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OPINION OF SERBIAN STUDENTS REGARDING KNOWLEDGE ECONOMY¹

Mišljenje studenata iz Srbije o ekonomiji znanja

Abstract

Global economic crisis has shown that only countries with high rate of innovation can preserve high levels of economic growth in an unstable environment. Furthermore, it has been proven that nation's and the world's future economic growth will stem from industries that rely on knowledge, new ideas and innovation. Therefore, creation of a knowledge economy became a global challenge and a primary goal of countries around the world. The authors have conducted a survey of 324 undergraduate and postgraduate students in Serbia in order to grasp their opinion regarding knowledge economy. The results have shown that concept of a knowledge economy is not well established and understood in Serbia and that students consider the knowledge as important feature but not valued enough. These findings present a big policy challenge since the future of a country strongly depends on the knowledge of generations to come. The paper will provide a set of recommendations on how Serbia could bridge this gap between global challenges and its young generations. Experiences and the recommendations from this case study might be of use for other countries in transition.

Key words: *knowledge economy, sustainable development, transition countries, educational system*

Sažetak

Svetska ekonomska kriza je ukazala na činjenicu da jedino zemlje sa visokom stopom inovacija mogu da sačuvaju visok nivo ekonomskog rasta u nestabilnom okruženju. Osim toga, dokazano je da će se svetski ekonomski rast bazirati na industrijama koje se oslanjaju na znanje, nove ideje i inovacije. Dakle, stvaranje ekonomije znanja je postalo globalni izazov i primarni cilj zemalja širom sveta. Autori su sproveli anketu u kojoj su učestvovala 324 ispitanika, studenti osnovnih i postdiplomskih studija u Srbiji, kako bi saznali njihova razmišljanja o ekonomiji znanja. Rezultati su pokazali da koncept ekonomije znanja nije dobro uspostavljen i shvaćen u Srbiji i da studenti smatraju da znanje ima izuzetan značaj, ali da nije dovoljno vrednovano u Srbiji. Ovi rezultati predstavljaju veliki izazov za društvo u celini, jer budućnost države zavisi od znanja generacija koje dolaze. U radu će biti iznet i niz preporuka o tome kako bi Srbija mogla da premosti ovaj jaz između globalnih izazova i njenih mladih generacija. Iskustva i preporuke iz ove studije slučaja mogu biti od koristi i za druge zemlje u tranziciji.

Cljučne reči: *ekonomija znanja, obrazovni sistem, održivi razvoj, zemlje u tranziciji*

Introduction

Govindan defined globalization as a "process of deepening economic integration, increasing economic openness and growing economic interdependence between countries in the world" [8, p. 5]. Several decades ago the process of globalization was started and today we all live in the

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globalized world, with no boundaries for trade, with increase in the intensity of competition, with free capital transfers and with 'time' becoming a key aspect of value [9]. Even though there were other periods in which we observed similar patterns, the pace and the extent of the current phase of globalization is without precedent [9]. The main characteristic of the recent phase of globalization is that FDI and capital flows have grown more rapidly than trade flows, implying that changes in the economic systems will be much wider and that these systems will have greater level of interdependence.

Globalization created a greater level of interconnectivity between businesses and economies of individual countries. Furthermore, in last two decades technological advances have led to a greater integration of all players in the global market allowing them greater availability of information and their faster transfer all over the globe. The global economic crisis, we have all witnessed, has proven that we can no longer talk about national economies due to the huge level of interdependence of individual markets and players on them. *Ramlee et al.* highlight that information and communication technology had a huge impact on the speeding up of the process of globalization but that it also led to the emergence of knowledge economy [15]. With an advent of globalization, knowledge became an international good and a key factor for long-term sustainable development [17]. According to *Sheehan* fundamental transformation of the global economy is connected to the knowledge economy [17]. *Brinkley* states that development of the knowledge economy led to a number of changes – greater level in flow of ideas, technology transfer, increase in the level of innovative activity, specialization and need for highly skilled workforce – which created even closer global linkages [2].

