

Analysis of the Most Vulnerable Labour Market Segments During the Period of Economic Development in Lithuania

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This paper analyzes the most vulnerable segments of the labour market with particular emphasis on situation of youth, women, long-term unemployed and pre-retirement age people in the labour market during the period of economic development in Lithuania in 2002-2010. The scientific problem of this research can be formulated by raising the issue as follows: how does the economic development in Lithuania influences the most vulnerable labour market segments? To tackle the problem, scientific literature analysis, statistical clustering and comparison, and correlation and regression analysis methods are used.

Statistical relations between country's overall level of employment and the number of unemployed among the most vulnerable segments of the labour market shows that the growth of the employment rate has a strong statistical tendency to decrease the number of unemployed among the most vulnerable segments of the labour market. Analogous analysis of the data revealed that when the unemployment rate increases, the unemployment rate of the most vulnerable segments of the labour market also increases. The research results show that the changes of employment and unemployment rate of the most vulnerable segments of the labour market in the country can be predicted with high reliability. This discloses the potential of practical applicability of the model. In order to monitor the employment of the most vulnerable segments of the labour market, there is a need to analyze constantly the impact of economic changes on the employment of these segments.

Keywords: *most vulnerable, labour market segments, economic development, employment, unemployment.*

Introduction

Research topicality and scientific problem

The impact of economic factors on different labour market segments at different stages of economic development is a very often cited issue especially emphasizing the problem of the employment of labour market segments. The integration of Lithuania into the EU had a direct impact on the structure of Lithuanian labour market and decline in unemployment rate in the country however the macroeconomic indicators in 2008 hit the structure of country's labour market.

The topic is highly topical to both every separate individual and state wide especially during the period of economic development in Lithuania. Employment security provided by the state is very topical to those whose possibilities to compete in the labour market are limited, and this concerns the most vulnerable labour market segments.

According to the development of Lithuanian economy strategy till 2015 and the European Commission proposal to implement the creation of new jobs, and growth strategy "Europe 2020" which is based on better economic policy coordination, scientists' and researchers' works, *there is a need* to evaluate those economically active segments of labour market that suffer more from economic changes and are more vulnerable in labour market.

In order to increase the employment and reduce population's social exclusion, the support of employment policy is implemented in Lithuania (Lietuvos..., 2009) the aim of which is to shape a rational employment structure of the population, to increase labour economic and social

activity. Employment policy must anticipate and implement the measures for unemployment prevention. Therefore, the state, that seeks to increase the employment and mitigate the social effects of unemployment, must prepare and implement special measures that comprise the content of labour market policy.

Lithuanian Labour Exchange implements the employment increase policy through execution and implementation of different projects. They are funded by the European Social Fund, the European Globalization Adjustment Fund, and Lithuanian national budget allocations. According to 2007-2013 Human Resources Development Operational Programme Priority 1 "Quality employment and social inclusion" implementation measure "Integration of job seekers into the labour market" the key employment increase projects are implemented. It can be stated that the benefit of these projects can be characterized by solving and implementing the most important issues of labour market.

"Lithuania, as the other EU states, when shaping the policy of usage of the EU structural funds in 2007-2013, especially emphasizes the increase of employment, participation of all working age population in labour market, favourable employment conditions to retirement age population, investment increase in peoples' knowledge, skills, activity, and entrepreneurship. The employment increase condition is emphasised as a mean of reducing social exclusion and a mean of increasing quality and social cohesion" (Gruzevskis *et al.*, 2006). Though employment promotion programmes are being implemented and are guided not only by the state but by the European long-term

strategies as well, the separate labour market segments have different position in the labour market and these segments face the employment and unemployment issues more often, they get lower salary, are discriminated by the employers because of the age.

One of the most vulnerable groups in the labour market facing the above mentioned problems are *women, young people, retirement age people, long term unemployed* (Matusaityte, 2005; Leaker, 2009). There is no doubt that the process of economic change has a particular impact on these labour market segments.

Considering all the factors influencing the employment – an aging population, emigration, social issues, economic development – the involvement issues of economically active persons into the labour market must be addressed urgently. Therefore, economic changes taking place under global economic conditions determine population employment and require a search for the increase ways of integration possibilities for the most vulnerable labour market segments using scientific research results and experience of other countries. Although economic factors have a direct influence on the employment indicators, different labour market participants are sensitive to the impact of economic factors in different ways. Due to the rapid global change resulting in major changes, this situation press to find new solutions concerning the employment of labour market segments with the focus on the country's key problems.

The analysis of the most vulnerable labour market segments in Lithuania in 2001-2010 in the context of economic change with the view on the key indicators of population employment (labour force, employment, unemployment, employment status) and on change of economic growth indicators during the period of economic development in Lithuania is the key issue that the research seeks to answer. This choice was determined by scientific literature analysis where there are many researches in the separate labour market segments but the most vulnerable labour market segments with the focus on the periods of economic fluctuation in Lithuania and data comparison between these segments are not investigated properly. All this confirm the topic of the object under research. The scientific problem of this research can be formulated by raising the issue as follows: *how the economic development in Lithuania influences the most vulnerable labour market segments?*

The performed research of academic literature allowed reasoning of the issue by stating that the situation of the most vulnerable labour market segments in labour market is relevant to the scientists and researchers in Lithuania and other countries too. For instance, Lithuanian scientists and researchers study the issues of the most vulnerable labour market segments from different aspects. Matusaityte (2005) analysed the situation of the problematic person groups (women, young people, aged people, long term unemployed) in the EU countries and Lithuanian labour market and gives suggestions for the improvement of the problematic labour market groups situation in Lithuanian labour market, integration of these groups into labour activities and elimination of discrimination; O'Higgins (2001); Shulus & Mkrchian (2003); Okuneviciute –

Neverauskiene & Moskvina (2008); Okuneviciute – Neverauskiene & Pocius (2008) investigated the youth problems that are closely related to both economic and social consequences. Andriusaitiene (2007) examined the development of the depressed regional labour market, Moskvina (2008) assessed the active labour market measures; the situation of different labour market groups was analyzed by Berzinskiene (2006), Grundey & Sarvutyte (2007), Stancikiene, (2007); Martinkus & Stoskus *et al.* (2009), Berzinskiene & Juozaitiene (2011) explored the employment aspects of labour force and the difference of labour force demand and supply, and the premises for labour market formation and labour market segmentation were surveyed by Jakstiene (2010, 2010a), Jakstiene & Berzinskiene (2011).

Novelty of the research. The novelty of this research is based on the detailed analysis of the most vulnerable labour market segments on the theoretical level and on the performed analysis of these segments during the period of economic development in Lithuania in 2002-2010.

The paper presents the concept of the most vulnerable labour market segments, formation reasons. The performed empirical research discloses the changes of the most vulnerable labour market segments in 2002-2010 during the period of economic development in Lithuania.

Research object – the most vulnerable labour market segments

Research goal – to perform the analysis of the most vulnerable labour market segments during the period of economic development in Lithuania in 2002-2010.

