long-term unemployed is more difficult than activation of the temporarily unemployed people. Long-term unemployment is highly determined by gender. A considerable part of this group of unemployed people consists of women, because women are considered to be less available and more troublesome (maternity leaves, parental leave, leaves related to mother’s care of a sick child) and the scope of occupational availability is narrower in case of women (they work in a smaller number of professions, especially these professions associated with heavy industry). The age and job seniority, as strong features correlated with each other, have a similar influence upon the time of being unemployed. Young

people at the age of maximum 25 years as well as people who are at the age of more than 50 years constitute a huge group among the unemployed. The majority of the long-term unemployed are people who used to work. For the most part they lost their jobs due to the liquidation of the working place or the working post. Most often these were the industry or building workers and rarely the employees of private trade. The long-term character of unemployment is a result of inadequate qualifications or even the lack of qualifications, or the lack of adjustment of qualifications to the requirements of labour market. Long-term unemployment is a problem not only of Polish labour market but it also harasses the labour market in all European countries. In case of Baltic countries the pace of changes in long-term unemployment rate for the total labour resources is shown in Figure 9.



**Figure 9.** Long-term unemployment rate in the years 2000-2008 for Baltic countries (in general)

Source: own elaboration.

Trend functions for long-term unemployment rate are shown in Table 14.

**Table 14.** Theoretical trend functions of long-term unemployment rate in general for the group of people at the age of 50-64 years

European Union (27 countries)	$y = -0.0543t^2 + 0.3933t + 3.4762$	$R^2 = 0.9352$
Denmark	$y = -0.0274t^2 + 0.2288t + 0.6119$	$R^2 = 0.8217$
Germany	$y = -0.0961t^2 + 1.0744t + 2.2714$	$R^2 = 0.7061$
Estonia	$y = -0.555t + 6.9972$	$R^2 = 0.928$
Latvia	$y = 0.0384t^2 - 1.1692t + 9.0405$	$R^2 = 0.9565$
Lithuania	$y = -1.0333t + 10.244$	$R^2 = 0.9414$
Poland	$y = -0.3729t^2 + 3.0661t + 4.7238$	$R^2 = 0.9854$
Finland	$y = -0.1667t + 2.9333$	$R^2 = 0.9058$
Sweden	$y = -0.0066t^2 + 0.021t + 1.1595$	$R^2 = 0.4187$

Source: own elaboration.



The analysis of the above empirical trend lines and additional detailed studies confirm the previously stated suggestions, namely that the level of long-term unemployment is higher in case of women than men. Generally it can be stated that in the analysed period the unemployment level shows a downward tendency for all analysed countries, however, with a different intensity. Unfortunately, the highest level in each of the analysed years was observed in Poland; in the years 2000-2005 the unemployment coefficient exceeded the level of Scandinavian countries by several times and the average EU level almost twice. In the years 2006-2008 there was a sudden drop of the long-term unemployment rate which made Polish unemployment rate equal the EU level in 2008. The reasons for the drop of long-term unemployment rate may be puzzling. Certainly, it cannot be explained by a sudden increase in work places. More reasonable reasons should be searched in the growing earning migration as well as in the outflow of labour force from the native labour market. In such a case, the number of unemployed people registered in the Labour Offices decreases and automatically the relevant statistical parameters that picture the given phenomenon change.

The next phase of the analyses concerning the long-term unemployment rate was the construction of the forecasts of the measure values for the nearest years. After the forecasting procedures had been carried out, both on the basis of trend function and harmonic weights method, it turned out that the obtained values of forecasts were burdened with a big error and therefore their presentation was dismissed.

#### 4. Summary

The considerations and detailed analyses presented above constitute only a part of broad research within the scope of labour market and its parameters. The selection of one age group of employees and the execution of analyses in this group is purposeful with regard to the specific position of the employees at the age of 50-64 years in the general level of labour resources. A more difficult situation results from, above all, a limited occupational mobility, sometimes poorer health condition, such occupational education that is not sufficient to continue the job at the previous position or, finally, the proverbial young generation's 'breath on the back' who are waiting for vacant work places. There occurs the need to stop working and to retire. The state of unemployment, many a time long-term unemployment, is a preceding phase. As it was highlighted and proved in the presented elaboration this is not only a local-Polish- problem, but it also concerns many European countries. Common actions undertaken by governing teams, aiming at occupational activation of *generation 50+* currently do not bring the expected results. It seems that the better solution is to adopt different solutions in particular countries, with the possible use of already verified patterns after slight but necessary adaptations. Such a pattern or even an exemplary solution is Scandinavian model of social provision which is successfully introduced in Finland (National Age Program), in Sweden (abolition of statutory pension age

and additional remuneration for work at the post-productive age) and in Denmark (flexible pension age and flexible dismissal or employment of employees). The combination of these three solutions or their partial selection will enable the sphere of social provision to improve its functioning, it will accelerate the return to financial balance of institutions related to social insurance and, finally, it may restore proper relations on the labour market. Such solutions should be adopted above all in our country; however, their successful realization requires a wide range of economic and political actions, which, as a rule, should be preceded by a social debate. The results of these debates are unpredictable.

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## RYNEK PRACY PAŃSTW NADBAŁTYCKICH – STAN OBECNY I PERSPEKTYWY ZMIAN

**Streszczenie:** artykuł zawiera analizy dotyczące „pokolenia 50+”. Szczegółowe analizy związane są z parametrami charakteryzującymi rynek pracy, z ich dynamiką w ostatnich latach i prognozami wartości na lata najbliższe. Podstawę analiz stanowią szeregi czasowe wartości odpowiednich współczynników zaczerpnięte z bazy Eurostat, jako jednego z najbardziej wiarygodnych źródeł danych lub współczynniki nie publikowane w żadnych źródłach, a wyznaczone na podstawie struktury wieku ludności. Zakres analiz szczegółowych dotyczy nie tylko Polski, lecz także innych krajów UE. Do grupy państw, dla których przeprowadzona została szczegółowa analiza, wybrano państwa nadbałtyckie, czyli Polskę, Litwę, Łotwę, Estonię, Danię, Szwecję, Finlandię i Niemcy. Wybór nie był przypadkowy. Cztery pierwsze państwa to państwa nowo przyjęte do UE w 2004 r., a cztery pozostałe to tzw. stare kraje unijne, w których zasady funkcjonowania systemów społecznych uznaje się za bardziej przyjazne pracownikowi i w związku z tym pozycja pracowników pokolenia 50+ na rynku pracy może być odmienna od tej, jaką mają pracownicy w państwach nowych w UE. Ze względu na niedostępność pewnych danych okres badania to lata 2000-2008, a współczynniki, które uznano za najważniejsze w ocenie kondycji rynku pracy, to współczynnik aktywności zawodowej, wskaźnik zatrudnienia, stopa bezrobocia i stopa bezrobocia długoterminowego.