

## THE MISMATCH BETWEEN THE LABOUR MARKET AND THE EDUCATION SYSTEM IN MONTENEGRO: IMPLICATIONS AND POSSIBLE SOLUTIONS

### NEUSKLAĐENOST TRŽIŠTA RADA I SUSTAVA OBRAZOVANJA U CRNOJ GORI: IMPLIKACIJE I POTENCIJALNA RJEŠENJA

*Milorad Jovović, Jovan Đurašković, Milivoje Radović*

*Ekonomski fakultet, Sveučilište Crne Gore, Podgorica, Crna Gora*

*Faculty of Economics, University of Montenegro, Podgorica, Montenegro*

#### *Abstract*

The paper analyzes the problem of the mismatch between the education system and the labour market. The aim of the research is an analysis of the current situation on the labour market, a consideration of key constraints in the education system and identifying possible solutions. The problem analysis covers a broader context: a change in the economic structure, the problem of migration and regional disparities, the specificities of the labour market and the results of the reform of the education system. An international comparison of the competitiveness of the Montenegrin economy, from the perspective of the education system and labour market is presented in the final section of the paper in order to identify room for improvement of the current situation. At the same time, the research results reveal the problem on the Montenegrin labour market of a lower or higher level of education compared to the needs of the market. In 2014, the labour supply was 24.6% higher than the demand for labour. In addition to long-term unemployment, the labour market in Montenegro is characterized by the following: unused human potential – low activity rates, high youth unemployment rates, disparities in regional unemployment, the problem of internal labour migration, intensive employment of workers from countries in the region, etc. The system of formal education in Montenegro is unconcerned about the needs of the market. The primacy of quantity over quality has contributed to the rapid growth in the number of graduates, resulting in a rise in the number of unemployed university graduates. Lack of specialization study programs and educational programs at

#### *Sažetak*

U radu se analizira problem neusklađenosti sistema obrazovanja i tržišta rada. Cilj istraživanja je analiza postojećeg stanja na tržištu rada, razmatranje ključnih ograničenja u sistemu obrazovanja i identificiranje mogućih rješenja. Analiza problema obuhvaća širi kontekst: promjenu gospodarske strukture, problem migracija i regionalnih dispariteta, specifičnosti tržišta rada i rezultate reformi sustava obrazovanja. Međunarodna komparacija konkurentnosti crnogorskog gospodarstva, sa stanovništa sistema edukacije i tržišta rada, data je na kraju istraživanja u namjeri da se identificira prostor za unapređenje trenutnog stanja. Rezultati istraživanja pokazuju da na crnogorskom tržištu, istovremeno, izražen problem manjeg, odnosno, većeg nivoa obrazovanja u odnosu na potrebe tržišta. U 2014. godini ponuda rada bila je 24,6% veća od tražnje za radom. Pored dugoročne nezaposlenosti, tržište rada u Crnoj Gori karakteriziraju: neiskorištenost ljudskog potencijala - niska stopa aktivnosti, visoka stopa nezaposlenosti mladih, dispariteti u regionalnoj nezaposlenosti, problem unutrašnje migracije radne snage, intenzivno zapošljavanje radnika iz zemalja regije itd. Sistem formalnog obrazovanja u Crnoj Gori nema sluha za potrebe tržišta. Primat kvantiteta nad kvalitetom doprinio je ubrzanom rastu broja diplomaca, što za posljedicu ima rast broja nezaposlenih visokoškolaca. Nedovoljna specijalizacija studijskih programa i obrazovnih programa na nivou općeg srednjeg obrazovanja dovodi do stvaranja znanja niske upotrebne vrijednosti. Prisutan je sindrom lakše do diplome – teže do posla.

the level of general secondary education leads to the formation of knowledge of low practical value. Eventually, it all results in a situation which is best described by this simple statement: the more easily you get a diploma, the harder it will be for you to find employment.

INTRODUCTION

A mismatch between the education system and the labour market is a serious threat to economic growth and development. This disturbance in the market leads to decreasing the usefulness of labour and to an improper use of the most important factors of production. The economy is faced with the problem of inefficient use of the basic resource – human potential. Consequently, the long-term trend of growth in GDP and the total potential of the economy has been brought into question. The problem of the mismatch between the education system and the labour market in the academic community within a broader, regional, European and even global context has not received the necessary publicity for a long period. However, the fact is encouraging that in recent times, perhaps under the impact of the global economic crisis this disorder has become the subject of analysis of international institutions, scientific institutions and researchers of various profiles. Recent labour market trends have raised concerns that the unemployment rate is high not because employers are reluctant to hire but because they are unable to hire – that is, for whatever reason, firms are unable to find suitable workers to staff the positions they are trying to fill. /1/ Research has shown that demand-side determinants such as employer’s requirement specifications and recruitment practices may be as or more important in determining the extent of mismatch unemployment. /2/

The model of lifelong learning is a need of the modern labour market. The idea of further education, in terms of specific sub-specializations and continuous refreshment of knowledge, is the most important determinant of personal competitive advantage in the labour market. It is also a precondition for a greater labour productivity and the efficiency of business operations of a company. Hence the importance of the availability of high-quality and specialized education programs that would allow a reallocation of labour between the sectors of the economy. This is still not the case. Research has shown that participation in life-long learning correlates directly with both employment and level of earnings./3/ There are several forms of mismatch of supply and demand in the labour market, ranging from the situation when a person has a lower/higher education level than demanded on the market to the one where there is a correlation in terms of the level but not in terms of the type of qualifications for a particular position (Table 1). It is interesting that there is also a mismatch when the skills and ability of a worker become obsolete and lose importance. It is this circumstance that highlights the importance of the process of (continuous) lifelong learning. Furthermore, it is necessary to point out to those cases when obtaining a diploma, which is not backed by adequate knowledge, leads the employer to an unjustified presumption that a certificate of graduation from a secondary school/university guarantees an *a priori* higher productivity.

Table 1: Types of mismatch of supply and demand in the labour market

<b>Vertical mismatch</b>	Level of education or skills is lower or higher than the requirements of a job position.
<b>Horizontal mismatch</b>	Level of education or skills is adequate, but not the field of education.
<b>Overqualification</b>	A person has a higher level of qualification than required for a job position .
<b>Underqualification</b>	A person has a lower level of qualification than required for a job position.
<b>Overskilling</b>	A situation where a person is unable to fully use their skills and abilities in the current job position.
<b>Underskilling</b>	A situation where a person lacks necessary skills and

		abilities for performing the current job according to current standards.
	<b>Credentialism</b>	A situation where the level of education necessary to get a job exceeds the level of education needed to adequately do the job. This situation refers to the belief of employers that a graduation certificate or diploma implies a greater productivity.
	<b>Economic skills obsolescence</b>	A situation where previously used skills to do a job are no longer necessary, are obsolete or lost in value.

Source: Cedefop (2010, p. 13); Sloane (2014, p. 2).

