

The fifth "economic levers" defines the leverage, the nature, boundaries and measure the impact on businesses in matters of production and resource consumption and resource preservation. In Fig. 5 shows the block diagram of the functioning of "economic levers." It is on the principles of a closed system and has a recurring character. For assis-

tance, economic incentives might affect the process of resource conservation at all stages of the life cycle of the resource, the effect of certain results of resource conservation. These results are basis for selecting nature of the economic levers of influence on businesses to ensure the resource, which can be stimulating, compensatory or deterrent.

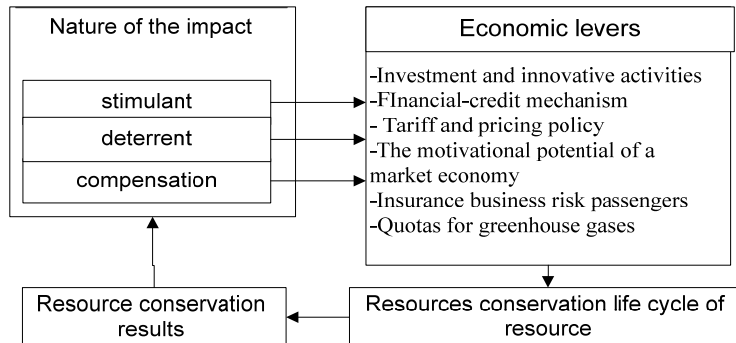


Fig. 5. Block diagram of the operation of "economic levers"

*Source: Authors' elaboration.

Conclusions: Thus we can conclude that the concept of "economic mechanism" reveals the essence of a variety of relationships and processes functioning and development of economic objects: from the most complex economic systems of the country – to specific companies. Perfection of the mechanism, on the one hand, requires good governance entities and levels of performance leads to their functioning, successful adaptation to dynamic growth and development under unstable environment. On the other – it is this perfection is a necessary condition for effective operation of the airline, its competitiveness, financial stability, profitability, investment attractiveness and solvency.

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ЕКОНОМІЧНИЙ МЕХАНІЗМ РЕСУРСОЗБЕРЕЖЕННЯ АВІАКОМПАНІЇ

В статті визначена сутність економічного механізму ресурсозбереження, показано причинно-наслідкові зв'язки між його елементами. Проаналізовано місце і роль кожного з блоків.

Ключові слова: економічний механізм, економія ресурсів, авіаційна галузь, функціональна структура

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ЕКОНОМИЧЕСКИЙ МЕХАНИЗМ РЕСУРСОСБЕРЕЖЕНИЯ АВИАКОМПАНИИ

В статье определена сущность экономического механизма ресурсосбережения, показаны причинно-следственные связи между его элементами. Проанализированы место и роль каждого из блоков.

Ключевые слова: экономический механизм, экономия ресурсов, авиационная отрасль, функциональная структура

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THE DYNAMICS OF UNEMPLOYMENT IN A SELECTED GROUP OF EU COUNTRIES

In the article there are synthetically analyzed parameters which characterize labour market in chosen EU countries in view of unemployment. Analysis includes age and gender of potential employee taking into account time of being unemployed. Particular attention is paid to long-term unemployment in view of its specific social character. Database is mainly Eurostat data and local statistical centers.

Key words: European Union; unemployment; long-term unemployment.

Introduction. The year of 2004 was a critical year in economy and position on the market of Europe for Ten European States. It was because this was the year they

joined the union community. As a rule, together with economic changes, hope for certain changes in everyday life occurs among people. Some of those hopes were associ-

ated with labour market, particularly with extension of possibilities to get a job and improve the living conditions. The oriented changes were to, and could, bring decrease in unemployment and increase in the level of employment. Particularly significant hopes were set on the states of the "old union". The present article includes initial results of analyses of the level of unemployment in the group of states that joined the EU in 2004. The analyses were limited to the period of time from 2000 to 2011 to show whether changes in unemployment rate occurred in the years directly preceding 2004 and in the years after accession to the EU. Establishment of occurrence of specific changes should allow for formulation of conclusions concerning the influence of economic changes associated with the accession to the EU on the condition of the labour market. The article is divided into three short parts. The first part includes general characteristics of the age structure of the population of particular countries – the new EU member states, the second includes the analyses of unemployment rate while considering the age of em-

ployees and their education, and in the third part a special attention was drawn to a particular form of unemployment, that is the long-term unemployment. Data from Eurostat provided empirical base for performed analyses. They were suitably compiled for the needs of the subject area included in the topic.

