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EDUCATION AND CHANGING LABOUR CONTENT –
IMPLICATIONS ON EMPLOYMENT

Employment was and remains a matter of great importance both before and during the actual economic crisis, due to the extended effects for the whole economy. We consider education, and particularly lifelong learning a key factor in improving employment even in time of crisis. Rapid changes in economic environment affecting each economic sector need constant update of skills, in addition to accumulation of knowledge. Characterized by reduced flexibility, labour market needs an increased adaptability to new conditions arising in national and global economy, and these can be achieved through education.

Keywords: education; knowledge; labour flexibility; lifelong learning; skills; occupational structure.

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ОСВІТА І ЗМІНИ У ТРУДОМІСТКОСТІ:
НАСЛІДКИ ДЛЯ ЗАЙНЯТОСТІ

У статті показано, що зайнятість була і залишається питанням великого значення як до, так і під час економічної кризи, через значний вплив на економіку в цілому. Слід вважати освіту і підвищення кваліфікації ключовим чинником збільшення зайнятості, навіть в період кризи. Швидкі зміни в економічному середовищі, що впливають на кожен галузь економіки, вимагають постійного оновлення навиків, на додаток до накопичення знань. Ринок праці, який характеризується зниженням гнучкості, повинен збільшити пристосованість до нових умов, що виникають у національній і світовій економіці, і це може бути досягнуто за допомогою освіти.

Ключові слова: освіта; знання; гнучкість трудових ресурсів; безперервне навчання; навички; структура зайнятості.

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ОБРАЗОВАНИЕ И ИЗМЕНЕНИЯ В ТРУДОЕМКОСТИ:
ПОСЛЕДСТВИЯ ДЛЯ ЗАНЯТОСТИ

В статье показано, что занятость была и остается вопросом большого значения как до, так и во время экономического кризиса, из-за большого влияния на экономику в целом. Следует считать образование и повышение квалификации ключевым фактором увеличения занятости, даже в период кризиса. Быстрые изменения в экономической среде, влияющие на каждую отрасль экономики, требуют постоянного обновления навыков, в дополнение к накоплению знаний. Характеризующийся снижением гибкости рынок труда должен увеличить приспособляемость к новым условиям, возникающим в национальной и мировой экономике, и это может быть достигнуто с помощью образования.

Ключевые слова: образование; знания; гибкость трудовых ресурсов; непрерывное обучение; навыки; структура занятости.

Introduction. The purpose of this paper is to examine the role played by education at the labour market, considering that the relationship between labour force and education is very important, especially now, when education become essential for any economy in order to increase and create value.

The correlation between education and the labour market is neither independent of conditions at the labour market, nor limited only to the worker's educational background. The distinction arises from labour's human aspect. Individuals decide

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how hard they work, and with what care. The environment affects their behaviour, including the incentives with which they are confronted (Stiglitz, J., 2002). However, in this paper we intend to highlight the influence of education on the labour market reflected in an increasing supply of well-educated workers and in the changes both qualitative and quantitative in the labour content to promote economic development. In other perspective, present education choices significantly affect labour market performance in future, assessment of labour market in terms of changes in occupational structure becomes increasingly useful.

One of 5 EU targets of the Europe 2020 Strategy is to raise the employment rate to 75% by 2020. Raising these indicators can be made through the adoption of measures to create jobs and increase labour participation. Given the ageing of the European Union population and the relatively low utilisation of labour, reforms are needed to promote skills and to create incentives to work. The response to these challenges should be training and education (European Commission, 2010).

A major benefit of education is the lower risk of unemployment at higher education levels. Education implies at least 3 basic advantages on labour market: higher wages, greater upward mobility in income and occupation and greater employment stability (Mincer, 1991). Globalization and EU integration intensified the need for labour flexibility. Labour-market flexibility is a much discussed but still vague concept. One rather narrow way that it can be precisely defined is in terms of the speed of adjustment of an economy in response to shocks (Pissarides, 1997). We consider education the most important factor for increasing flexibility.

The European Union labour market witnessed significant changes in the last period. The crisis brought some new problems like the increasing influence of low investments in education and lifelong learning. A better educated labour force could better adapt to the changing economic environment from crises periods and globalized world.

Changing labour content and occupational structure. As a result of globalization and of the increased international competition the demand for workers with low skills decreases, new jobs involve high performance, flexibility, the focus on qualities such as: high level of training, creativity, openness to change, initiative. But, not all people can gain increasingly high skills neither it is required. Only adaptation of all people to a new system, to new economy, is necessary.