Taking into account all the above-mentioned, it is important to consider certain aspects of educational mismatches in the labour market in terms of time horizon (Table 2). In the short term, the costs of job search for the individual and the costs for the company while the position is vacant will prevent the best outcome – a match of supply and demand. As time passes, the costs of the “search” grow and at one point the prospective employee will accept a

lower wage job which quality-wise does not match his or her abilities and qualifications. On the other hand, the potential losses in productivity will force employers to hire workers who might not be the optimal solution. The consequence of such a decision is a mismatch between the characteristics of labour supply and those of labour demand, which ultimately renders the worker unmotivated and the company less efficient.

**Table 2:** Educational mismatch in short and in long term

	<b>Short term</b>	<b>Long term</b>
<b>Causes</b>	Costs of job search for the individual and the costs for the company while the position is vacant prevent the best outcome – <i>matching</i>	Unbalanced changes in supply and demand
<b>Methods of observation and measurement</b>	Differences in the characteristics of the job position and prospective employee	Estimates and forecasts of aggregate changes in supply and demand in the various categories on the labour market
<b>Analysis methods</b>	Analysis of the ways in which individuals seek jobs and the ways in which companies hire workers.	Examining result of trends such as technology, organizational changes, globalization, education, etc.
<b>Consequences</b>	High costs of job searching for both prospective employees and companies, losses in the prospective employee's wages and a lower output for the company.	Loss of return on investment in education and training of employees, inadequate labour force for the expansion and growth of the company.
<b>Policies targeting the mismatch</b>	Institutions dealing with the labour market which encourage the harmonization of the market (matching of supply and demand), reduction of job search and labour force search-related costs.	Adapting education policies in order to anticipate changes

Source: Sattinger (2012, p. 4).

In the long term, if a person fails to find a job corresponding to their qualifications and education, their investment in the education process will become a “failed” investment. For the employer, inadequate labour force will prevent the growth and expansion of the company and jeopardize its life cycle. In order to provide a more relevant analysis of this problem, it is necessary to make an objective

prediction and assessment of trends in the labour market, while the role of state institutions is crucial not only in the short-term harmonization of the market and reduction of costs for both the prospective employees and the employers, but also in the long-term repositioning of the education system in accordance with the anticipated changes.

The measurement results of the mismatch between education and labour market differ significantly between countries. One study, which included 25 European countries, illustrates well this disparity. On average, 33% of workers are at a higher level of education than required (overeducation), this percentage ranging from 15% in the Netherlands to 79% in Estonia. As regards the countries of the former Yugoslavia, only Slovenia was included in the sample, where the problem of overeducation is present in 17.7% of cases. The study has shown that there is a much higher proportion of workers with lower levels of education than the market needs (undereducation) – an average of 59%. Naturally, there is the lowest percentage of workers where quality of supply coincides completely with the market needs (even below 10% in the twenty countries included in the survey). /4/ Recent studies show that in European countries between 15% and almost 35% of employees work in jobs for which they have a lesser or greater level of qualification than needed, the lack of education being more common than excess education. Observed by sectors, “agriculture, forestry and fishing” as well as “household production” are those with the highest degree of mismatch with the labour market needs. By occupations, the highest horizontal and vertical mismatch is present in “agriculture, forestry and fishing”. /5/ More detailed results based on a survey show deeper causes and manifestation of consequences of the educational mismatch with the labour market. Educational institutions are out of sync with employer needs. While 72 percent of educational leaders think newly educated workers are ready for work, only 42 percent of employers do. This is a big mismatch. Primary and secondary educational institutions are not in touch with corporate recruiters’ needs. /6/ The probability of being overeducated increases with education level. This is a common result in the international literature. /7/ Non-European experiences show similar

trends. In Australia, it is found that approximately 15.8 per cent of men and 13.6 per cent of women are overeducated, whereas approximately 18.5 per cent of women and 13.7 per cent of men are undereducated. /8/

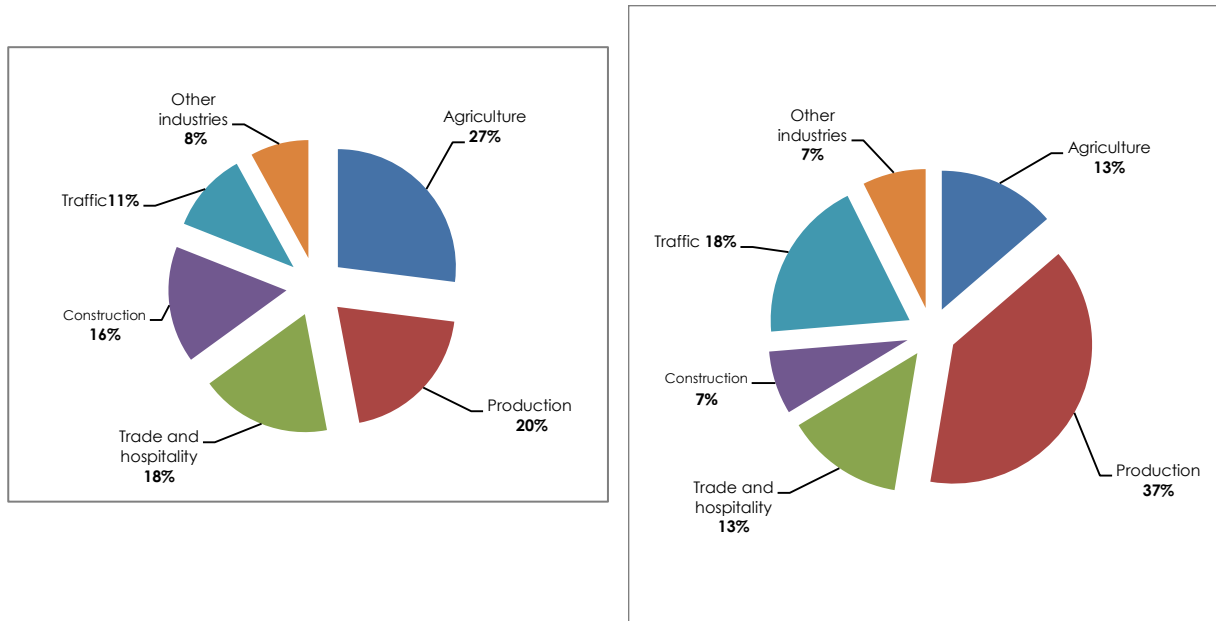
When it comes to the level of earnings, there is no doubt that the mismatch of labour supply and demand is an important determinant of future wages. It is generally found that overeducated workers earn less than adequately educated workers with a similar educational background. /9/

### **1. The economic context - the history of the problem**

For a comprehensive analysis of the subject matter, it is necessary to take into account and consider the dynamics of the processes that characterize the development of the economic system, the structure of the population, the labour market situation and the development of the education system in Montenegro.