Dynamics of unemployment rate while taking into account the age and level of education of a prospective employee. Beside the level of unemployment, the employment rate is one of the major parameters that characterise the situation on labour market; therefore it cannot be neglected in thorough analyses of the labour market. Employment rate is most often defined as the proportion of the number of unemployed people to the number of economically active population (that is the sum of working people and those who look for work). In the case of new EU member states its level was really varied and it amounted to about 4.4 % for Cyprus and Malta and to the level of over four times higher for Poland and Slovakia.

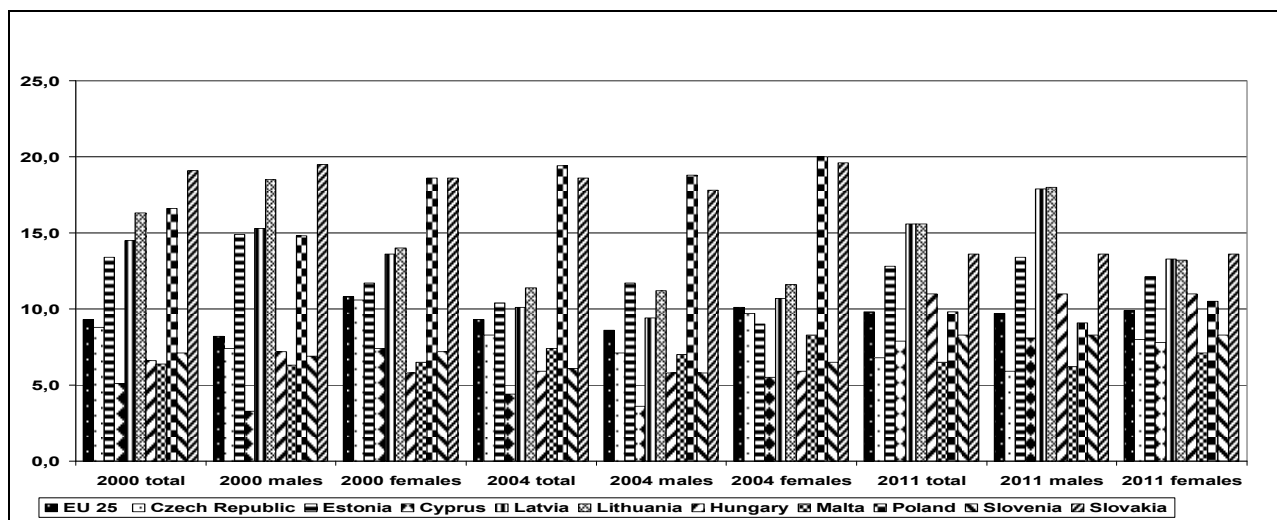


Fig. 1. Unemployment rate for selected EU member states in 2000, 2004 and 2011 with gender taken into account

* Source: Own case study on the basis of Eurostat database (access on 15th December 2012).

Analysing the values of the rate presented in fig. 1 in detail, we can state that 2004 was for majority of the states (apart from Poland and Slovenia) the year of decreased level of unemployment. Maybe, the EU requirements influenced activation of economic mechanisms, the goal of which was to increase the employment, and prevent and fight unemployment. Effectiveness of active employment policies was maintained after the period of accession to the EU, because in 2011 in a part of the states unemployment rate decreased, like for example in Poland, the Czech Republic or Slovenia, but in majority of states, especially small states such as Hungary, Lithuania, Latvia, Cyprus or Estonia, the direction of changes was opposite and the level of unemployment increased as compared with 2004. A specific regularity of the level of unemployment, that is the fact that employment affected more significantly women than men, was maintained at the same time. In each of the states selected for the analysis in 2000, 2004 and 2011 female unemployment rate was a few per cent higher than male unemployment rate. The level of unemployment is also determined by the age of prospective employee. Table 1 shows the level of unemployment in division into age groups with distinc-

tion of three major groups that is, a group of school-leavers (15 – 24 years of age), employees at occupationally mobile age (25 – 49 years of age) and employees at pre-old age, that is at pre-retirement age (50 – 64 years of age)³. However, it appears that the youngest group of people, that is school-leavers and university graduates are most affected by unemployment. Employers' trust in young employees is very small and they offer employment to them very unwillingly. It is also related to smaller and smaller dynamics, or job rotation at workplaces. A growing wave of young people's unemployment which was observed clearly in the first years after accession to the EU was the effect of the lack of workplaces for young employees.

³ In the case of analyses concerning unemployment rate, 50+ age group is more frequently indicated than 55+ age group, and thus appropriate analyses are going to be performed for this age group.