Objectives:

1. To present the concept of the most vulnerable labour market segments.
2. To identify the reasons of the key issues of the most vulnerable labour market segments in labour market.
3. To emphasise the periods of economic development in Lithuania in 2002-2010.
4. To analyse the changes of the most vulnerable labour market segments in Lithuania during the period of 2002-2010.

Research methods: academic literature analysis, statistical data analysis and comparison, correlation and regression analysis.

Concept of the most vulnerable labour market segments

Analysing the employment of labour market segments, the concept of vulnerability arises which is related to the integration of different labour market segments into the labour market issues concerning age, gender, education, work experience, motivation, and personal traits. The vulnerability concept is derived from the Latin word *vulneraria* (injured), in English speaking literature it is as vulnerability or vulnerable. The vulnerability is associated with the human condition, where he/she gives up the belief under certain circumstances, also with a physical or emotional damage, i.e. is associated with the risk to be physically or emotionally damaged (Okuneviciute-Neverauskiene & Cesnuiyte, 2009).

In the new jobs and growth strategy “Europe 2020” the most vulnerable or easily vulnerable terms are used.

The research of the issues of social groups in the labour market together with the identification of the reasons was started in the second part of the twentieth century when O’Keefe and Wister created social vulnerability concept in 1970. Later in 1998 Chambers with the help of the empirical research proved that social vulnerability problems are more encountered in less developed countries. In a social structure a socially most vulnerable groups concept is distinguished which is defined as “a part of population that because of low income, bad health, age and other circumstances are not able to resist negative influences” (Okuneviciute-Neveauskiene & Cesnuityte, 2009). It is stated that life quality of this group mainly depends on the social-economic transformations of state’s economic development and on the factors influencing the members of this group (the raise of unemployment rate, redundancy, enterprise reengineering, etc.)

In the social-economic aspect the most vulnerable people are *aged, retired, students, children, youth, women, long term unemployed* (Matusaityte, 2005; Leaker, 2009). Whereas other researchers indicate that these groups encounter greater danger for discrimination and gender inequality (Guscinskiene & Ciburiene, 2009).

This means that the integration of persons representing the most vulnerable labour market segments is difficult for the reason of social, health, family, loss of skills and other issues. These reasons make the employment of these persons problematic – they are unattractive to the employers, they encounter greater difficulties in labour market due to the lack of self dependency or other factors that make job hunting more difficult and consequently experiencing loss of income. Stancikiene (2007) maintains that separate age group inhabitants are evaluated by separate aspects – reproduction, economic, cultural, social and other. The researcher thinks that division in theory and practise between age groups is based on economic-social factor, i.e. identifying the upper and lower limit of the working-age.

According to the scientific literature and Statistics Lithuania at the Government of the Republic of Lithuania and the Eurostat official statistics the most vulnerable labour market segments are as follows:

Young people are those aged 15-24 years including pupils and students that seek particular qualification (Lietuvos Statistikos departamentas prie LRV, 2011).

Women can be defined as 15-64 year old economically active part of population among all economically active population. However women experience greater competition, discrimination and gender equality issues in the labour market due to maternity duty (Daukantiene, 2006; Sniepis *et al.*, 2007; Ervasti & Venetoklis, 2010).

Long-term unemployed are unemployed people that are looking for the job for one year or more. Whereas *unemployed* is a 15-74 year old person that actively looks for a job and within a specified period of time can start working (Lietuvos Statistikos departamentas prie LRV, 2011). *Pre-retirement age persons* are of 55 and until the retirement age which is settled on the 1st of January 2012 by current provisions 21 and 57 of the State Social Insurance Law (Socialinio draudimo pensiju įstatymo 21 ir 57 straipsniu nuostatos, 2011). With respect to the

presented data of the Lithuanian Department of Statistics under the Government this segment is surveyed at 55-64 years old interval as economically active persons.

Identification of the problems for the most vulnerable labour market segments

There are quite many studies about identification and research on the issues of the most vulnerable labour market segments in Lithuania.

When analysing the *youth* employment issues, work attractiveness problems are apparent, i.e. low wages and salary, poor working conditions, illegal work (Okuneviciute-Neveauskiene & Pocius, 2008). Therefore part of this segment leaves the country and seeks more attractive jobs in the EU or other countries. Due to relatively little accumulated human capital, i.e. lack of practical experience, young people are identified as a group of lower productivity which needs additional investment. This complicates the youth employment opportunities (Berzinskiene & Rudyte, 2008). A higher share of employed young people among the young unemployed ones can be explained by the fact that young people have a particularly high working, professional and territorial mobility though their unemployment rate is relatively high. This is often emphasized by the scientific literature (Shulus & Mkrtchian, 2003; Martinez-Granado, 2005; Hammer, 2007; Okuneviciute-Neveauskiene & Pocius, 2008).

Women’s problems in the labour market were analysed by several researchers. For example, Rakauskiene (2000) explored women’s contribution in creating gross national product, Daukantiene (2006) analyzed the changes of labour market in Lithuania emphasizing status aspects of women and men, Sniepis *et al.* (2007) investigated women’s problems as one of the most vulnerable groups in the labour market and analysed possible decisions for increasing women’s employment. Following the President’s of the Republic of Lithuania D. Grybauskaite assessment given in the conference “Women in consolidating democracy: example of best practice” in Lithuania in 2011, in the developing countries as well as in the strong democracy societies *women* face similar problems. The President sees women discrimination in the labour market as one of the most challenging problems. 17 percent of women are business executives but they earn 20 percent less than men in the same position. The President pointed out that it is not only discrimination, but also economic disincentive. Studies have shown that after abolishing wage discrimination GNP can increase by 30 percent (Grybauskaite, 2011). It should be noted that the most socially vulnerable labour market segment is *long-term unemployed*. Considering Lithuania’s regions this problem is particularly acute in rural areas. Long-term unemployment in particular has a negative impact not only on individual but on society as well. This depends on *objective* and *subjective* reasons:

1. objective ones depend on the overall situation in country’s economy, labour market and social policy and on labour relations in enterprises and social dialogue.

2. subjective ones depend on the qualitative characteristics of the unemployed; their job motivation, performed family functions and employers attitudes.

Such unemployment is caused by:

- reduced low-skilled and unskilled labour demand;
- difficulties for older unemployed people in employment (Sniepis *et al.*, 2007).

There are many debates about the *pre-retirement age people* and their situation in the labour market in the academic research which began to intensify after the Restoration of Independence because this market segment faces with the substantial change in the system. Moskvina (2004) provided a model for the increase of economic and social activity of elderly people; Atmanaviciene & Kisieliene (2005) study has highlighted the situation of the pre-retirement age people in Lithuania (Vilnius and Utena counties) at the organizational level; Berzinskiene (2005) prepared the model of the development of people employment; Stancikiene (2007) analyzed efficient labour issues of middle and pre-retirement age women in her research, Okuneviciute-Neverauskiene & Moskvina (2007) analyzed the elderly (aged 60 and older) population in vocational training and counselling needs. Particular attention is paid to the motivation of older persons to participate in social life and in association with this for the demand of information and counselling.