Over the last 70 years, Montenegrin economy has been through huge structural changes. A very dynamic economic activity in the Socialist period led to changes in the interrelationship between agriculture and industry. The participation of industry in the GDP of Montenegro increased enormously from only 7.4% in 1952 to 37.9% in 1989, while agriculture recorded quite the reverse trend, since its share of 38.8% was reduced to 12.6%. In the period 1961-1989, industrial production increased 6.4 times, while agricultural production increased only 1.5 times. Such large disproportion caused other controversies such as a high rise in unemployment, a very intense process of migration from rural to urban areas, or from the northern to the central and southern regions (from 46.2% in 1961 to 31.4% in 2003). Other industries, with the exception of traffic, also recorded a smaller share in the realized GDP at the end of the period (*Graph 1*).

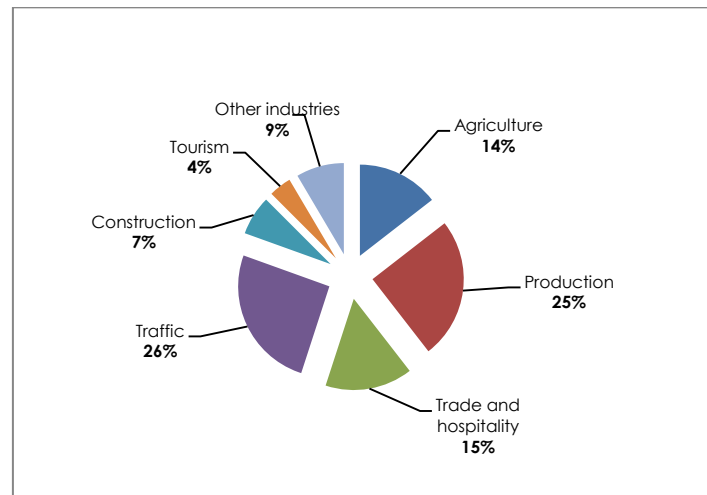
**Graph 1:** Structure of the domestic product (GDP) in Montenegro in 1961 and in 1989



Along with a very accelerated process of industrialization the process of development of the tertiary sector, which now makes the dominant segment of GDP, occurred. Thus, the dynamic growth of the tertiary sector (about 9 times) occurred as a result of construction and putting into operation of large infrastructure facilities of the transport sector (Adriatic highway, Port of Bar, etc.), as well as the burgeoning trade, tourism and hospitality. In addition, the tertiary sector generated new jobs (an increase from 14,000 employees in 1961 to about 48,000 in 1989), thus by the number of employees approaching the total number of employees in production (about 54,000). The highly dynamic economic development in the socialist period ended ingloriously – in a complete collapse of the economic system of the early 1990s. The process of transformation from a socialist to a capitalist economy, accompanied by many unknowns, was a very dramatic experience. In the period 1989-2000 Montenegro witnessed a so-called depression economics –

a pronounced decline in economic activity across all sectors of the economy. At the end of this period, in 2000, the industry accounted for only 37.8% of GDP achieved in 1989, agriculture 73.4%, construction 57.3%, transport 77.8%, trade 69% and tourism 57.8%. It is evident that during this period production, maritime transport and tourism suffered the most damage. The production suffered damage not only because its share in GDP was reduced to 25.3%, but also and even more because it retained this share primarily thanks to the energy and metallurgy sector, which more or less managed to hold its own, while the utilization rate of other industries fell below 25%, and some were practically extinguished. The intensity of the decrease in the share in GDP inevitably brought about significant structural changes in the economy. The production share in the domestic product nearly equaled that of traffic (25% and 26%), while the share of agriculture equaled that of trade (14.5% and 15.5%), while construction kept the same position as in 1989 (7%).

**Graph 2:** Structure of the domestic product (GDP) in Montenegro in 2000.



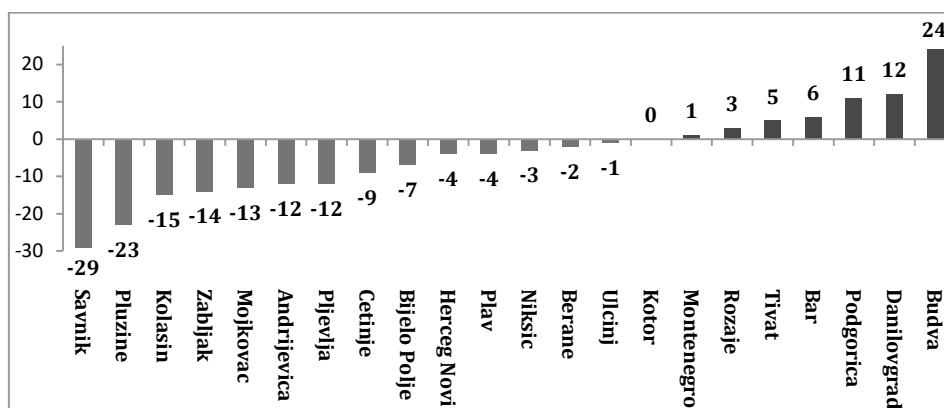
A more intense economic recovery occurred after 2000. In the period 2001 - 2008, GDP increased by 37%. In the same period, the number of employees increased by 25.1 thousand, i.e., 17%, while the number of unemployed fell by as much as 53.1 thousand or 65%. /10/ The unemployment rate continuously decreased and in 2008 fell to 16.8%. A dynamic economic growth lasted until the last quarter of 2008, when it became clear that the negative effects of the global economic crisis, combined with the internal challenges of the domestic economy, were about to jeopardize the progress made at the beginning of the first decade of the 21st century. As the new methodology of calculating GDP prevents comparability of data in a broader temporal context, we will briefly analyze the changing structure of the economy in the period 2000-2013. The dominant share in GDP belongs to services sector, at the expense of the agricultural sector and production. In the period 2000-2013 the share of agriculture in GDP was reduced to 8%, while the share of production declined to 11%. The share of gross added value in 2013 was recorded in the following percentages: tourism accounted for 27%, construction 5%, and production 12.5%/11/

## 2. The structure of the population

According to the 2011 census, as a result of natural population growth and migration, Montenegro's population was 620,000. In absolute terms, the population of Montenegro increased compared to the 2003 census by only 7,762. In regional terms, the

population of the northern area has a negative growth rate of 7.2%, the increase in population in the central part is 5.8%, and 3.7% at the Montenegrin coast. Without going into more detail, it can be concluded that the dynamics and the achieved number of population is primarily due to falling birth rates and reduced mortality rates, which brings Montenegro closer to the low natality areas. Falling birth rates, caused largely by economic factors (unemployment), later marriages, families with one or two children, that is, the reduced number of household members, are likely to result in a further decline in the birth rate. Migrations have also left a strong impact on the population. In this regard, we especially emphasize the obvious fact of emigration of professional and highly qualified personnel. These processes have been encouraged by the economic and political developments, starting in the 1990s. The brain drain does not only mean a decrease in, that is, an impoverishment of human resources, but also permanently losing significant funds invested in education of "finished products". A particularly pronounced problem is that of internal migration – from the northern regions to the central and southern parts of Montenegro – which resulted in uneven regional development. This can also be concluded from *Graph 3*, which shows that the outflow of population is predominantly present in the northern region, while the central and southern regions have recorded a population growth.