Table 1. Unemployment rate by age in selected EU states in 2004

GEO/TIME	15-64	15-24	25-49	50-64
EU 25	9.3	18.3	8.4	7.0
Czech Rep.	8.3	19.9	7.2	5.7
Estonia	10.4	23.5	9.1	9.3
Cyprus	4.4	8.7	3.8	4.4
Latvia	10.1	19.3	8.0	9.1
Lithuania	11.4	21.2	9.8	11.9
Hungary	5.9	14.4	5.5	3.8
Malta	7.4	18.3	4.5	:
Poland	19.4	40.1	17.0	14.7
Slovenia	6.1	14.0	5.3	5.4
Slovakia	18.6	32.8	16.4	16.3

* Source: Own case study on the basis of Eurostat database (access on 15th December 2012).

Comparing the level of unemployment in the group of school-leavers we can state that in 2004 the highest rate of young unemployed people, reaching the level of 40.1 % was reported in Poland and Slovakia (32.8 %) and the lowest, only 8.7 %, in Cyprus. High level of unemployment in the youngest age group directly affects the general unemployment rate because in other age groups the level of unemployment is rather equal in every state with a slight predominance of older generations. This is somehow surprising because labour potential of the oldest age groups is definitely weakened with reference to other age groups. Within reductions in employment related to economy restructuring, the oldest employees were dismissed regardless of their seniority and professional experience. New technologies required additional skills and professional experience was not always enough to cope with them. Additional knowledge, or at least the will to complete it, was necessary, which, in the case of older-age employees, was not always possible. Therefore, dismissals from jobs in some economy sectors that had quite an extensive character were the consequence of new tendencies in economy. On the other hand, pre-retirement allowances that let maintain, at least in a minimum degree, the standard of living achieved before were a form of escape in the case of a lot of employees.

If we analyse the dynamics of changes in the level of unemployment in selected age groups in the years from 2000 to 2011 (tab. 2) it appears that expected decrease in the level of unemployment not always could be achieved. Lack of data for Malta in tab. 1 and 2 for 50+ age group is caused by limitations of source data ⁴.

Table 2. Mean pace of changes in unemployment rate in selected states for the period from 2000 to 2011 (in per cent)

GEO/AGE	15-64	15-24	25-49	50-64
EU 25	0.48	1.45	2.13	-0.39
Czech Rep.	-2.32	0.52	-2.58	-0.15
Estonia	-0.42	-0.48	-1.58	0.59
Cyprus	4.06	7.41	8.62	2.52
Latvia	0.67	2.88	0.83	1.61
Lithuania	-0.40	1.28	-0.43	0.83
Hungary	4.75	7.08	3.85	8.04
Malta	0.14	1.37	0.51	
Poland	-4.68	-2.91	-4.61	-2.43
Slovenia	1.43	-0.40	3.16	-0.38
Slovakia	-3.04	-0.96	-2.60	-1.99

* Source: Own case study on the basis of Eurostat database.

The largest decrease in unemployment rate is observed, without division into age groups, in Poland, Slovakia and the Czech Republic, and the largest increase is observed in Hungary and Cyprus.

Apart from age, education of a prospective employee is the factor that definitely influences the possibilities to find a job. Adopting a three-level division of education into: pre-school education, primary school and lower secondary, that is junior high school education (level 0-2), high school education and post-high school education but not college (levels 3 and 4) and first and second stage of university education (levels 5 and 6), we can state that people with the lowest level of education made definitely the highest proportion of the unemployed (fig. 2). Among the ten EU states, in this group of education, in Slovakia unemployment was reaching the level from 40 % in 2000 to over 50 % in 2004, and then, in 2011 it reached the level of over 40 % again.

The situation of people with university education is the most favourable on labour market. This is shown by the lowest level of unemployment rate. In each of indicated three years, unemployment among people with university education only in few cases was over 7 %, and in the Czech Republic, Slovenia and Cyprus it was not higher than 3 %. Hungary is a specific "leader" where unemployment rate of the people with university education in 2000 was only 1.4 % and in 2004 it was 2.2 %.