It can be emphasized that this segment is exposed to these essential problems in the labour market as follows: 1) due to the established view in the society that older people are at lower levels of qualification for physiological changes, they do not work as efficiently as younger people. Therefore, problems in effective work of these persons are naturally conceived; 2) economic restructuring, business ownership change; 3) frequent negative attitudes of employers towards older workers over 50 years, disbelief in their ability to raise skills, adapt to a rapidly changing working conditions; 4) lack of self-confidence of the elderly (Atmanaviciene & Kisieliene, 2005).

The older and more experienced labour force is not desirable in organizations as well as young labour force which lacks the experience though has a diploma certifying the qualification. Employer is orientated towards such an employee that already has proper work skills but is still relatively young and that the investment in their skills development would be likely to return as much as possible (Matuziene & Petkiene *et al.*, 2004).

Though there are many useful researches on the problem analysis of the most vulnerable labour market segments but the problems have not been solved yet and are very relevant for Lithuania. With respect to the findings of scientific literature, this work is devoted to employment issues of youth, women, long-term unemployed and pre-retirement age people, taking into account development in the Lithuanian economy.

In support of allegations of scientific literature and evaluation of Lithuania research field it is observed that there are many studies but they analyse different labour market segments from the different point of view. Due to this there is a lack of deeper analysis in order to compare the situation of these segments in Lithuanian labour market in the context of economic development in Lithuania.

This analysis is important because there is a need for continuous analysis and evaluation of the most vulnerable labour market segments in the labour market during the different periods of economic development in order to

assess the impact on these segments and to avoid greater losses not only for the country's economy but the employment too.

Analysis of economic development period in 2002-2010 in Lithuania

In Lithuania the unemployment rate has grown steadily until 2001 and in 2001 accounted for 17.4 percent, and in 2002 a decline in unemployment and employment growth began and this trend continued until 2007. However, the year 2008 rocked the Lithuanian labour market due to the rapid growth of unemployment in the country, which lasted until 2010. For the aforementioned reasons, a period of 2002-2010 years was selected as best reflecting the economic development of Lithuania. Lithuania's economic cycle from the beginning of 2005 to the third quarter of 2007 was in a growth stage whereas since the fourth quarter of 2007 a growth stage has changed to contraction phase. Transformation that took place in the third quarter of 2010 shows the return of economy cycle to the growth stage (Finansu ministerija, 2010). In 2008 global economic crisis affected the country's economy. Like in many countries there were 10 percent stock decline rates, the users were impoverished by high oil and consequently food prices. As the stock market does not still have a notable market share in Lithuania, this factor has not significantly affected the country's economy.

In 2008-2010 economic crisis considerably increased unemployment rate in Lithuania. Export volumes dropped by nearly a third, manufacturing shirked – about four thousand Lithuanian companies went bankrupt or were forced to cease operations, and unemployment jumped from 80 thousand to 320 thousand. The state avoided bankruptcy only because of foreign loan, so since mid of 2008 to mid of 2010 state debt increased by more than twice – from 14 million Lt to almost 32 billion Lt and at the end of 2010 reached 35.5 billion Lt. Real estate crisis in all the world at the end of 2008, tightening of bank lending and withdrawal of real estate benefits led to the decline of real estate market bubble in Lithuania. At the end of 2008 a trade deficit with foreign countries declined because of the strong decrease in import volumes due to the decrease in domestic consumption. There was a drastic decline in gross domestic product (GDP) in 2009, in the first quarter by 18.1 percent and comparing to the second quarter of 2008 by 22.4 percent. In the third quarter GDP reduced by 14.2 percent if compared to the same period of the previous year. The unemployment soared and, comparing 2008 and 2009, increased 2.4 times and reached 13.7 percent (Lietuvos Statistikos departamentas prie LRV, 2010).

Analysing country's economic growth rates, it is noted that, since 2002 gross domestic product (GDP) has increased rapidly each year and in 2007 GDP change consisted of 9.8 percent or 3 percentage more than in 2002, but from 2007 a significant decline is noticed in the fourth quarter and negative GDP tendencies are observed in 2009. Another important indicator is labour productivity, which describes country's competitiveness with other countries. One of the labour market problems is low labour productivity. Lithuania according to this indicator lags significantly from the EU member states (Balvociute, 2011).

Labour productivity index shows the change in volume of output per employee. Labour productivity index is very important indicator for economic situation analysis. Its impact on the market is very important. However, labour productivity should be monitored and analyzed as hasty conclusions can sometimes be misleading. For example, a

reduced number of employed persons in manufacturing during the decline period gives rise to productivity. This may happen due to strikes too. The growth of labour productivity index value is a positive factor to national economic development (see Table 1).

Table 1

Indices of economic growth in the period of 2002-2010

| Indices | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Changes of GDP, % | 6,8 | 10,5 | 7,0 | 7,8 | 7,8 | 9,8 | 2,9 | -14,8 | 1,4 |
| GDP per capita at current prices, Lt | 14975 | 16436 | 18174 | 21206 | 24521 | 29396 | 33377 | 27524 | 28926 |
| Labour productivity indices, calculated by gross value added per actually worked hour, compared to the base period, 2005 | 85,2 | 92,7 | 98,3 | 100 | 106,7 | 112,8 | 115,0 | 107,5 | 113,8 |

Source: compiled by the authors according to Lietuvos ekonomine ir socialine raida, 2007; 2009; 2011.

As the table shows a significant increase of GDP is noticed in 2007. This is efficient development of economic activities in manufacturing and transport, storage and communications. In 2007 a significant impact on GDP growth in Lithuania had also effective wholesale and retail economic development. Its created gross value added in 2007 compared with 2002 increased by 4.1 percentage points (Lietuvos ekonomine ir socialine raida, 2007; 2009; 2011). Labour productivity analysis in 2002-2010 in Lithuania reveals that average labour productivity grew more slowly than GDP. This can be explained by the fact that the global financial crisis has changed labour productivity even in rapidly developing economies, including Lithuania. Like the country's economic situation, the country's labour market experienced economic development during the analysed period. The changing country's economic situation changed the country's population activity in the labour market.

Design of the empirical research

Economically active (labour force) but easily most vulnerable individuals were chosen for the qualitative research. The study followed a *criterion* and *theoretically based sampling* (Bitinas & Rupsiene et al., 2008) because units of the sample from population are chosen according to a researcher specified criteria and a researcher chooses periods and people based on the research constructs. The research identifies the criteria as follows:

- the most vulnerable labour market segments (young people, women, long-term unemployed, pre-retirement age persons) are chosen;
- segmentation attributes are chosen (education, employment status, employment in economic activities, demographic facts);
- the research period is chosen (2002-2010).

In Lithuania till 2001 unemployment rate steadily increased and was of 17.4 percent and from 2002 decrease of unemployment rate and decrease of employment continued till 2007. However, 2008 shocked the Lithuanian labour market due to the rapid growth of unemployment in the country. For the foregoing reasons, the year 2002 was chosen as the main starting point for further investigation.

The goal of the empirical research is to perform the analysis of the most vulnerable labour market segments in 2002-2010 in the context of economic change in Lithuania. The research was carried out in March-April in 2011.

Empirical research methodology is based on statistical data analysis and comparison, and on correlation and regression analysis.