**Graph 3:** Change in the number of inhabitants per municipality in 2011 compared to 2003, shown in percentages (%)



Source: Statistical Office of Montenegro, *Census 2011* (www.monstat.org).

These data point to an important problem of the Montenegrin economy – a mismatch of human and economic resources. The trend of the population outflow from the area that is abundant in natural and economic resources precipitates the processes of deagrarization, devastation and depopulation of arable areas. In short, this is a manifestation of the previously mentioned changes in the structure of the economy, or, more precisely, of the marginalization of agriculture as an industry. When it comes to the share of agriculture in the total population, in 1952 it amounted to 71%, and in 1991 to only 7.5%. As the age structure of the population is an indicator of the quality of the human factor, we will highlight the tendency of aging of the population, with obvious regional differences. There is a decrease in the share of young population, increasing the share of the middle-aged population and especially older population over 60, or 65 years of age. Associated with the migration trends, the average age of the population is the highest in the north of Montenegro. In addition, there are evident differences between the urban population and the population of other settlements. The urban population is slightly younger, which is largely a result of migration, while in other settlements, mostly rural in type, the age of the population is higher. Earlier, in the territory of Yugoslavia, Montenegro was near the top in terms of the educational level of the population, which can be taken as an indicator of the quality of human resources. However, this was in contrast to the economic practice, with the parameters of efficiency, profitability and productivity below the federal average. When looking for an answer to this question, we find that one of the primary causes was valuing educational over experience. Often was an educational level more a formal confirma-

tion of completion of education than of knowledge and skills.<sup>12/</sup> Economic structure and level of activity of human resources is also a factor of quality and development. The activity rate in the third quarter of 2015 was 55%. This level of activity speaks of underutilization of human resources, since almost 50% of the population was outside the labour market activities. Furthermore, if we add an even lower activity rate of the female population, then one gets a complete picture of this characteristic in Montenegro.

### 3. The complexity of the labour market

A labour market analysis points to certain structural weaknesses and threats to a dynamic economic development. They primarily include the problem of high long-term unemployment, high youth participation in the structure of the registered unemployed, a continuous increase in the number of unemployed university graduates and a pronounced structural disproportion between supply and demand in the labour market, both in terms of quantity and quality. The causes of the mentioned discrepancy are:

- the mismatch between the educational structure of employees and the needs of the employer,
- the mismatch between supply and demand not only in terms of occupational structure and but also and even more in the number of employees
- the mismatch in terms of the quality of professional qualifications of persons completing full-time education and the current technological requirements and working conditions in manufacturing and services.

In addition to all the-above mentioned, we should be concerned about the fact that only about half, i.e., 53.5% of employees in Montenegro work in

their profession. By analogy, labour productivity measured by GDP per number of employees in 2009 amounted to only 22% of the average productivity of the 27 countries of the European Union. /13/ A finding from the same survey speaks a lot about the preferences of human resources, as the maker of labour supply. According to the survey, almost 2/3 of the working age population (64%) would rather work in the public sector for a monthly income of 450 euros, than in the private sector for 750 euros. It speaks volumes about the entrepreneurial ambitions of workers in the Montenegrin market, but is also an indicator of the (insufficient) level of self-employment and of an aversion towards the risk of starting their own business.

The remainder of the paper discusses some of the basic indicators, characteristics and determinants of the labour market in Montenegro./14/

- The number of employees– 221,7 thousand;
- The number of unemployed persons– 47,25 thousand;
- Inactive population – 231,6 thousand;
- Low activity rate – 53,7%;
- Low employment rate – 44,3%;
- High unemployment rate – 17,6%;
- High long-term unemployment rate– 57% of the unemployed have been looking for work for over a year;
- High youth unemployment rate (od 15-24 g.) – 37,6%.

- Disparities in regional unemployment – the unemployment rate is 7.8% in the coastal region 12.4% in the central region (Podgorica 11.4%) and as much as 37.3% in the northern region.
- Excessive employment of foreigners – as many as 23.255 people in 2014. /15/

By analyzing the parameters of the labour market in terms of educational level (Table 3), it is evident that the category of persons with secondary education is dominating the share of the active population with 41.5%, followed by university graduates in the percentage of 23, 7%. An observation of the activity rate and the employment rate reveals that they are in direct proportion to the level of education – i.e., the higher the level of education, the greater the activity in the labour market and the greater the likelihood of finding employment. When it comes to the unemployment rate, it shows a decreasing trend with the increase of the level of education, and in people with post-secondary education and university degree it is below the total unemployment average, but in the latter category it is still in double digits – with the alarming 11.4%. The data point to yet another characteristic of the education system – the level of general secondary education in which the activity and employment rates are below the average, and the unemployment rate above average. This suggests that this is a harder employable category of workers, that is, an inadequate education output that does not promote highly specialized knowledge and makes the labour supply less attractive.

**Table 3:** The parameters of the labour market according to educational level <sup>1</sup>

	Active population by educational level (%)	Activity rate by educational level	Employment rate by educational level	Unemployment rate by educational level
No education and incomplete primary school	1.5	12.4	9.8	20.9
Primary school	7.7	23.8	16.7	29.7
Vocational education after primary school	15.2	56.2	45.2	19.6

<sup>1</sup> The first column features the data on the degree of education of the active population, while the other three categories represent aggregate indicators for people aged 15 and over.



General secondary education	5.8	46.8	38.1	18.6
Secondary vocational schools	41.5	67.2	56.1	16.5
Higher vocational education	4.6	65.3	60.5	7.4
Faculties, academies and colleges, doctors and masters of arts and science	23.7	81.5	72.2	11.4
<b>TOTAL</b>	<b>100</b>	<b>55</b>	<b>45.9</b>	<b>16.5</b>

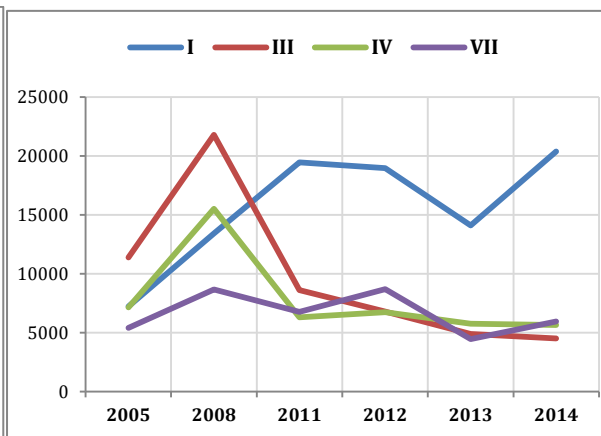
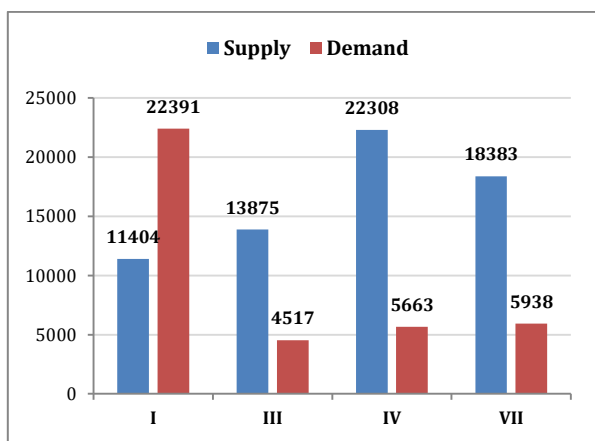
Source: Monstat (2015, p. 8).