Long-term unemployment as a specific form of unemployment. Long-term unemployment, that is a situation where an employee ineffectively looks for work for a period of time that is longer than a year, is a separate problem in analyses concerning the sphere of unemployment. Long-term unemployment is a specific form of unemployment and is significantly different from its other forms. According to sociologists a specific "professionalization" of the status of the unemployed, is observed. This means that unemployment is becoming more and more frequently a way of life and activation of the long-term unemployed is more difficult than of those who are temporarily unemployed. Long-term unemployment is significantly determined by gender. Women make a remarkable part of the group of unemployed people because they are considered by the employers to be employees who are less available and more troublesome (maternity leaves, leaves to look after a sick child) and the range of occupational availability is narrower in the case of women (they work in fewer number of professions, especially related to heavy industry). In Polish reality, age and seniority, as values are correlated as they have the same impact on the period of unemployment. Among the unemployed, a large group is made of young people who are not older than 25 years of age and people who are not older than 50 years of age. People who worked previously constitute a definite majority of the long-term unemployed. In predominant part they lost a job due to liquidation of a company or a position in a company. They were mostly employed in industry or constructions and less frequently in private trade. Long period of unemployment results from inadequate qualifications or even lack of them, or from mismatch between qualifications and requirements of the labour market. Long-term unemployment is a problem of not only a Polish labour market but actually, it also influences the labour markets of all the European states. In the case of the analysed group of states, the level of long-term unemployment with respect to the total population of occupationally active people in 2000, 2004 and 2011 is shown respectively in fig. 3 and tab. 3. The last column of tab. 3 includes the measure of mean pace of changes.

⁴ In Eurostat database, data for Malta are not available in all surveys.

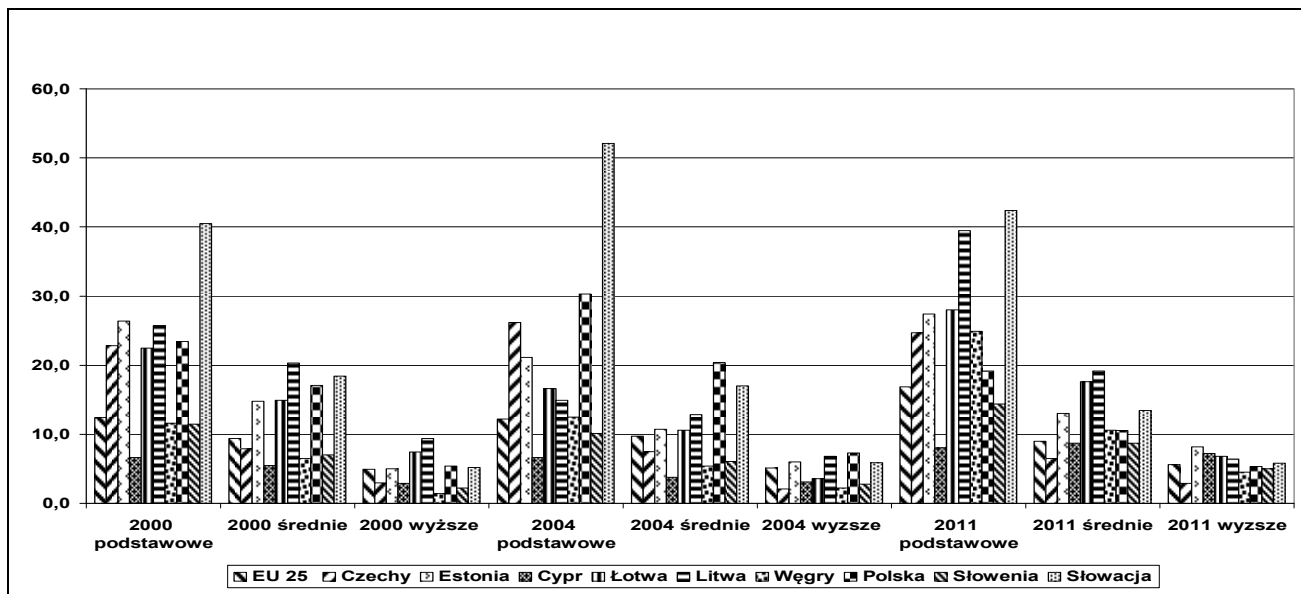


Fig. 2. Unemployment rate by age in the 2000, 2004 and 2011 in selected EU states

* Source: Own case study on the basis of Eurostat database.