In the knowledge society, productive people are strongly needed: farmers, miners, carpenters, steelworkers, drivers, vendors etc. But all these activities require a different intellect, enabling their successful inclusion in another kind of thinking, a different behaviour (Roegen, 1979). Here it is a fundamental principle of social change: any social revolution, any transition from one civilization to another requires a different kind of intellect than the one which initiated and led to the previous turning, both in science and arts, progress is the result of mutation, not mere numeric growth of what already exists.

In today's society, the share of intellectual elements in the work content carried out by a man in the production process is growing. Under these conditions creating wealth depends less on the working time and on the volume of work performed and more on the general level of science and the degree of application in production. The main element becomes his productive force, how to understand, act, dominate and

transform nature. Production involves human activity on an increasingly complex higher step.

As a creator of value, scientific, intellectual work becomes of increasing importance while scientific knowledge makes the unskilled work incorporate more knowledge than it previously had. Knowledge is the most solid form of wealth: product and its creator. The most important aspect becomes the process of learning. In knowledge societies, we will always be learning. The development of adult education takes time. It requires very deep changes in mentalities (particularly in the attitude to learning, since learning often remains associated to childhood) before reaching full legal age. Increasingly, people will be changing jobs several times in a lifetime, and education can no longer be limited to offering a single specialization, but must develop each person's ability to change course during his or her lifetime, and to cope with economic and social changes (UNESCO, 2005).

Considering these changes in jobs needing specialization during peoples' life it is useful to analyze the occupational structure during only two decades (from 2000 to 2020 forecast). It indicates some changing in the last 10 years, both in the European Union and in Romania. The most evident increases are registered already in the European Union for professionals (such as physical, mathematical and life-science engineers, health and teaching professionals) on the one hand and for technicians and associate professionals (including physical, engineering, life science, health and teaching associate professionals) on the other hand. The increase was 2–3%. The share of skilled agricultural and fishery workers is decreasing, just like craft and related trades workers (Table 1).

For Romania, the trends are broadly the same. But the most important aspect is the decrease in skilled agricultural and fishery workers between 2000 and 2010, from 42% to 24% in total employment. Even so, the share of these workers remains high compared to the European Union. Linking the share of skilled agricultural and fishery workers, technological progress and productivity performance for agriculture sector, the picture becomes alarming. These workers have to find a way to overcome the situation, moving to other sectors. Unused skills and competencies limit productivity and make workers more vulnerable to labour market changes.

Table 1. Changes in Occupational Structure, 2000-2020, the European Union and Romania

Employment by Occupation ¹	European Union			Romania		
	2000	2010	2020	2000	2010	2020
Legislators, senior officials and managers	8%	8%	9%	2%	2%	3%
Plant and machine operators and assemblers	9%	8%	8%	9%	10%	11%
Elementary occupations	9%	10%	11%	6%	12%	14%
Professionals	12%	15%	15%	6%	11%	11%
Service workers, shop and market sales workers	13%	14%	15%	7%	11%	12%
Technicians and associate professionals	14%	16%	18%	8%	9%	12%
Craft and related trades workers	16%	13%	11%	16%	15%	13%
Clerks	12%	11%	10%	4%	5%	5%
Skilled agricultural and fishery workers	7%	4%	3%	42%	24%	20%

¹ Armed forced not included

Source: Eurostat Statistics and Cedefop, 2010.

Cedefop considers that the main trends in recent period are expected to continue at least in the next decade, as a result of the decisions made in the past. A consid-

erable shift is noticed in labour demand for skilled workers implying that future jobs will become more knowledge and skills intensive. Most projected increases are expected for high-skilled non-manual occupations, such as management, professional and associate professional jobs. If in 2010 almost 40% of the people were employed at higher level (knowledge and skills intensive) jobs such as managers, professionals and technicians, in 2020 the share is expected to become more than 42% in the European Union. These changes are linked to sectoral structural changes, globalisation and technological progress which may displace many routine jobs (Cedefop, 2010).

Quantitative and qualitative changes regarding qualifications at the labour market.

Changes emerging today in terms of level of training and knowledge of human resources require a new approach, both qualitatively and quantitatively.

Quantitatively speaking the growth of training duration in parallel with the coverage of some of the increasingly large population in the educational processes is noted. Education will not only meet the training requirements for today's world, the one where the generation is living. It will have to meet the needs of the world in which the next generation will live, will have to meet requirements to create their future. New realities require a dynamic, responsible, creative, flexible, innovative and continuously adapting. The specifics of our world is that it changes faster and faster and that it puts us in front of certain original, unforeseen and even unpredictable situations.