Looking at the employment by occupation, it can be observed that the agricultural sector accounts for the smallest share in the total employment (only 8.3%), followed by the category of non-agricultural activities – production with 17.9% of employees, mostly in processing industry (7.1%), and construction (6.8%). The largest number of workers are employed in the service sector (its share in the total employment 73.8%), predominantly in the wholesale and retail, accounting for 21.3% and public administration 9.2%. These data are complementary to the change in the structure of GDP in favour of the service sector and at the expense of production and agriculture.

The mismatch between supply and demand on the labour market is reflected by the data of the Employment Agency for 2014 relating to the registered job vacancies and job seekers. As illustrated in *Graph 4*, the demand for labour in 2014 exceeded the supply of labour only in the category of persons with primary education, that is level I of education, which experienced a labour shortage in the absolute amount of -11,527 persons. As the level of education increases, the labour supply exceeds the demand and surpluses occur in the categories of professional education with the largest number of registered persons – III (surplus of +9,358), IV (surplus of +16,645) and VII (surplus of +12,445).

**Graph 4:** Supply and demand by sec. education (in thous.)

**Graph 5:** Vacancies by secondary education (in thous.)



Source: Employment Agency (2015, pp. 12, 86).

If the trend is observed of the change in the number of vacancies registered with the Employment Agency according to the education level, there is an apparent preference of the market for level I of education. From 2005-2008 there was a growth in the number of vacancies in all categories, but the effects of the crisis produced negative trends. However, in 2013, only the demand for level I education

showed a tendency of rapid growth. This tendency, too, completely corresponded with the structure of GDP, or the output of the Montenegrin economy, which is significantly different compared to the pre-transition period, which implies a change in the nature and scope of the demand for labour by companies. A mismatch between supply and demand is best illustrated by the fact that in 2014, the

supply was 24.6% higher than the demand. Most vacancies were recorded in the sectors of trade, administrative and auxiliary services, and tourism and hospitality industry; it is mostly vocational secondary education that was needed. /16/ One of the consequences of structural unemployment and the mismatch of the education system and the labour market is seasonal workforce which consists of imported unemployment. The 2014 Employment Agency analysis of the supply and demand on the labour market states the following: "The large size of the employment of foreigners in Montenegro is the specificity and an exception to the scope of employment of foreigners in other countries ... There are several causes of this phenomenon, first of all, the fact that in Montenegro there is a pronounced deficit in the supply of some jobs in the construction and hospitality industries in a period of the most intensive activity in these sectors, and the fact that there is pronounced unemployment in the neighbouring countries (totalling about 1 million people in Serbia, Bosnia and Herzegovina, Macedonia, Kosovo and Albania), which offers the possibility of meeting the needs of employers in terms of volume, structure and dynamics and, as a rule, with cheaper labour. "/17/ Foreign employment is five times higher than the employment of local labour force in the field of construction, in hospitality and tourism it is higher by 50.3% and in trade by 34.2%. This suggests that the excess of demand over supply of labour, especially in the category of level I education, is generated from foreign sources, which would not be so alarming if it were not for the fact that Montenegro already has a high (double-digit) unemployment rate. However, it should be noted that it is necessary to perform a detailed analysis of the situation in this respect, because there is an assumption that this mismatch between domestic supply and domestic demand is not only due to the structural characteristics of labour, but also a certain degree of frictional, and even voluntary unemployment.

#### 4. An Analysis of the education system – the results of reforms

During the transition process, the education system in Montenegro underwent numerous reforms in all segments. Today, there are 424 active schools at the primary education level and 50 schools at the secondary level (12 of which are general education high-schools/grammar schools), while in the field of higher education, there is a state-funded univer-

sity (the University of Montenegro)<sup>2</sup> and two private universities (The Mediteran (Mediterranean) University<sup>3</sup> and the University Donja Gorica<sup>4</sup>) as well as seven independent higher education institutions. The total number of students in primary schools at the end of the school year 2013/14 was 68,171, while 30,180 students attended secondary schools. In the 2014/15 academic year, 24,000 students attended higher education institutions. In the same year, the rate of primary school enrollment stood at 98.55, the rate of secondary school enrollment at 86.49, and that of university enrollment at 35.41. /18/ One of the most important segments of education in Montenegro is general secondary education. It relies on the reformed nine-year primary education and together with secondary vocational education establishes the basis for the continuation of education at universities. The reform of general secondary education began in 2002 when the legal framework was adopted and in the school year 2006/07, education under the new education program started. The reform enabled students to partly create the curriculum adjusting it to their personal affinities. Thus, in the first grade of the general secondary education (grammar school), obligatory subjects make up 90% of the curriculum, while compulsory elective subjects and compulsory electives account for the remaining 10%. However, by the fourth grade compulsory elective subjects account for more than a quarter of the curriculum./19/ The development of this, undisputedly the highest quality segment of secondary education, should imply a certain degree of specialization of students. The labour market data show that employers' preferences are more focused on hiring experts/specialised personnel. In this regard, it would be necessary to create conditions for strengthening specialized programs within general secondary schools (mathematics, socio-linguistics, sports), which is ultimately a useful preparation for higher education. The need of the economy, that is the labour market, is to create a system of knowledge of high use value through the strengthening of creativity and logical reasoning in pupils/students, from primary, through secondary to ter-

<sup>2</sup> There are 19 active faculties and two institutes at the University of Montenegro and about 20,000 students.