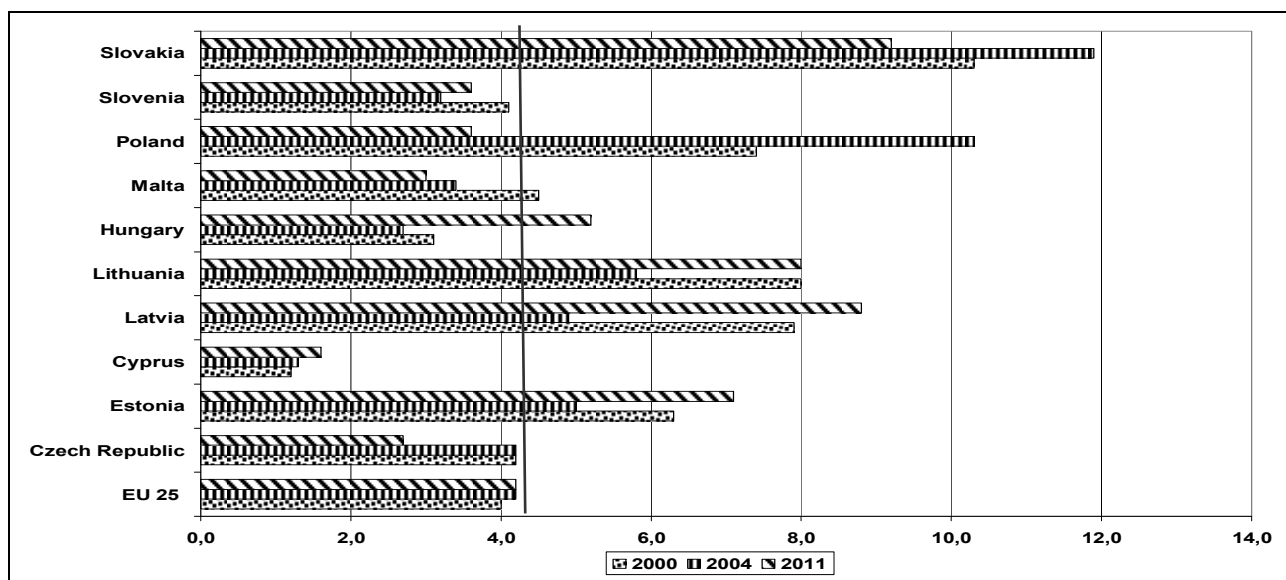


Fig. 3. Long-term unemployed people as the percentage of the total number of occupationally active people in selected years

* Source: Own case study on the basis of Eurostat database (access on 15th March 2013).

Table 3. Long-term unemployed people as the percentage of the total number of occupationally active people in selected years.

GEO/TIME	2000	2004	2011	
EU 25	4.0	4.2	4.2	0.44
Czech Rep.	4.2	4.2	2.7	-3.94
Estonia	6.3	5.0	7.1	1.09
Cyprus	1.2	1.3	1.6	2.65
Latvia	7.9	4.9	8.8	0.99
Lithuania	8.0	5.8	8.0	0.00
Hungary	3.1	2.7	5.2	4.81
Malta	4.5	3.4	3.0	-3.62
Poland	7.4	10.3	3.6	-6.34
Slovenia	4.1	3.2	3.6	-1.18
Slovakia	10.3	11.9	9.2	-1.02

* Source: Own case study on the basis of Eurostat database (access on 15th March 2013).

Thorough analyses of the values in the last column let us state that there occurs a clear differentiation in both the long-term unemployment rate and the pace of

changes. The largest decrease in the level of unemployment was observed in the years from 2000 to 2011 in Poland and in the Czech Republic. The increase is ob-

served in Cyprus and Hungary, but considering its absolute level, it ought to be noticed that despite relatively high pace of increase in employment in Cyprus, its level is in the whole group of states the lowest, and in comparison with the EU it is almost three times lower.

Analysing additionally the rate of long term unemployed people with respect to the total number of unemployed people (fig. 4 and tab. 4) we can state that in the analysed range of time the dynamics of changes in unemployment rate in the whole EU and in majority of the "ten states" shows a falling tendency and only in the case of Lithuania, Estonia and Slovakia it shows a slight increase. However,

the scale of this phenomenon is alarming because long-term unemployed people make a significant percentage of the total number of the unemployed reaching the value of about 45 % in majority of states (similarly to the whole EU). This confirms previous observations related to specific character of the phenomenon when the status of the unemployed allows to obtain a series of social benefits starting from insurance and finishing with benefits in the form of money. Benefits may not be enough to live affluently, but they let survive and possibly look for unregistered employment in underground economy.