Compulsory education is trying to provide a minimum of human capital to every individual. Some people benefit more from such education, some less, depending on the specific individual skills and efforts made by each person. Those who decide to continue their studies after compulsory education voluntarily decide to invest in the acquisition of additional human capital.

The challenge for future society is education, but not only in the old-fashioned meaning of school, but as continuing and lifelong learning education, to acquire higher skills: to check, design, create and invent.

Qualitatively speaking the change in the nature of educational processes is noted, education of all kinds decreases its descriptive and theoretical size and amplifies the applicative and methodological one.

The increase of workforce competitiveness due to globalization and the European Union integration requires permanent adaptation to the labour market demands which involves updating and expanding the knowledge and its coverage area throughout the active life of an individual at the labour market.

The specific actions to be promoted will have to follow the restructuring of the educational system, the development of new professions and professional standards in education, promoting entrepreneurship, encouraging collaboration with social partners and promotion of lifelong learning, and training of human potential and flexible workforce with skills for activities with high added value content, plus measures of flexibility of the labour market without neglecting the need to ensure social cohesion (EIR, 2006).

Education plays a central role in preparing individuals to enter the labour force, as well as equipping them with the skills to engage in lifelong learning experiences. Education, especially but not only formal education as the basic "ingredient" in cre-

ating human capital, is a precondition for future economic development, being at the same time the result of the past economic development, since raising the living standards along with the continuous economic growth and the more complex social and economic environment lead to an increase in demand for adequate human capital.

Education is essential for any economy because through education we diversify the relations between man and society, an individual having the ability to contribute as a member of society with something to counterbalance what he receives as a result of the coexistence with others. Moreover, the current economy needs well-trained workforce, in terms of globalization and technological revolution, which require the development of skills, creativity, solid knowledge and a greater sense of responsibility (Aceleanu, 2011).

Lifelong learning and employment. Appropriate qualifications and continuing education represent a primary need for greater and easier accessibility to the labour market and for limitation of social exclusion for certain groups. It is noted that the population with higher education is more favourable in terms of requirements on the labour market compared with the population with lower educational level. In Romania the unemployment rate was two times higher in 2010 than before the crisis for tertiary educated people: 2.7% in 2008 compared to 5.4% in 2010. The situation was not the same in EU. This may be due to a low correlation between the curricula and the qualifications required at the labour market.

Despite relatively high levels of enrollment, education systems in the region do not produce enough graduates with appropriate. The systems are still making the transition from teaching the basics (factual content often via rote-learning) to inculcating higher order skills such as critical thinking and problem solving. As a result, too many students graduate with diplomas but without the skills that are increasingly in demand in modern manufacturing and service industry.

Under these conditions, the problem is not the lack of demand for workers but rather a mismatch between workers' skills and employers' needs. The common aspect of this problem is that education is the solution, the only solution. In other words, delivering appropriate education and training to workers becomes the primary if not sole policy challenge if want to prevent a (further) loss of competitiveness (Mishel, 2011).

Lifelong learning has positive effects on the human existence, as well as on the society. The more educated a person is, the more adaptable and therefore more productive in the long term is that person in front of new challenges. A lifelong learning involves certain costs that are primarily and mostly supported by an individual (family), both directly and indirectly, and in a proportion different from country to country, by the society. These costs which represent the investment in human resources produce their effects in the future.

Investing in education should aim at both efficiency and equity without any trade-off between these objectives. It is vital that lifelong learning does not become the preserve of the elite few. It should be open for everyone. In Romania, lifelong learning is not a functional concept yet. As a proof, participation in education or training for population aged between 25 and 64 is very low, the second lowest in Europe after Bulgaria (but very close, 1.3% versus 1.2% in Bulgaria). The situation is more worrying as the average in the European Union is 9.1% and the Nordic coun-

tries record levels are over 20%. Table 2 puts together employment and lifelong learning for a better understanding of the situation. We separate participation in education and training (lifelong learning) for tertiary educated people in order to emphasize again the positive influence of education in having a good understanding of the new economic environment and of the need to improve the level of knowledge to gain a better stability at the labour market in the future. Countries with higher levels of participation in education or training have also higher levels of employment comparing to the European Union average (Denmark, Sweden, Finland, the Netherlands, United Kingdom). There are other countries, including Romania, that are below the European Union average for both lifelong learning and employment (Bulgaria, Romania, Hungary, Slovakia, Greece, Lithuania, Poland etc.).

In Romania participation in education and training for people with tertiary education is more than two times higher that participation for total population (age 25-64). The situation is not the same in the countries with higher lifelong learning levels. In Denmark, 32.8% of population aged 25-64 and 41.1% of population with tertiary education, also aged 25-64 is involved in lifelong learning process. This is the proof of understanding the need for continuous learning and increasing human capital value.