For the performance of the survey a *target sample* was chosen, i.e. the most vulnerable labour market groups in Lithuania with the defined target groups (youth, women, long-term unemployed, pre-retirement age people) which were chosen according to four attributes of labour market segmentation and to the official information of the Lithuanian Department of Statistics under the Government:

- *Education – the highest* – higher, higher education (ISCED 5,6); *general* – basic with professional qualifications, secondary, secondary with professional qualifications, specialized secondary education (ISCED 3,4); *lower* – do not have primary, primary, primary with professional qualifications, basic education (ISCED 0,1,2);
- *Employment by economic activities* – agriculture, industry, construction and services sectors;
- *Employment status* – hired and others (self-employed, working without employees and self employed workers and employees hiring persons);
- *Gender* – men, women.

Target groups which are the most vulnerable were chosen on the basis of analysed scientific literature dealing with the most important labour market issues that the most vulnerable labour market segments encounter. In order to increase the economic activity of the most vulnerable segments in the Lithuanian labour market, it is important to evaluate the labour market segments, which are facing difficulties in the labour market in Lithuania in the context of economic change. This confirms the choice validation of target groups in the study.

Analysis of the most vulnerable segments of the labour market changes during the period of 2002-2010

One of the main labour market characteristics is the population's activity, which is seen in the academic literature as the ratio of the working age (15-64 years) economically active population (labour force) and the population of the same age (Vetlov & Virbickas, 2006). The population's activity is inseparable from the labour market demand and supply but there are many factors that influence population's activity and they can change the ratio balance of the supply and demand in the labour

market. With the increase of population's activity, the situation in labour market changes too (Balvociute, 2011).

Statistical data analysis shows that the number of 15 years and older population in 2002-2010 had an average decrease of 182.3 thousand. This has resulted in migratory processes in the country, the birth rate decline and the aging society, and country's socio-economic policy. Assessing the changes in the workforce in 2002-2010, the total population *activity level* was similar in all the years. Analyzing the most vulnerable segments of the labour market, a significant activity changes among these segments can be noticed. In 2004, downward trend of youth (15-24 years) activity level is observed (in 2004 it was 26.2 percent) and the decline continued until 2008 (in 2008 it began to increase and amounted to 30.8 percent). These changes may be associated with Lithuania's accession to the European Union, where a large number of young people emigrated from the country and with the economic crisis that started in the world in 2008 and therefore young people stayed in the country or re-emigrated to Lithuania due to deterioration of conditions in the emigration.

But assessing the activity level of the pre-retirement age people (55-64 m.) it is apparent that the activity level of this segment increased every year starting from 2002 (in 2002 it was of 46.6 percent and in 2010 it reached 56.8 percent). It should be noted that the youth activity level compared to the pre-retired persons' activity level during the analyzed period was almost two times lower. This was determined by increased emigration of young people, employers' approach to young workers, offered inferior working conditions and lower wages, and youth motivation. Analyzing women activity in 2001-2010 a decrease of activity level is noticed when general women activity level was increasing. Young women (15-24) activity level decreased till 2007 and dropped from 26.6 percent in 2002 to 22.8. But from 2008 an increasing tendency is observed again and in 2010 activity of *young women* (15-24) reached 26,3 percent. Meanwhile, *pre-retirement age* (55-64) *women* activity level from 2002 to 2010 increased – from 36.9 percent in 2002 to 52.2 percent in 2010. Comparing men's and women's activity, it is noted that the activity of men, young adults (15-24 years old) and pre-retirement age (55-64 years old) is greater than women in different age segments.

Young people's (15-24) employment in Lithuania is significantly less than the total national employment and employment of *pre-retirement age* (55-64) *people*. Statistical data analysis shows that in 2002 the employment of *young people* was 23.6 percent. Whereas country's overall employment rate was 59,6 percent. During the period of 2002-2010 the *young people's* (15-24 years) employment rate decreased from 23.6 percent in 2002 to 19.2 percent in 2010 (see Figure 1).

However, in contrast to *young people's* (15-24), employment level of *pre-retirement age* (55-64) *people* annually increased: from 41.3 percent in 2002 till 48.6 percent in 2010 (see Figure 2). Such a situation can be explained by the fact that the main reasons that led to *young people's* (15-24) employment significant downturn are as follows: very high emigration (declared) from 3580 in 2005 to 2040 in 2010 whereas *pre-retirement age*

people (55-64) emigration (declared) was from 372 in 2005 to 2941 in 2010. Thus young people (15-24) left Lithuania nearly ten times more than the pre-retirement age people (55-64) during 2002-2010.

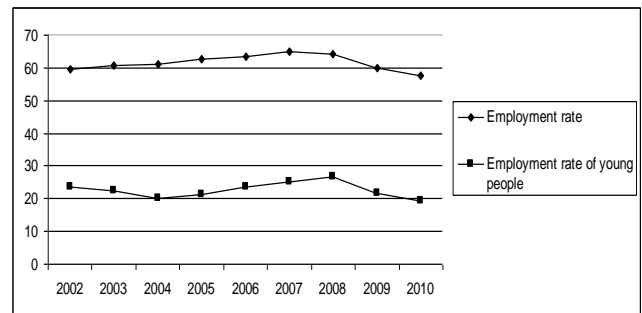


Figure 1. The employment rate of young people (15-24 years) in 2002-2010, in percent

It is also important to know the reasons why a very low level of employment of young people (15-24) is, and what are employers' attitude towards the young man and distrust of him, lack of work experience unattractive professions in the labour market, discrimination in wages, working conditions and gender.

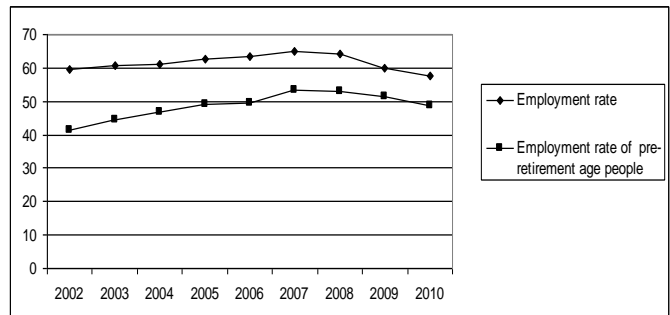


Figure 2. The employment rate of the pre-retirement age people (55-64 years) in 2002-2010, in percent

It is observed that the *female* employment rate as well as the *young* (15-24) and *pre-retirement age* (55-64) *people* is less than the total national employment rate for women (see Figure 3).

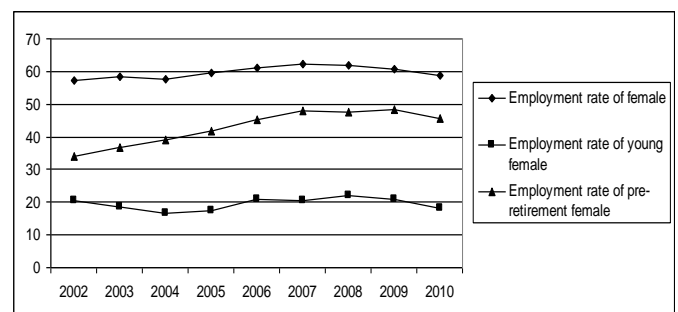


Figure 3. The employment rate of the female in 2002-2010, in percent

As can be seen from the figure, the young (15-24) female employment rate is low and declining over the period of each year, from 20.6 percent in 2002 to 18.2 percent in 2010. The overall female employment rate was 57.1 percent in 2002 and in 2010 reached 58.7 percent.