The knowledge economy has emerged from increase in knowledge intensity of economic activities and increase in the globalization of economic affairs [9]. Decades ago, economic development was primarily based on the exploitation of natural resources and physical labor in the agriculture. With the industrial revolution, financial capital became the most important resource. Over time, physical labor and financial resources gradually started to lose importance, while on the other hand the intangible

factors such as information, knowledge and skills gain in their importance. Through the process of globalization developed countries have shifted their economies from orientation on physical resources because of their scarceness and limits of their use. *Florida* and *Kenney* stated that capitalism is undergoing a huge transformation from mass production based on human labour towards productivity and economic growth based on knowledge [6]. *Sirbu et al* build on their conclusion and further state that growth in economic importance of information, technology and human capital has determined “the switch from resource-based economy to one that is predominantly knowledge based” [19]. *Sigismund* explained that this shift was a logical step since knowledge is the only resource which cannot be spent and can be easily duplicated and upgraded with almost no cost [18]. Therefore, knowledge and innovation as intangible assets became major tools for long term development of businesses and countries [3], [6], [9], [23].

Some define the knowledge economy as production of goods and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally rapid obsolescence [9]. Characteristics which differentiate knowledge economy from previous types of economies include a greater reliance on intellectual capabilities than on physical inputs or natural resources, combined with efforts to integrate improvements at every stage of the production process, from the R&D laboratory to the factory floor and the interface with customers [14]. On the other hand, *Sirbu et al.* recognized that in knowledge-based economy economic activities are based on intangible resources, that there is no need for large quantities of physical resources, that knowledge is key for survival of businesses, that there is continuous growth of services share within the economy as well as increase in a number of small enterprises [19].

In 1962 *Fritz Machlup* presented interpretation of the knowledge economy that emphasizes the significance of production, distribution and use of knowledge for economic growth [11]. At that point in time, for many, this was unthinkable. Increase in the level of competition in global markets requires from companies to endorse creativity and innovation as an integral part of knowledge that is the only non-scarce resource. Global market competition is

pushing society to reject certain traditional ways of doing business and adopt a creative work environment where employees exchange ideas and knowledge, and contribute to creating a society based on knowledge. *Houghton* and *Sheehan* outlined that price competitiveness is no longer a key element for success [9]. They explain that innovation and knowledge have become the bearers of competitive advantage [9]. *Papulova* and *Mokros* said that constantly investing in innovations, knowledge and managing skills is the core competitive advantage [13]. *Jhamb* and *Kaushik* agree with these two statements and they further argue that knowledge is a key resource both for companies and states for creation of their competitive advantages [10]. This leads towards high demand for productive, efficient and innovative workers and further results in the increase in importance of knowledge. It has gone a long way for knowledge as being one of the most important factors of production according to *Drucker* to become a primary competitive factor of businesses as *Velmurugan* stated [4], [22].

Throughout time knowledge became a determinant of standard of living, it became hallmark of technology transfer and a prerequisite for the long-term sustainable growth. *Sirbu et al.* wrote that sustainable development encourages society to introduce new activities and more efficiently manage resources and improve the quality of life [19]. In the long term this approach leads towards creation of a stronger economy. Today's global society is based on knowledge, and one of the main challenges society is facing today is how to define, measure and improve the process of knowledge management. In order to fulfill the concept of sustainable development with a balanced social development, it is necessary to introduce new values based on knowledge, skills and creativity. Today's society is driven by knowledge, today's workforce based on active contribution of every individual, has successfully replaced a passive army of unmotivated and unconcerned workers and knowledge management became a basic framework of modern businesses.

Nowadays, disparities in the productivity and growth of different countries have far less to do with scarceness of their resources and have much more to do with the quality of human capital and investments in it

[3]. Knowledge economy is a primary factor determining the standard of living, especially in developing countries, where knowledge is necessity for development unlike in developed countries [23]. But *Sheehan* points out that the fruits of development after Industrial Revolution went into hands of economies which could apply and expand the knowledge [17]. The main concern of developing countries is that they have not stabilized their economies internally and that therefore they will not be able to exploit and benefit from the creation of knowledge economies throughout world [15]. For those reasons there is a legitimate fear among developing countries that the current trend of the development of knowledge economies across the globe will strengthen even more the position of developed countries. On the other hand, *Uppenberg* states that both developed and developing countries can benefit from cross border knowledge spillovers [21]. He argues that developing countries can benefit more and therefore achieve higher growth from the adoption of the best practice and knowledge due to the fact that advanced economies are more dependent on R&D and knowledge creation [21]. Furthermore, *Michailova* and *Sidorova* explain that transition countries are mainly suffering from scarce resources and that therefore it would be reasonable for them to put strong emphasizes on knowledge [12]. Knowledge as a long-term asset is great chance for these countries to achieve sustainable growth and competitive advantage.