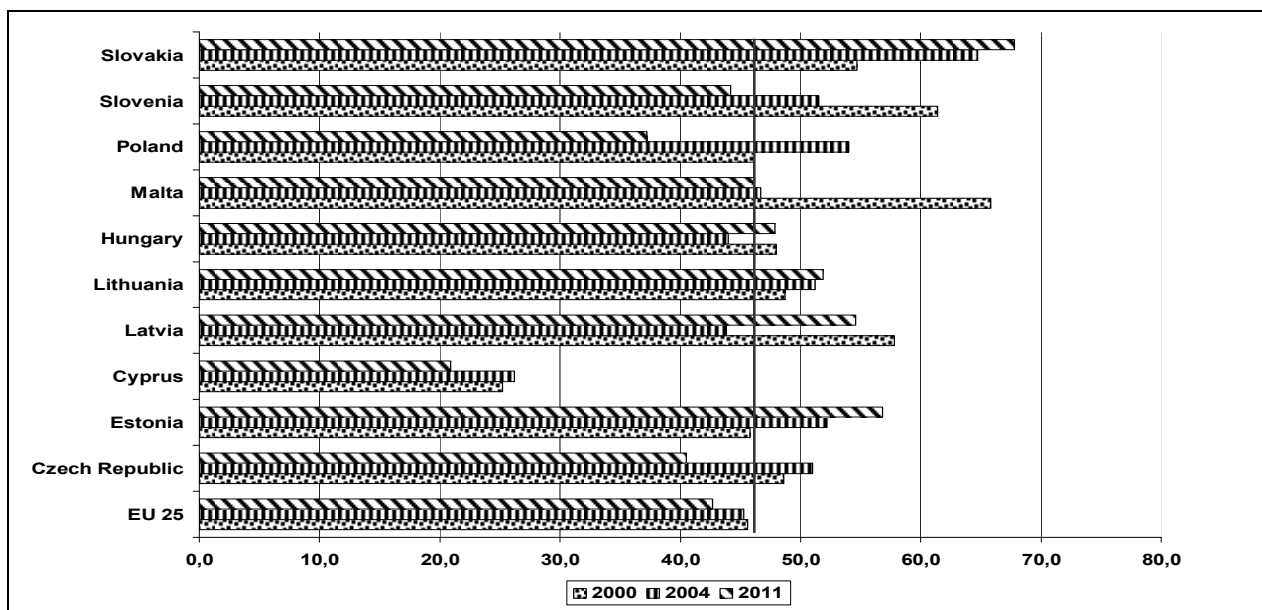


Fig. 4 Share of long-term unemployed people in the group of total number of unemployed in selected years

* Source: Own case study on the basis of Eurostat database.

However, we ought to draw attention to the fact that in the first years of transformation in some states, including Poland, there was a social acceptance for unemployment, but it was treated as a specific "hygienic procedure" in reformed economy. Unfortunately, after 1989 the scale of unemployment "went out" of any control and significantly af-

ected the condition of economy (the phenomenon of limited global market demand) and caused threat to people's well-being. The growth of the problem caused expansion of this phenomenon over a long period of time, and as a result of mismatch between economy structures and market requirements, it turned into long-term unemployment.

Table 4. Long-term unemployed as the percentage of the total number of unemployed in selected years

GEO/TIME	2000	2004	2011	
EU 25	45.6	45.3	42.7	-0.60
Czech Rep.	48.6	51.0	40.5	-1.64
Estonia	45.8	52.2	56.8	1.98
Cyprus	25.2	26.2	20.9	-1.69
Latvia	57.8	43.8	54.6	-0.52
Lithuania	48.7	51.2	51.9	0.58
Hungary	48.0	44.0	47.9	-0.02
Malta	65.8	46.7	46.1	-3.18
Poland	46.1	54.0	37.2	-1.93
Slovenia	61.4	51.5	44.2	-2.94
Slovakia	54.7	64.7	67.8	1.97

* Source: Own case study on the basis of Eurostat database.

The reasons for the fall in long-term unemployment rate observed in recent years seem interesting. Certainly it cannot be explained by rapid growth in the number of workplaces. More reasonable causes ought to be looked for in growing wage-earning migration and in the outflow of labour force from national labour market. In this case, in Offices of Employment the number of registered unemployed people is decreasing and at the same time appropriate

statistical parameters that illustrate the particular phenomenon are changing.

Final remarks. In the session of the European Committee, the European Union agreed that, they should aim to achieve, a 75 per cent employment rate of males and females that belong to the group of 20 – 64 years of age by 2020. This ambitious responsibility shall contribute to per-

sistency of European social model, social welfare systems, economic growth and public finances.