<sup>3</sup> There are 6 active faculties at the Mediteran (Mediterranean) University-

<sup>4</sup> There are 9 active faculties and the Centre for Foreign Languages at the University Donja Gorica.

tiary education. This is achievable through the affirmation of practical classes in which students are direct participants/partners in the learning process and through the implementation of entrepreneurial learning. The ultimate goal is to create individuals characterized by self-awareness, independence, entrepreneurial thinking and proactivity. The reforms of the higher education system in Montenegro started in 2003 by the acceptance of the Bologna Declaration. A system was adopted based on a three-cycle study structure: first cycle (undergraduate), second cycle (graduate), and third cycle (post-graduate-master/doctoral). The ECTS (European Credit Transfer System) system of transferring credits was introduced, the new mobility programs for teachers and students affirmed and so on. The adoption of the new Law on Education (2003) opened the door to the implementation of new reforms. In the years that ensued, new (private) universities were opened. A new stage of development of the higher education system is characterized by:

- Uneven quality of education at both the level of institutions and the level of study programs;

- The concept of lifelong learning is still not sufficiently promoted and developed;
- The higher education system is not competitive and attractive on the international scene;
- International cooperation and academic mobility is not at a satisfactory level (lack of instruction in English, insufficient infrastructure, etc.);
- Scientific research is not sufficiently represented in the higher education process and
- A rapid growth in the number of higher education institutions and the number of university students, with no correlation between that growth and the labour market needs. /20/

The last item in this analysis of the educational system concerning the rapid growth in the number of students is best illustrated by *Table 4*. With the start of the “experimental” application of the Bologna Declaration in the academic year 2003/04, the number of undergraduate students stood at 9,759. The next academic year in Montenegro saw 24,184 undergraduates. The expansion is obvious with the programs of specialist and master's studies, too.

**Table 4:** Number of students by study cycle in Montenegro

Academic year	Undergraduate studies	Specialist studies	Master's studies
2000/01	8 271	n.a.	n.a.
2001/02	7 878	n.a.	n.a.
2002/03	8 333	n.a.	n.a.
2003/04	9 759	n.a.	n.a.
2004/05	11 011	n.a.	n.a.
2005/06	12 903	n.a.	n.a.
2006/07	16 173	n.a.	n.a.
2007/08	18 009	420	966
2008/09	20 490	1 225	1 023
2009/10	21 199	1 656	931
2010/11	22 163	1 880	1 061
2011/12	22 227	2 215	780
2012/13	22 279	2 169	463
2013/14	23 442	2 014	552
2014/15	24 184	1 903	443

Source: Monstat, 2015 (www.monstat.org)

However, despite the apparent dominance of quantity over quality education in Montenegro, there is an insufficient percentage of highly educated popu-

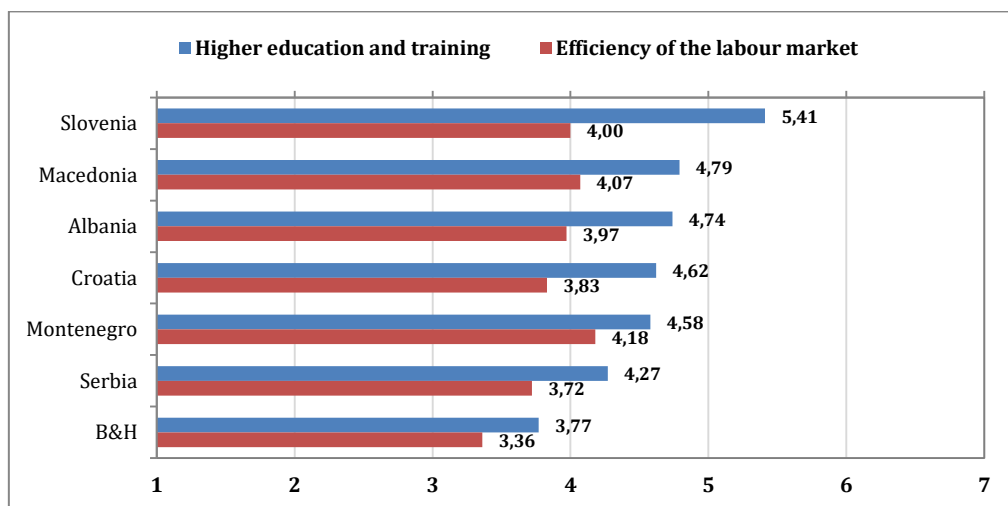
lation compared to developed countries. According to the 2011 census, out of the total population aged 15 and over, 17.4% holds a higher education degree

obtained either in the old and or the new higher education system. The aim is that by 2020 the share of population aged 30-34 with a university degree increases to at least 40%, and that the dropout rate, which in 2011 stood at 60% decreases to 10%.<sup>21/</sup> Along with the formal levels of education, a continuous development of vocational education is needed, which is a function of lifelong learning. The current deficits and surpluses in supply and demand of labour, particularly pronounced in some occupations, necessitate the implementation of a series of programs in order to harmonize these relations. In this context, we should emphasize the importance of education and training programs: additional training, retraining, or specialization within the areas of metal processing, crafts, agriculture, information technology, foreign languages, hospitality and others.<sup>22/</sup>

### 5. Competitiveness in the international context

Montenegro's position on the world rankings, in terms of quality of education and labour market efficiency, can be reflected upon by analyzing the Global Competitiveness Index published annually by the World Economic Forum. *Graph 6* presents a comparison of the countries in the region in relation to the two aforementioned areas. When it comes to the category of higher education and training of employees, in the 2015 report Montenegro received a score of 4.58, and thus was ranked 54th among 140 countries. Slovenia received the best ranking among the observed countries, being ranked 22nd, while Serbia and Bosnia and Herzegovina received worse rankings than Montenegro.

**Graph 6:** Comparison of the Global Competitiveness Index, higher education and the labour market in the selected countries (2015)<sup>5</sup>



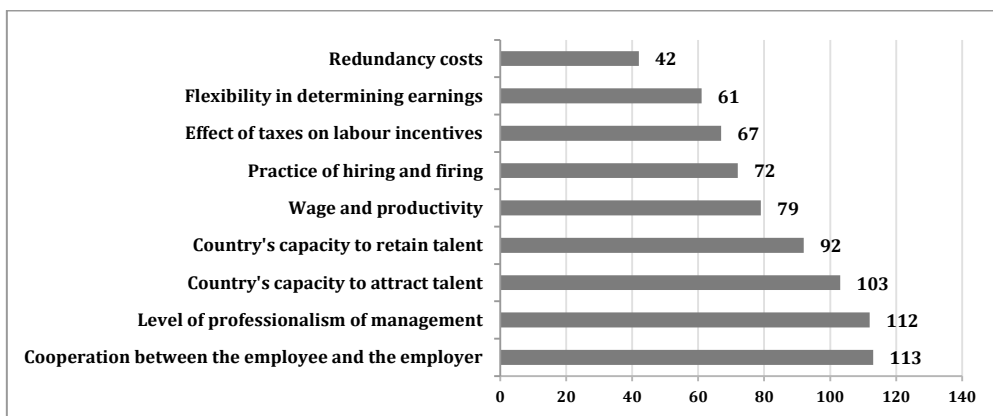
Source: World Economic Forum, 2015.

<sup>5</sup> Score 1-7 (1 represents the lowest score, 7 the best score).