Meanwhile, changes in male employment rates show that, compared the employment with young men's and pre-retirement age men, the employment in the latter group over the analyzed period was always significantly less than of young men.

Analyzing country's population by the employment status (self-employed working without employees, self-employed individuals hiring employees, and all hired employees), it should be noted that there are less *self-employed women* than *less self-employed men*.

A downward trend in number of self-employed women from 89.2 in 2002 to 50,5 in 2010 can be noticed. However, the number of self-employed men fell by almost two times: from 144 thousand in 2002 to 73.9 thousand in 2010. This could be explained by the fact that self-employed persons experience high tax burden, and that there are reduced production and sales volumes, reduced purchasing force and consumption, falling incomes, therefore a part of the self employed drifted into the shadow employment. It was also heavily influenced by the global economic crisis and economic migration.

Studying employed population of the country by the different age categories, the study further analyzed the following segment: *hired employees and the others* (the other category includes self-employed without employees and self-employed individuals and employees that hire people), according to the data limitations of population employment statistical research.

Statistical data analysis shows that the *employed population* according to employment status decreased from 1405,9 thousand in 2002 to 1343,7 thousand in 2010.

Comparing the statuses of employed men and women (15 and older) it is apparent that men's employment considerably dropped during the period under the research, i.e. from 707.8 thousand in 2002 to 640.2 thousand in 2010 while for the women upward trend can be noticed, from 698.1 thousand in 2002 to 703.5 thousand in 2010.

Such a situation can be explained by the determined greater decrease in number of males in the economic downturn which led to reduced scope of work in construction and transport sectors, while the growth in the number of women employed may be associated with the dominant feminization of the services sector and the growing market share of service market.

Analysis of young people (15-24) according to the employment status established that till 2008 an upward trend is seen from 119.9 thousand in 2002 to 142.6 thousand in 2008 but then the economic downturn reduced youth employment to 97.4 thousand in 2010.

The analytical results show that in 2002 the status of hired employees dominated among the youth and was 102.3 thousand, while self-employed number was only 17.6 thousand in 2010. There is also a drop of young employees and it was 92.5 thousand and self-employed only 4.8 thousand.

It may be noted that young men are more active in a self-employed status during the investigation period (2002 – 10.3 thousand, 2010 – 3 thousand) than self-employed young women (in 2002 – 7.3 thousand, in 2010 – 1.9 thousand).

Meanwhile, comparing young (15-24) women and pre-retirement age (55-64) woman it can be seen that pre-

retirement age (55-64) women unlike the young women (15-24) are more active having the self-employed status, although there remains a downward trend (see Figure 4).

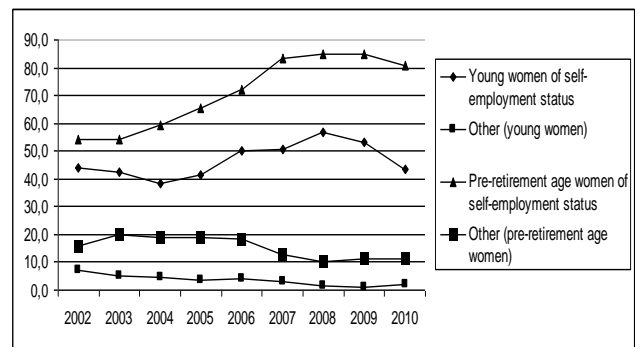


Figure 4. The number of young (15-24 years) women and pre-retirement age (55-64 years) woman according to the employment status in 2002-2010, in thousand

Analyzing the pre-retirement age (55-64) people by employment status in 2002-2010 in Lithuania, it appears that the number of this segment increased from 149.6 thousand in 2002 to 171.4 thousand in 2010. It can be noted that the pre-retirement age (55-64) hired people increased from 110.7 thousand in 2002 to 147.5 thousand in 2010. Meanwhile, the number of self-employed decreased from 38.9 thousand in 2002 to 23.9 thousand in 2010.

The share of hired people from the total population in the labour market was annually increasing till 2008. This can be explained by the expansion of the labour market in the economic boom period, increase of the number of new jobs, consequently at the same time demand for labour force increased too. However, at the end of the same year the number of employees started to decline and at the end of the year it was 270 thousand less than a year ago. It is noted that in 2009 the supply of hired employees in Lithuanian labour market decreased by 7.4 percent. For this reason, there was a higher unemployment rate in the country, and people who lost work and cannot find another one, are often at social risk and need a social support. This had an impact on labour costs decline too.

It should be noted that the economic boom and recession periods in Lithuania showed changes in the employed population in the industry. Analyzing the employment of young people (15-24) in the industrial sector, it is noted that in 2002 this sector employed 30,1 thousand young people, but every year until 2010 this number was constantly decreasing and only 19.4 thousand of young people were employed in the industry in 2010.

Meanwhile, the number of pre-retirement age (55-64) employees in the industry increased steadily until 2008 and amounted to 34.9 thousand of all retirement age employed persons. However, during the economic downturn the employment of this segment in the industrial sector dropped by 6.3 thousand people in 2010. This situation can be explained that young people without education, work and professional experience, and skills acquired through study or training, work in the services sector (mainly commercial and service areas). It should be noted that young learners are working too because they want to have their income. As seen in this sector, there is a tendency to employ young workers and it experiences high staff

turnover. Emigration also reduced the number of youth – some left to study in foreign educational institutions, some – to work. Upward trend is observed in the service sector over the analyzed period and among the pre-retirement age (55-64) individuals.

The growth in number of the pre-retirement age individuals in the service sector can be explained by the fact that this sector offered more jobs for unskilled workers, therefore lower wages prevail, and for these individuals it is more difficult to find a job due to lack of qualifications and ability, age, employers' attitude to older persons and persons own lack of self-confidence. Consequently in the service sector these persons are involved as unskilled workers who are lower paid and there are lower professional requirements to take the jobs.

Based on the Population Survey, an average level of education dominates among young people (15-24), i.e. basic with vocational training, secondary, secondary with vocational training, specialized secondary education (ISCED 3, 4) and consisted of 98.9 thousand people in 2010. Meanwhile, the highest education, i.e., higher education (ISCED 5, 6) had only 30.7 thousand of young people in 2010. Statistical data analysis shows that in 2010 pre-retirement age people (55-64) also mostly had average level of education, i.e. basic with vocational training,

secondary, secondary with vocational training, specialized secondary education (ISCED 3, 4) and consisted of 125.1 thousand people. Meanwhile, the highest education, i.e., higher education (ISCED 5, 6) had only 64.3 thousand of pre-retirement age people in 2010.