EU can rise to the challenges and remarkably increase the employment rate, particularly of females and elderly employees, but only on condition of undertaking vigorous activities focused on four priorities:

Firstly, better functioning labour markets ought to be cared of. Persistently high rates of unemployment of a structural character are an unacceptable loss of human assets: this discourages and leads the employees to early withdrawal from labour market and to social exclusion. The policy based on the model of flexible labour market and social security described as flexicurity is the best instrument of labour market modernisation. The principles of this policy should be re-analysed and adjusted to post-crisis conditions, to accelerate the pace of changes, reduce segmentation of labour market, support equality of genders and make changes of status in labour market profitable.

Secondly we ought to provide better qualified labour force that should be able to make contribution to technological evolution and adjust to it through new systems of labour organisation. It is a big challenge because of rapidly changing requirements in the sphere of skills, and constant mismatch between skills and EU labour market. Investments in systems of education and trainings, predicting requirements in the sphere of skills and services in the field of adjustment and counselling are of fundamental importance for the increase in productivity, competitiveness, economic growth, and consequently in employment. EU bound itself to improve the level of education through reducing the number of people who finish education early to the level that is not higher than 10 % and through increase in the rate of university education or equivalent to at least 40 % before 2020. In spite of the fact that migrants contribute to employment and economic growth is significant, the potential related to mobility in the EU and inflow of migrants from third countries is neither fully exploited nor directed in the way that satisfies the requirements of the labour market.

Thirdly, it is necessary to create a higher quality workplaces and better working conditions. The quality of workplaces does not affect negatively their number: high quality of workplaces in EU is associated with equally high labour productivity and share in employment. Working conditions as well as physical and mental health need to be taken into consideration in order to meet the requirements that nowadays professional life is related to. It is characterised by frequent changes of employment, more intensive and more demanding work and new forms of its organisation.

Fourthly, the policy stimulating creation of places of work and demand for work should be more efficient. It is not enough to make people stay active and gain skills that make it possible to get a job. Overcoming crisis must be based on economic growth and also associated with creation of places

of work. Appropriate conditions for creation of a larger number of workplaces, including enterprises the functioning of which is based on high skills and business models that are advanced with respect to research and development ought to be created. Selective reduction of labour costs other than salary or appropriately oriented employment subsidies might be the factor encouraging employers to recruit employees who are unemployed for a long term and who disappear from the labour market. The policy that makes it possible to use the major sources of new workplaces and to promote entrepreneurship and self-employment is also important for increasing the rates of employment.

Responsibility for the achievement of those aims is first of all born by member states; they have at their disposal most of instruments that are necessary in this sphere. However, the target EU employment rate, 75 % for females and males can only be achieved before 2020 if both efforts and instruments are involved.

Conclusions Unemployment, particularly long-term unemployment, is a serious social problem. Being unemployed for a long time starts the process of destruction that is expressed in social isolation, lack of trust in oneself, stress in the family, decrease in intellectual and spiritual condition and scanty degree of occupational mobility. It is a serious problem of both social and economic character. People who are unemployed for a long time have weaker chances to find a job due to three reasons – their qualifications get worse, skills and experience gradually expire and optimism and enthusiasm to look for work decreases. Being unemployed for a long time leads to social pathologies, and fighting pathologies is the most difficult and most expensive methods of fighting the negative results of unemployment. Therefore, there occurs the necessity to prepare a common program that could be used in majority of EU states that would aim at professional activation of unemployed people with reference to Lisbon Strategy of 2000, particularly in the 50+ age group.

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ДИНАМІКА БЕЗРОБІТТЯ В ГРУПІ НОВИХ ЧЛЕНІВ ЄС

У статті здійснено статистичне моделювання параметрів, які характеризують стан та тенденції розвитку ринку праці певних країн-членів ЄС, шляхом виявлення співвідношень між віком, статтю та періодом безробіття потенційного зайнятого. Особливу увагу приділено аналізу довгострокового безробіття через його соціальну специфічність. В роботі використано дані Євростату та регіональних статистичних центрів.

Ключові слова: Європейський Союз; безробіття; довгострокове безробіття.

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ДИНАМІКА БЕЗРАБОТИЦЫ В ГРУППЕ НОВЫХ ЧЛЕНОВ ЕС

В статье проведено статистическое моделирование параметров, которые характеризуют состояние и тенденции развития рынка труда некоторых стран-членов ЕС, путем выявления соотношений между возрастом, полом и периодом безработицы потенциального занятого. Особенное внимание уделено анализу долгосрочной безработицы из-за ее социальной специфичности. В работе использованы данные Евростата и региональных статистических центров.

Ключевые слова: Европейский Союз; безработица; долгосрочная безработица.