Globalization and knowledge economy bring many challenges, especially for developing countries. With an aim to sustain in a modern and globalized world, countries must recognize the advantages of the knowledge economy and try to exploit them. Human capital could be core for this aim, so *Ramlee et al.* argue that knowledge economy, together with globalization, put strong human capital to the forefront and make it critical for future development of countries [15]. Development of the human capital is one of the most important elements of a learning society in knowledge economies. *Jhamb* and *Kaushik* define "knowledge worker", focused on learning, as a product of knowledge economy [10]. Creation of the knowledge worker begins in the educational system of each country. Importance of the education was recognized by *Schultz* who explained that education is an investment in human capital which

will result in economic progress and development [16]. *Houghton* and *Sheehan* recommendation for education go in line with the previous conclusion and they outline the need to focus on the development of human capital [17]. This development of human capital implies: comprehensive formal education, life-long learning and implementation of market feedback on labor supply and demand [17]. In his book “Knowledge as a global public good” *Stiglitz* states that education has the highest importance for the development of knowledge economy in developing countries since education determines the speed of the development and level to which these countries can help themselves to access the positive influence of knowledge [20]. *Azman* and *Ahmed* go further and state that education is the main prerequisite for sustainable economic growth and development [1]. The future workers, which come out as graduate students, have to possess applicable knowledge, skills, they have to have specialized expertise and be productive and innovative [15].

Jhamb and *Kaushik* state that one of the biggest challenges of Indian economy is how to guide and motivate young manpower [10]. This same challenge applies to all transition countries and respectively to Serbia. Unemployment rates are high worldwide, but youth unemployment in the Balkans is almost four times the EU average. In most countries the education system is considered the main culprit of unemployment. According to official statistics in 2011, Statistical Office of the Republic of Serbia, 48.8% of young people (up to 25 years) in Serbia is unemployed. *Sheehan* thinks that many governments see monetary stability as their own success and they neglect the fact that they will not be able to generate further growth without sound educational system and knowledge workers [17].

We have conducted a study to determine two important issues: (1) to assess if students in higher learning institutions in Serbia understand concepts of globalization and knowledge economy and to find out what skills they consider necessary for a successful career in the knowledge economy; and (2) to determine how students value their educational experience in terms of the degree to which it prepares them to meet needs of the knowledge economy and the globalized world.

Methodology

We used a survey research to conduct the study. Survey research is designed to examine characteristics of a sample or population on prescribed variables and is dependent on instrumentation for observation and measurement. In our study, the population consisted of undergraduate and graduate students since we believe that young people today are the most dynamic social group and bearers of all relevant changes in the society. Further, students can be viewed as the most meaningful subgroup within the group of young people [5]. In fact, they represent a knowledge-intensive community in which a large proportion of members is involved in the production and reproduction of knowledge. When they penetrate conventional organizations, they can become agents of change for their industry and for the economy as whole [3].

Our sample included students from five different faculties in Serbia. Three faculties belong to University of Belgrade, one to University Singidunum and the last one to University of Kragujevac. University of Belgrade and University Singidunum are located in Serbia’s capital, Belgrade, while the third University is located in Kragujevac. The sample was random and it included 324 students: 19 students from School of Medicine (University of Kragujevac); 255 economics students attending Faculty of Economics, Finance and Administration (University Singidunum) and School of Economics (University of Belgrade); 18 students from School of Dental Medicine (University of Kragujevac); 31 students from the Faculty of Political Sciences (University of Belgrade) and 1 student from School of Electrical Engineering (University of Belgrade).

The majority of the surveyed students (286 students — 88% of the sample) are undergraduate students while the remaining students are graduate (master) students (38 students — 12% of the sample).