Lithuanian Department of Statistics under the Government of the Republic of Lithuania does not provide statistical data on education in the analysis of the labour market segments according to the age of the unemployed, and therefore education data of long-term unemployed and unemployed cannot be directly compared and assessed with the other groups of persons. However, based on the data analysis of the workforce education, it can be concluded that both young people and women, and pre-retirement age unemployed in Lithuania mostly have average education. To determine the statistical relationships between country's overall level of employment and the number of unemployed in the separate most vulnerable segments of the labour market the linear regression and correlation analysis was applied, and the significance of the determined relations was evaluated by p-level. Table 2 presents statistical relationship between the employment level and the unemployed rate of the most vulnerable labour market segments (youth, women and pre-retirement age people separately) in 2002-2010 in Lithuania.

Table 2

Relationship between the employment level (in percent) x and the unemployed rate (in thousand) y of the most vulnerable labour market segments (youth, women and pre-retirement age people separately) in 2002-2010 in Lithuania

| <i>Segments of the labour market</i> | <i>Correlation coefficient, r</i> | <i>Determination coefficient, r^2</i> | <i>Statistical relationship</i> | <i>Statistical significance</i> | <i>Linear regression equation</i> |
|---|--|--|---------------------------------|---------------------------------|-----------------------------------|
| Number of the unemployed youth (15-24), in thousand | -0,93 | 0,87 | Negative very strong | $p < 0,01$ | $y = -5,66x + 379,44$ |
| Number of the unemployed women (15 and older), in thousand | -0,97 | 0,93 | Negative very strong | $p < 0,01$ | $y = -12,44x + 843,60$ |
| Number of the unemployed pre-retirement age people (55-64), in thousand | -0,98 | 0,95 | Negative very strong | $p < 0,01$ | $y = -2,89x + 194,71$ |

Source: compiled by the authors according to the indicators of the Lithuanian Department of Statistics under the Government of the Republic of Lithuania in 2002-2010.

As it can be seen from the data in Table 2, discovered correlation coefficients are significant at $p < 0,01$. Thus, the results of the analysis revealed that between the country's employment levels and the unemployment rate of the most vulnerable segments of the labour market there is a very strong negative linear statistical relationship, i.e. when employment rate increases the number of unemployed of the most vulnerable segments of the labour market has a strong statistical trend to decrease.

Regression equations showed that the level of employment growth mostly reduced women's unemployment – when the employment rose by one percentage point, the number of unemployed women decreased by about 12.44 thousand.

Similarly another analysis was carried out - the relationship between the unemployment rate and the number of unemployed of the most vulnerable segments of the labour market (youth, women, and pre-retirement age people separately) were investigated. These relationships are also significant at level $p < 0,01$, and between these unemployment rate and numbers there is a positive linear

statistical dependence, i.e. when the unemployment rate increases, the number of unemployed of the most vulnerable segments of the labour market also increases with high correlation coefficient. The correlation coefficients, coefficients of determination and regression equations of these relationships are presented in Table 3.

Assessing the significance of the indicators it can be seen that changes in the unemployment in the country are most closely associated with the number ($r = 0,98$) of unemployed pre-retirement age people (55-64). It can be assumed that this segment is influenced not only by the change of the employment external factors (for example, the change trend of the common economic factors), but also by the inner employment factors as acquisition of new competencies.

Relationships between the unemployment level (in percent) x and the unemployed rate (in thousand) y of the most vulnerable labour market segments (youth, women and pre-retirement age people separately) in 2002-2010 in Lithuania

| <i>Segments of the labour market</i> | <i>Correlation coefficient, r</i> | <i>Determination coefficient, r^2</i> | <i>Statistical relationship</i> | <i>Statistical significance</i> | <i>Linear regression equation</i> |
|---|--|--|---------------------------------|---------------------------------|-----------------------------------|
| Number of the unemployed youth (15-24), in thousand | 0,96 | 0,93 | Positive very strong | $p < 0,01$ | $y = 3,01x - 0,74$ |
| Number of the unemployed women (15 and older), in thousand | 0,97 | 0,94 | Positive very strong | $p < 0,01$ | $y = 6,44x + 9,68$ |
| Number of the unemployed pre-retirement age people (55-64), in thousand | 0,98 | 0,96 | Positive very strong | $p < 0,01$ | $y = 1,49x + 1,13$ |

Source: compiled by the authors according to the indicators of the Lithuanian Department of Statistics under the Government of the Republic of Lithuania in 2002-2010.

The performed statistical analysis shows that the most vulnerable segments of the labour market are problematic groups in Lithuania, which are characterized by low employment and activity, and often have the average level of education i.e. basic with vocational training, secondary, secondary with vocational training, specialized secondary education (ISCED 3, 4) and work in the service sector and according to employment status are mostly hired employees. Comparing different segments it was established that unemployment rate of young people is higher than of pre-retirement age people but women unemployment is lower than men in all segments. It can be concluded that men's unemployment rate higher than that of women in the country shows that there is an economic downturn because when economic recovers, male unemployment rate reduces first of all.

Development in the employment of the most vulnerable labour market segments during the period of the economic development shows that the employment in these segments is more sensitive to changes of economic factors related to the industry of the country and the significant employment changes are established in this sector. Meanwhile, country's general employment increase tendency is determined in the service sector especially among pre-retirement age people (55-64) and women (15 and older). It is established that the highest employment during the research period was in the service sector but it should be noticed that the young people employment in the service sector in 2010 was of the same level as in 2002.

It was also found that self-employed workers are more sensitive to changes in the economic environment. The research confirmed that the number of self-employed in Lithuania considerably decreased during the research period.

It was established that among the most vulnerable segments of the labour market people of pre-retirement age (55-64) are closely related to the changes of the level of employment and unemployment in the country therefore it can be stated that this segment is mostly dependent on labour supply and demand ratio in the country at different periods of economic development.

Conclusions

Based on the results of the research, the following conclusions can be drawn:

1. The performed theoretical analysis reveals that the issues on employment of market segments are closely related to vulnerability concept which is associated with the

integration problems of different labour market segments into the labour market due to age, gender, education, work experience, motivation, and personal traits.

2. Having identified the main reasons for the problems of the most vulnerable labour market segments it can be maintained that different groups of people encounter different problems that are provoked by different reasons.

3. Statistical data analysis showed that there was a change not only in the country's economic situation, but in population's activity as well. This is confirmed by the drop in number of 15 years old and older people in the country in 2002-2010. This can be attributed to the migratory processes in the country, fertility decline, the problem of the aging society and country's socio-economic policy.

4. The carried out empirical research suggests that the most vulnerable labour market segments are problematic groups in Lithuania which are generally characterized by the low employment and activity level, with the average level of education (ISCED 3, 4) i.e. basic with vocational training, secondary, secondary with vocational training, specialized secondary education working in the service sector and according to employment status are mostly hired employees.

5. The performed statistical relations' analysis between the country's overall level of employment and the number of unemployed among the most vulnerable segments of the labour market shows that the growth of the employment rate has a strong statistical tendency to decrease the number of unemployed among the most vulnerable segments of the labour market. Analogous analysis of the data revealed that when the unemployment rate increases, the unemployment rate of the most vulnerable segments of the labour market also increases and has a strong correlation with the country's unemployment rate.

6. The research results show that the change of employment and unemployment rate in the country for the most vulnerable segments of the unemployed in the labour market can be predicted by regressive methods with high reliability. This reveals the potential of practical applicability of the model. In order to monitor the most vulnerable segments of the labour market employment, there is a need to analyze constantly the economic impact of changes in the employment of aforementioned segments.