When it comes to the efficiency of the labour market, the research shows that compared to the region Montenegro received a score of 4.18, that is, it is ranked 74th on the general ranking list. Macedonia and Slovenia also recorded better results than the rest of the region, the worst rankings being received by Bosnia and Herzegovina. When a more detailed analysis is performed of both indicators, it is interesting to look at the weaknesses of the Montenegrin economy from the standpoint of individual sub-categories. When it comes to the efficiency of the labour market, Montenegro achieved the best result in terms of the amount of redundancy costs (ranked 42nd). The practice of hiring and firing (as to whether the regulation allows a more flexible establishment/termination of employment) obtained a relatively low rating of 3.8 which puts the country in the worse-ranked half of the ranked economies. As is mentioned above, the national competitiveness is not significantly contributed by

productivity, but what is particularly worrying is the assessment relating to the country's capacity to retain/attract talents. In terms of productivity, Montenegro is ranked 92nd, and in terms of capacity to retain/attract talents 103rd. In a sense, this can be an indicator of "braindrain" which endangers the basic substance of development. An interesting result is recorded in terms of the level of professionalism of management – the score of 3.6 (where 1 means – higher managerial positions are often filled with family members or friends, and 7 means – higher managerial levels mainly consist of professional managers selected on the basis of qualifications). The last indicator of the efficiency of the labour market is *cooperation between employees and the employer*, where the poorest single result was achieved, the country receiving the rank of 113. This leads to the conclusion that the relationship between social partners is more one of confrontation than cooperation.

**Graph 7:** Montenegro's position in the ranking of global competitiveness, 7. pillar- Efficiency of the Labour Market (2015)

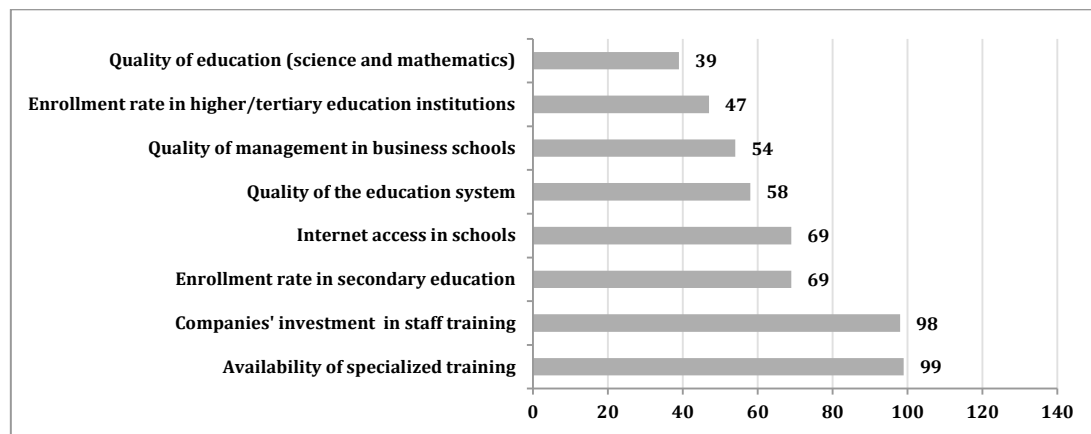


Source: World Economic Forum, 2015.

The competitiveness indicator, which analyzes Pillar 5 - Higher Education and Training, evaluates the quality of education, investment in staff training, enrollment rates, etc. It is particularly interesting that the assessment of the quality of the educa-

tion system has changed significantly compared to, for example, year 2010, when, according to this indicator, Montenegro won the high 39th position. Five years later, the country earned the 58th position in the rankings.

**Graph 8:** Montenegro's position in the ranking of global competitiveness, 5. pillar – Higher education and Training (2015)



Source: World Economic Forum, 2015.

In addition to other indicators, the last two in which Montenegro achieved the poorest results are Companies' investment in staff training (ranked 98th) and the Availability of specialized training (ranked 99th). The first indicator points to the objective limitations of the companies (less successful business operations, the economic crisis, insolvency and so on.) as well as erroneous subjective assessment of management (training is a cost rather than an investment, human capital development is not among the company's priorities, only the consumer is "king" but not the employees, etc.).

## CONCLUSION

Taking into account the causes and consequences of the mismatch between the education system and the labour market, which are manifested through the inefficient use of the most important resource in the economy, the decline in productivity, reduced profitability and a lower rate of economic growth, it cannot be emphasised enough how important it is to coordinate the activities of all relevant institutions and entities, so as to mitigate this disturbance in the economy. These institutions should, first of all, include the relevant ministries – the Ministry of Education and the Ministry of Labour and Social Welfare, the Employment Agency, the Union of Employers, the Chamber of Commerce, trade unions, universities, etc.

The recommendations to reduce the mismatch between the education system and the labour

- Developing specific empirical research projects and a continuous analysis of the mismatch between the labour supply and labour demand (carrying out an analysis every 3-5 years of the

problem of the mismatch through the existing surveys (Monstat, EAM), or providing special funds for the collection of relevant information; harmonizing the methodology and structure of the research with the European research standards for future comparability of data; conducting research through a survey of employers and workers (with the involvement of the Union of Employers and trade unions);

- Promotion of an active policy on the labour market accompanied by a continuous growth in state investments in the field of education and science with the aim of reaching the EU average;
- A more flexible labour market through the improvement of labour legislation. Job security guarantees the quality of work, not the law;
- Promotion of lifelong learning;
- Continuous improvement of programs of professional training of young people and adults to the extent that they contribute to the reallocation of labour across different sectors of economy;
- Policy-makers should develop new and upgrade the existing training programs for those jobs where there is a surplus of demand for labour, and for which labour force from neighboring countries is predominantly hired;
- Improvement of practical classes at all levels of education, making knowledge more concrete, development of skills and promotion of the importance of self-education through entrepreneurial education;
- Continuous work on creating knowledge of high use value through the development of better quality specialization at the level of gen-

eral secondary education, and especially in the field of higher education;

- Improving the external quality control in educational institutions (promotion of quality rather than quantity);
- Creating programs at all levels of education in accordance with the needs of the labour market in the medium and long term;
- Periodically synchronizing enrollment policies in higher education institutions with the needs of the economy and the labour market;
- Improving cooperation and communication between educational institutions, public employment services and the Union of Employers;
- Establishing or strengthening advisory bodies in educational institutions – in secondary schools/colleges/universities – which involve representatives of employers, academia and relevant state institutions;
- Strengthening the function of career and professional development, i.e., opening and improving career development centres in educational institutions;
- Developing programs for lifelong learning at higher education institutions dedicated to the needs of employers for specific training of employees; examining the possibility of mutually beneficial cooperation: training of employees = practice of students in the company;
- Developing student mobility within a single university with the aim of affirmation of multidisciplinary, subspecialisation and concretization of knowledge (e.g. a student of economics intending to specialise in macro analytics or business analytics, i.e., a field of econometrics, could attend lessons and take exams in the set/module of specific subjects in the field of applied mathematics and computer science at the Faculty of Mathematics and Natural Sciences);
- Working on the development of the function of human resource management in companies. Investing in employees is an investment, not an expense; the goal is to create a long-term oriented function of human resource management (through a concern about motivation, education and training, career development of employees, etc.).