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ENVIRONMENTAL AUDIT AS ELEMENT OF THE ECO-MANAGEMENT SYSTEM OF UKRAINIAN IRON ORE MINING INDUSTRY

Main principals, methods and juridical procedures of ecological audit of mining plants were considered in context of international practice. Research of mining plants production particularities in ecologisation context was carried out. Main nature pollution factors of mining plants were considered.

Keywords: nature pollution; mining industry; mining plants; ecologisation of production; environmental audit.

Introduction. One of the problems of management and its part referring to environmental management is to preserve it as a tool-kit implementing the principles of sustainable development. This requires the adaptation of the basic management functions to these conditions, which in particular should include accounting and controlling. Environmental audit adjoins to the mentioned functions. This is due to the fact that enterprises, especially mining, have negative environmental characteristics, and are not directly interested in the implementation of these management functions [1].

Environmental audit as an independent market instrument of environmental regulation has evolved in the U.S. in the early 70's, when some of the largest industrial corporations began to develop their own programs of independent assessment carried out by industrial production companies of environmental legislation. Almost at the same time, the programs of environmental audit began to be implemented at the European companies [2].

The issue of environmental audit in Ukraine attracts more attention of scientists. Ukrainian scientists, such as V.J. Shevchuk, Y.M. Satalin, V.M. Navrotskyj (2007), L.I. Maksymiv, A.A.(2011), A.A. Sadkov (2002), G.P. Serov (2000) and others work fruitfully in this direction.

Objectives and methodology. However, the analysis of recent publications indicates that the peculiarities of the mining industry of Ukraine are not enough studied and measures for its improvement are not formulated. Therefore, the aim of this article is to identify the main areas for improvement of environmental audit techniques and the conditions for sustainable development.

The main theoretical methods of research are analysis, synthesis and formalization. The method of expert assessments is used for the determination of the legal provisions regulating environmental audit in Ukraine.

In many countries, especially in Member States of the European Union (EU), legislation contains requirements for conducting environmental audits in enterprises, among other market instruments of environmental regulation. Most of them are designed to encourage voluntary environmental performance of businesses, improve their performance by implementing environmental management. However, an appropriate attention to the promotion of environmental audit has not been given. The implementation of Eco-Management and Audit Scheme gave the greatest impetus to its development in the EU (EMAS, 2013) [3,4].

theoretical solutions and legal basis. As defined by the International Chamber of Commerce, an environmental audit is a tool of management that covers a systematic, documented, periodic and objective evaluation of organizational structure functioning, management and equipment in order to protect the environment. This means that one can use it to analyse the environmental activities and assess environmental policies, including regulatory compliance and standards.

In the Member States of the European Union environmental audit is seen as a market tool of environmental man-

agement, which is used by management organizations on a voluntary basis. Through this, several management problems of environmental audit can be solved, like the following:

- acquiring the information about the level of company compliance with established environmental requirements (both legislative and developed by the organization);
- risk analysis and internal investigation of accidents or emergency situations reasons that result (or could lead) to the environmental impacts and identification of damage inflicted to human health;
- acquiring the information about improving the environmental performance, reduce of costs associated with the use of natural resources, raw materials, energy etc.;
- an estimate of current state to a desired (during the design, implementation and certification of environmental management systems);
- completion of financial institutions' requirements (presenting the results of environmental audits in obtaining credit, insurance, etc.);
- identification of cases that may lead to liability of organization committed (including earlier committed) violations;
- acquiring the information that could affect the value of assets during the buying and selling procedures (including on environmental pollution and changes in the natural resources that are the result of the past performance)[5].

The Law "On Environmental Audit" [6] and the State Standard of Ukraine (DSTU) ISO 14001-2006 "Environmental Management Systems. Requirements and guidelines for usage" [7, 8] are the main Ukrainian legislations on regulations of environmental audit issue.

The legislation stipulates that an environmental audit is a documented systematic, independent assessment process of environmental audit object. It includes the collection and objective assessment of evidence to match certain activities, events, conditions, systems of environmental management and information on these issues according to the legislation of Ukraine on environmental protection and other environmental audit criteria [5].

Main Results. The main goals and objectives in the field of environmental audits based on international best practices include:

- gathering reliable information on the environmental aspects of the production activities of the facility and the formation of the environmental audit findings;
- installation of amenability according to the legislation requirements on environmental protection and other environmental audit criteria;
- evaluation of the environmental auditing facility impact on the environment;
- evaluation of the effectiveness, completeness and validity of measures for environmental protection at the site of environmental audit;
- assistance for the business entities in the self-regulation of internal environmental policy, shaping the priorities of preventive measures for the implementation of environmental requirements, rules and regulations;