Table 2. Evolution of lifelong learning (age 25–64, total population and population with tertiary education) and employment rate (age 25–64), the European Union countries, 2000 and 2010

Area/Country	2000			2010		
	Participation in education and training, age 25–64	Participation in education and training for persons with tertiary education, age 25–64	Employment, age 25–64	Participation in education and training, age 25–64	Participation in education and training for persons with tertiary education, age 25–64	Employment, age 25–64 ²
European Union	7,1	14,4	68,4	9,1	16,7	70,6
Sweden	21,6	30,8	78,6	24,5	33,8	81,5
Cyprus	3,1	8,1	72,6	7,7	14,2	77,3
Netherlands	15,5	21,3	73,8	16,5	22,4	77,3
Denmark	19,4	28,0	78,4	32,8	41,1	76,8
Germany	5,2	7,4	69,0	7,7	11,9	76,2
Austria	8,3	17,3	71,0	13,7	26,0	75,6
United Kingdom	20,5	33,5	74,3	19,4	29,2	74,8
Finland	17,5	27,0	73,4	23,0	31,0	74,7
Luxembourg	4,8	11,4	69,0	13,4	19,0	74,2
Czech Republic ¹	5,6	18,9	72,7	7,5	17,0	73,5
Portugal	3,4	10,6	75,5	5,8	11,1	72,8
Slovenia ¹	8,4	18,2	70,9	16,2	28,8	72,7
France	2,8	6,9	69,6	5,0	8,4	71,5
Belgium	6,2	11,9	67,9	7,2	11,9	70,3
Estonia	6,5	12,3	69,5	10,9	18,7	70,1
Lithuania	2,8	4,8	68,5	4,0	7,4	68,8
Slovakia ¹	8,5	21,6	65,4	2,8	8,2	68,4
Bulgaria ¹	1,2	1,8	59,6	1,2	1,8	68,1
Latvia ¹	7,3	16,1	64,7	5,0	8,5	68,1
Romania	0,9	1,3	73,3	1,3	2,8	67,3
Poland ¹	4,2	13,7	64,0	5,3	13,2	67,0
Ireland ¹	5,5	16,1	70,1	6,7	10,6	66,7
Greece	1,0	1,9	64,1	3,0	6,3	66,6

The End of Table 2

Area/Country	2000			2010		
	Participation in education and training, age 25–64	Participation in education and training for persons with tertiary education, age 25–64	Employment, age 25–64	Participation in education and training, age 25–64	Participation in education and training for persons with tertiary education, age 25–64	Employment, age 25–64 ²
Spain	4,5	11,3	62,6	10,8	19,3	64,7
Italy	4,8	8,5	59,1	6,2	16,0	63,5
Hungary	2,9	7,3	62,5	2,8	4,9	63,4
Malta	4,5	16,8	55,1	6,2	16,1	59,0

¹ Participation in education and training in 2000 refers to the levels of 2002 (due to data availability).

² Countries in descending order by the employment in 2010.

Source: Eurostat Statistics.

Lifelong learning is no longer a luxury but a prerequisite for adaptation to the demands of professional, social, economic and ever-changing requirements at the labour market. Even if the role of basic (formal) education remains essential, lifelong learning, together with non-formal education, comes to personalize and develop skills closer to market and society on the one hand, closer to ability and soul of the learner, on the other.

Conclusions. Given the important role of the human factor in the socioeconomic development of Romania, but also its role in the knowledge society, Romania integration into developed countries can be achieved and sustained only by developing a modern and flexible labour market and by transforming the educational process into a driving factor of other production factors. Education should be judged according to the favourability and requirements of the knowledge society which means that we must take into account the rapid changes that make each sector to need constant updating of skills, in addition to the accumulation of knowledge and new skills.

Lifelong learning plays a key role in achieving the European Union's economic and social objectives set by Lisbon and Europe 2020 Strategies. The major challenge remains to ensure the right balance between the capacity of lifelong learning to adapt skills and competencies of workers of all categories to the current labour market needs, on the one hand, and enhancing social inclusion and personal development, on the other.

Under the globalization and the European Union integration, the labour market in Romania has to answer the need of the companies to constantly adapt to the requirements to increase competitiveness. In this respect, employment policies must include the results of constant collaboration with the business environment, representatives of workers and professional associations, to effectively regulate the labour relations.

The increase of adaptability of workers and businesses to the current conditions is a necessity, given the process of structural changes at the labour market in Romania. By ensuring the increase of adaptability, the labour market capacity to anticipate and absorb economic and social changes will increase as well.

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