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Labiausiai pažeidžiamų darbo rinkos segmentų analizė Lietuvos ekonomikos raidos laikotarpiu

Santrauka

Labiausiai pažeidžiamų darbo rinkos segmentų analizavimas yra aktuali mokslinių tyrimų tema. Nepaisant to, kad su užimtumu susijusių mokslinių tyrimų yra nemažai, labiausiai pažeidžiamų darbo rinkos segmentų užimtumo problema yra dažnai akcentuojamas klausimas, išryškinant skirtingų darbo rinkos segmentų padėtį darbo rinkoje. Poreikį tyrinėti labiausiai pažeidžiamų darbo rinkos segmentų užimtumą iš įvairių perspektyvų rodo ne tik mokslininkų ir tyrėjų susidomėjimas, bet ir tai, kad tokio pobūdžio tyrimai nepraranda aktualumo. Remiantis Europos Sąjungos šalių patirtimi, Lietuvos ūkio (ekonomikos) plėtros iki 2015 metų ilgalaikė strategija bei Europos Komisijos pasiūlymu įgyvendinti naujų darbo vietų kūrimo ir augimo strategiją „2020 m. Europa“, grindžiamą geresniu ekonomikos politikos derinimu, mokslininkų ir tyrėjų darbais, kyla poreikis tyrinėti tuos ekonomiškai aktyvius darbo rinkos segmentus, kurie sunkiai išvertia ekonominius pokyčius ir yra labiausiai pažeidžiami Lietuvos darbo rinkoje.

Šiame tyrime siekiama atlikti labiausiai pažeidžiamų darbo rinkos segmentų situacijos 2002-2010 m. analizę vykstant ekonominiams pokyčiams, atsižvelgiant į svarbiausius šalies gyventojų aktyvumo rodiklius (darbo jėgos, užimtumo, nedarbo, užimtumo statusą) ir ekonominio augimo rodiklių pokyčius 2002-2010 metais Lietuvoje. Tai yra svarbiausi klausimai, į kuriuos siekiama atsakyti šiuose tyrimuose. Tokį pasirinkimą lėmė tai, kad nors mokslinėje literatūroje yra atliekama nemažai tyrimų atskirų darbo rinkos segmentų požiūriu, tačiau labiausiai pažeidžiami darbo rinkos segmentai, atkreipiant dėmesį į Lietuvos ekonomikos raidą ir duomenų lyginimą tarp šių segmentų, tyrinėti palyginti nedaug. Visa tai patvirtina nagrinėjamo objekto problemišumą. Mokslinė šio straipsnio problema galima suformuluoti iškeliant tokį probleminį klausimą: *kaip Lietuvos ekonomikos raida veikia labiausiai pažeidžiamus darbo rinkos segmentus?*

Tyrimo tikslas – atlikti labiausiai pažeidžiamų darbo rinkos segmentų analizę Lietuvos ekonomikos raidos laikotarpiu.

Tyrimo naujumas. Šio darbo naujumas grindžiamas išsamia, labiausiai pažeidžiamų darbo rinkos segmentų analize teoriniu lygiu ir atliktu empiriniu tyrimu Lietuvos ekonomikos raidos laikotarpiu, sudarančiu prielaidas išsamesnei darbo rinkos problemų analizei. Straipsnyje pateikta labiausiai pažeidžiamų darbo rinkos segmentų samprata, susidarymo priežastys ir atliktas empirinis tyrimas, atskleidžiantis labiausiai pažeidžiamų darbo rinkos segmentų pokyčius Lietuvoje 2002-2010 m. ekonominės raidos laikotarpiu.

Tyrimo metodai: mokslinės literatūros analizė, statistinių duomenų analizė ir lyginimas, koreliacinė ir regresinė analizė.

Remiantis atliktų tyrimų rezultatais pastebima, kad analizuojant darbo rinkos segmentų užimtumą, susiduriama su pažeidžiamumo sąvoka, kuri susijusi su skirtingų darbo rinkos segmentų problemomis integracijoje į darbo rinką: dėl amžiaus, lyties, išsilavinimo, darbo patirties, motyvacijos, asmeninių charakteristikų. Identifikavus pagrindines, labiausiai pažeidžiamų darbo rinkos segmentų problemų priežastis, teigtina, kad skirtingos asmenų grupės darbo rinkoje susiduria su skirtingomis problemomis, kurias sukelia ir skirtingos priežastys.

Atlikta analizė leidžia išryškinti svarbiausias jaunimo, moterų, ilgalaikių bedarbių ir priešpensinio amžiaus asmenų priežastis darbo rinkoje:

- Jaunimo (kaip labiausiai pažeidžiamo darbo rinkos segmento) priežastys yra per mažas specifinio, žmogiškojo kapitalo kiekis (praktinis patyrimas, įgūdžių stoka), dėl ko jaunimas dažnai tapatinamas su mažesnio produktyvumo asmenų grupe, kuriai reikia papildomų išlaidų.
- Moterų (kaip labiausiai pažeidžiamo darbo rinkos segmento) priežastys yra mažesnis investavimas į žmogiškąjį kapitalą (bendrą ir specifinį) ir darbinį įgūdžių praradimas, susijęs su darbinės veiklos pertraukomis.
- Ilgalaikių bedarbių (kaip labiausiai pažeidžiamo darbo rinkos segmento) priežastys yra mažas žmogiškojo kapitalo kiekis (profesinio pasirengimo, darbinį įgūdžių praradimas, motyvacijos stoka) ir jo nuvertėjimas, pasitikėjimo savimi trūkumas, darbdavių neigiamas požiūris.
- Priešpensinio amžiaus asmenų (kaip labiausiai pažeidžiamo darbo rinkos segmento) priežastys yra mažesnis investavimas į specifinį žmogiškąjį kapitalą ir jo nuvertėjimas, pasitikėjimo savimi trūkumas.

Vadinasi, šių segmentų pagrindinių įgūdžių stoka, mokymosi visą gyvenimą galimybių trūkumas, diskriminacija užkerta kelią jų pilnaverčiam dalyvavimui darbo rinkoje. Nors atliekama daug vertingų mokslinių tyrimų, labiausiai pažeidžiamų darbo rinkos segmentų problemoms darbo rinkoje analizuoti, jos dar neišspręstos ir labai aktualios.

Lietuvoje iki 2001 m. nedarbo lygis nuolat didėjo ir 2001 m. sudarė 17,4 proc., o 2002 m. prasidėjusios nedarbo lygio mažėjimo ir užimtumo lygio augimo tendencijos tęsėsi iki 2007 m. Tačiau 2008 metai sukretė Lietuvos darbo rinką dėl spartaus nedarbo lygio augimo šalyje, kuris tęsėsi iki 2010 m. Dėl minėtų priežasčių, 2002-2010 metai pasirinkti kaip geriausiai atspindintys Lietuvos ekonomikos raidą.