#### References

- /1/ Barlevy, G., Evaluating the role of labour market mismatch in rising unemployment, *Economic Perspectives*, Federal Reserve Bank of Chicago, 3Q, pp. 82-96, 2011.
- /2/ Adams, J.; Greig, M.; McQuaid, R., Mismatch in Local Labour Markets in Central Scotland: The Neglected Role of Demand, *Urban Studies*, Vol. 39, No. 8, pp. 1399-1416, 2002.
- /3/ Cusa, A.I., Ionescu, A.M., How does education affect labour market outcomes?, *Review of Applied Socio-Economic Research*, Volume 4, Issue 2, pp. 130 pp. 130-144, 2012.
- /4/ Galasi, P., *The effect of educational mismatch on wages for 25 countries*, Budapest Working Papers On The Labour Market, BWP – 2008/8.
- /5/ Morgado A. et al., *Measuring Labour Mismatch in Europe*, Springer Science+Business Media Dordrecht, (DOI 10.1007/s11205-015-1097-0), 2015.
- /6/ Bersin, J., The Educational Mismatch, *Chief Learning Officer*, April, 2013, p.14.
- /7/ Ramos, R., Sanroma, E., Overeducation and Local Labour Markets in Spain, *Journal of Economic & Social Geography*, pp. 278-291, 2012.
- /8/ Voon, D., Miller, P.W., Undereducation and Overeducation in the Australian Labour Market, *The Economic Record*, Vol. 81, No. 255, pp. s22-s33, August 2005.
- /9/ Verhaest, D., Omev, E., Overeducation, Undereducation and Earnings: Further Evidence on the Importance of Ability and Measurement Error Bias, *J Labour Res*, No:33, pp. 76-90, 2012.
- /10/ Djurovic, G., Radovic, M., Djuraskovic, J., *Macroeconomic performance of Montenegrin economy in period 2001 – 2010*, Conference proceedings, Economic development through the prism of entrepreneurship – International Conference, Faculty of Economics Podgorica, 2011.
- /11/ Ministarstvo ekonomije, *Industrijska politika Crne Gore do 2020. godine*, nacrt, Podgorica, 2015, str. 4.
- /12/ Bozovic, Z., Djuraskovic, J., 2013, Demographic trends and human resource development in Montenegro, *Economic Themes*, Vol. 51, No. 3, ISSN 0353-8648, Nis.
- /13/ UNDP, *Nacionalni izvještaj o razvoju po mjeri čovjeka 2013*, UNDP Montenegro, Podgorica, 2013.
- /14/ Monstat, *Anketa o radnoj snazi – III kvartal 2015. godine*, Podgorica, 2015.
- /15/ Zavod za zapošljavanje, *Analiza ponude, tražnje i zapošljavanja na tržištu rada u Crnoj Gori u 2014. godini*, Podgorica, 2015, str. 15.
- /16/ Ministarstvo rada i socijalnog staranja, *Nacionalna strategija zapošljavanja i razvoja ljudskih resursa (2016-2020) – tržište rada na evropskom putu*, Podgorica, 2015, str. 19.
- /17/ Zavod za zapošljavanje, *op. cit.*, str. 16.
- /18/ Monstat, *Statistički godišnjak Crne Gore 2015*, Podgorica, 2015, str 157-160.

- /19/ Ministarstvo prosvjete, *Strategija razvoja opšteg srednjeg obrazovanja u Crnoj Gori (2015-2020)*, Podgorica, 2015, str. 7.
- /20/ Ministarstvo prosvjete i sporta, *Strategija razvoja i finansiranja visokog obrazovanja u Crnoj Gori 2011-2020*, Podgorica, 2011, str. 3.
- /21/ Ministarstvo prosvjete i sporta, *Strategija razvoja i finansiranja visokog obrazovanja u Crnoj Gori 2011-2020*, op. cit., str. 10.
- /22/ Ministarstvo prosvjete, *Strategija razvoja stručnog obrazovanja u Crnoj Gori (2015-2020)*, Podgorica, 2014, str. 7.

#### Literature

1. Allen, J.; Weert, D.E. (2007). What Do Educational Mismatches Tell Us About Skill Mismatches? A Cross-country Analysis. *European Journal of Education*. Vol. 42, No. 1, pp. 59-73.
2. Bečić, M. (2013). Obrazovna neusklađenost na tržištu rada: preobrazovanost i njezine implikacije. *Ekonomski vjesnik*. Year XXVI, No. 2/2013, pp. 621-636.
3. Bozovic, Z., Djuraskovic, J. (2013). Demographic trends and human resource development in Montenegro, *Economic Themes*, Vol. 51, No. 3, ISSN 0353-8648, Nis.
4. Cedefop (2010). The skill matching challenge - Analysing skill mismatch and policy implications. Luxembourg: Publications Office of the European Union.
5. Croce, G.; Ghignoni, (2015). E.Educational mismatch and spatial flexibility in Italian local labour markets. *Education Economics*. Vol. 23, No. 1, pp. 25-46.
6. Djurovic, G.; Radovic, M.; Djuraskovic, J. (2011). Macroeconomic performance of Montenegrin economy in period 2001 – 2010. Conference proceedings.
7. Galasi, P. (2008). The effect of educational mismatch on wages for 25 countries. *Budapest Working Papers On The Labour Market*. BWP – 2008/8.
8. Institute for Employment Research. (2015). Structural Unemployment in Selected Countries. Current reports 4/2015. Nuremberg: The Research Institute of the Federal Employment Agency.
9. Modestino, A.S. (2010). Mismatch in the Labor Market: Measuring the Supply of and Demand for Skilled Labor in New England. Research Report 10/2, November/2010, Federal Reserve Bank of Boston.
10. Morgado A. *et al.* (2015) Measuring Labour Mismatch in Europe. Springer Science+Business Media Dordrecht 2015, DOI 10.1007/s11205-015-1097-0.
11. Ordine, P.; Rose G. (2011). Educational Mismatch and Wait Unemployment. International Conference on "Human Capital and Employment in the European and Mediterranean Area" Bologna, 10-11 March 2011.
12. Sattinger, M. (2012). Assignment Models and Quantitative Mismatches, London: Expert Workshop „Skill Mismatch and Firm Dynamics: Integrating Skills with the World of Work“.
13. Schomburg, H.; Teichler, U. (2006), Higher Education and Graduate Employment in Europe - Results from Graduate Surveys from Twelve Countries, *Higher Education Dynamics*, Vol. 15, Springer, Netherlands.
14. Sloane, P.J. (2014). Overeducation, skill mismatches, and labor market outcomes for college graduates. *IZA World of Labor* 2014: 88.
15. World Economic Forum. (2015). The Global Competitiveness Report 2015–2016. Geneva: Switzerland.