Statistinių duomenų analizė parodė, kad keičiantis šalies ekonominei situacijai, keitėsi šalies gyventojų aktyvumas darbo rinkoje. Tai patvirtina 15 metų ir vyresnių gyventojų skaičiaus šalyje 2002-2010 metais mažėjimas. Tai galima sieti su migraciniais procesais šalyje, gimstamumo mažėjimu ir visuomenės senėjimo problema bei šalies socialine-ekonomine politika.

Atliktas empirinis tyrimas leidžia teigti, kad labiausiai pažeidžiami darbo rinkos segmentai yra probleminės asmenų grupės Lietuvoje, kurios dažniausiai pasižymi mažu užimtumu bei aktyvumu, dažniausiai turintys vidutinį išsilavinimą (ISCED 3,4) – pagrindinį su profesine kvalifikacija, vidurinį, vidurinį su profesine kvalifikacija, specialųjį vidurinį, dirbantys paslaugų sektoriuje ir pagal užimtumo statusą dažniausiai yra samdomieji darbuotojai.

Tyrimo metu nustatyta, kad bendras šalies gyventojų *aktyvumo lygis* tiriamu laikotarpiu buvo panašus, tačiau vertinant atskirus darbo rinkos segmentus, pastebimi ryškūs pokyčiai tarp šių segmentų aktyvumo. Pažymėtina, kad jaunimo (15-24 m.) aktyvumo lygis, lyginant su priešpensinio amžiaus (55-64 m.) asmenų aktyvumo lygiu analizuojamu laikotarpiu buvo beveik du kartus mažesnis. Tokią situaciją galėjo lemti jaunimo didesnė emigracija, darbdavių požiūris į jaunus darbuotojus, siūlomos prastesnės darbo sąlygos ir mažesnis atlyginimas bei jaunimo motyvacija.

Išanalizavus labiausiai pažeidžiamų darbo rinkos segmentų *užimtumo lygio* kitimą analizuojamu laikotarpiu, pastebima, kad jaunimo (15-24 m.) užimtumo lygis 2002-2010 m. laikotarpiu buvo beveik du kartus mažesnis, nei bendras šalies užimtumo lygis. Tačiau priešingai nei jaunimo, priešpensinio amžiaus (55-64 m.) asmenų užimtumo lygis kiekvienais metais didėjo. Tuo metu priešpensinio amžiaus (55-64 m.) moterų užimtumo lygis buvo beveik du kartus mažesnis, nei bendras priešpensinio amžiaus (55-64 m.) asmenų užimtumo lygis. Nustatyta, kad jaunų (15-24 m.) moterų užimtumo lygis buvo labai mažas per visą laikotarpį, lyginant su bendru moterų užimtumu.

Analizės duomenys apie užimtus šalies gyventojus pagal *užimtumo statusą* atskleidė tendenciją: savarankiškai dirbančių moterų skaičius mažėjo. Tyrimo metu nustatyta, kad ekonominės raidos laikotarpiu dominavo jaunimas (15-24 m.), vertinant samdomųjų darbuotojų statusą. Taip pat galima pastebėti, kad jauni (15-24 m.) vyrai yra aktyvesni, lyginant savarankiškai dirbančiųjų statusą tiriamuoju laikotarpiu, nei jaunos (15-24 m.), savarankiškai dirbančios moterys. O priešpensinio amžiaus (55-64 m.) moterys priešingai, nei jaunos (15-24 m.) moterys, yra aktyvesnės pagal savarankiškai dirbančiųjų statusą, nors šiame segmente taip pat išlieka mažėjimo tendencija. Rezultatai rodo, kad į ekonominės aplinkos pokyčius jautriau reaguoja ir savarankiškai dirbantys darbuotojai. Tyrimo metu pasitvirtino nuomonė, kad savarankiškai užimtų gyventojų skaičius Lietuvoje gerokai sumažėjo 2002-2010 m. laikotarpiu.

Pastebima, kad jaunimo (15-24 m.) nedarbas didesnis nei priešpensinio amžiaus (55-64 m.) asmenų, tačiau moterų (15 m. ir vyresnių) nedarbas visuose segmentuose yra mažesnis nei vyrų (15 m. ir vyresnių). Taigi didesnis nedarbas tarp vyrų, nei moterų šalyje rodo, kad dar yra ekonominis nuosmukis, nes atsigaunant ekonomikai, pirmiausia mažėja vyrų nedarbo lygis.

Labiausiai pažeidžiamų darbo rinkos segmentų užimtumo svyravimai Lietuvoje 2002-2010 m. laikotarpiu rodo, kad šių segmentų užimtumas jautriau reaguoja į ekonomikos pokyčius, kurie susiję su šalies pramone, kur nustatyti žymūs šalies gyventojų užimtumo pokyčiai šiame sektoriuje. Tuo metu bendros šalies užimtumo didėjimo tendencijos nustatytos paslaugų sektoriuje, ypač priešpensinio amžiaus (55-64 m.) asmenų ir moterų (15 m. ir tarp vyresnių).

Tyrimo metu nustatyta, kad jaunimo (15-24 m.), didžiausias užimtumas tiriamuoju laikotarpiu buvo paslaugų sektoriuje, tačiau galima pastebėti, kad 2010 m. užimto jaunimo (15-24 m.), paslaugų sektoriuje skaičius yra 2002 m. lygio.

Nustatyta, kad iš labiausiai pažeidžiamų darbo rinkos segmentų, priešpensinio amžiaus (55-64 m.) asmenys yra kiek glaudžiau už kitus segmentus susiję su užimtumo lygio ir nedarbo lygio pokyčiais šalyje, todėl daroma išvada, kad didžia dalimi šis segmentas yra priklausomas nuo darbo jėgos pasiūlos ir paklausos santykio šalyje skirtingais ekonomikos raidos laikotarpiais.

Lyginant labiausiai pažeidžiamus darbo rinkos segmentus matyti, kad jaunimas (15-24 m.) yra nežymiai statistiškai silpniau susijęs su užimtumo svyravimais šalyje, nei priešpensinio amžiaus (55-64 m.) asmenys ar moterys (15 m. ir vyresnės).

Atlikta statistinių ryšių tarp bendro šalies užimtumo lygio ir labiausiai pažeidžiamų darbo rinkos segmentų bedarbių skaičiaus analizė rodo, kad užimtumo lygiui didėjant, labiausiai pažeidžiamų darbo rinkos segmentų bedarbių skaičius turi stiprią statistinę tendenciją mažėti. Analogiškos analizės duomenys parodė, kad nedarbo lygiui didėjant, labiausiai pažeidžiamų darbo rinkos segmentų bedarbių skaičius irgi didėja. Tyrimo rezultatai rodo, kad užimtumo ir nedarbo lygio pokyčiai šalyje labiausiai pažeidžiamų darbo rinkos segmentų bedarbių skaičiui gali būti prognozuojami regresiniais metodais su aukštu patikimumu. Tai rodo modelio praktinio taikomumo galimybes. Siekiant stebėti labiausiai pažeidžiamų darbo rinkos segmentų užimtumą, reikia nuolat analizuoti ekonominių pokyčių poveikį šių segmentų užimtumui.

Raktažodžiai: *labiausiai pažeidžiami darbo rinkos segmentai, ekonomikos raida, užimtumas, nedarbas.*

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