When constructing a survey questionnaire, we used different studies, articles and literature relating to globalization and knowledge economy. In particular, when selecting relevant questions we used as a model a survey developed by *Ramlee et al.* and then we adjusted it to fit more the Serbian reality and our research needs [15].

The survey had three parts. After a short purpose statement with directions, the first part of the survey aimed at collecting relevant demographic data (gender, school which the student is attending and foreign language competency).

The second part of the survey attempted to assess if students understand what globalization and knowledge economy are. Further, this part of the survey tried to determine what kind of knowledge and skills students deemed relevant (or irrelevant) for a successful career in the globalized world and knowledge economy. The research questions in this part included:

1. Does globalization bring more job opportunities?
2. What is important for the process of creation of knowledge economy?
3. Which attributes (in terms of knowledge and skills) are important for building a successful career in a knowledge economy?

The last part of the research tried to determine a respondent's assessment of his/her educational readiness for challenges of knowledge economy. We also tried to determine respondents' perception related to importance of knowledge in Serbia today. In that vein, questions tried to establish if a respondent thinks that Serbian employers value academic knowledge and skills that students gained through formal education. Finally we asked students to suggest ways for universities to improve educational preparation of Serbian students for globalization and knowledge economy. Thus, the third part of the survey included the following questions:

1. Do respondents think that the knowledge they gained at the university has prepared them for future work challenges?
2. Do employers in Serbia value knowledge and can good education secure a job after the graduation?
3. How should we change the Serbian undergraduate and graduate education systems so that the students gain the necessary knowledge during their studies as to be able to find successful employment in the globalized knowledge-based economy?

The last question was open-ended.

Results

The first part of the study gave an overview of characteristics of the sample (gender, academic information and language competency). The respondents were 44.75% male and 55.25% female. The majority of students are studying Economics (78.7%), the rest are from Faculty of Political Sciences (9.57%), then from School of Medicine (5.86%), School of Dental Medicine (5.55%) and from School of Electrical Engineering (0.31%).

The participants were also asked about their knowledge of other languages besides their mother tongue. Most of the students assessed their knowledge of English language as excellent (45.65%) or good (32.92%). Only few of them think that their knowledge of English language is poor (3.1%). Other most common languages that the participants speak are Spanish (50%), German (48%), French (46%), Russian (41,6%) and Italian (34%). However, their competencies in these languages vary significantly. In fact, most of the participants assessed their knowledge of foreign languages other than English as average or poor. Very few of the respondents have written that they speak some other languages besides those mentioned above. Those other languages are: Hungarian, Ukrainian, Arabic, Greek, Dutch and Japanese. Thus we can conclude that most of Serbian students are fluent in English and that in addition they have basic knowledge of at least one more foreign language. Table 1 presents gender, academic information and foreign language competency of the respondents.

The second part of the study was focused on globalization, knowledge economy and skills necessary to succeed in the knowledge economy. One of key aspects of globalization is that competition is becoming increasingly global. The ability to compete head-to-head in all major markets is today essential for success [9]. Thus, we wanted to determine if respondents believe that globalization brings to them more job opportunities. Majority of the respondents believe that globalization brings more opportunities and they make 80.12% of the sample. The other 19.88% think that globalization is in fact decreasing their future job opportunities since it increases competition.

If we accept that today's society is driven by knowledge and that knowledge is the key determinant of comparative advantage of each individual, firm and/or country, then we need to determine which factors and processes contribute to development of the knowledge economy. We all witness to the acceleration of speed at which knowledge is created and accumulated today and to an unprecedented speed at which it depreciates in terms of its economic relevance and value [3]. Thus, respondents were asked to identify processes that are the most important for creation of the knowledge economy in Serbia.

The respondents were given seven factors and processes which, according to the literature, contribute

most to development of the knowledge economy. The respondents were then asked to rate these factors and processes according to their importance for creation of the knowledge economy. The factors and processes had to be listed from the most important one (should have been listed as 1st) to the least important one (which should have been listed as 7th). Here is how respondents listed factors/processes in terms of their importance for creation of knowledge economy (the first one being the most important one):

1. Investment in human capital
2. Innovations and creativity
3. Transfer of knowledge

Table 1: Demographic, language and academic structure of the respondents

	Items	Frequency (n=324)	Percentage (%)
Gender	Male	154	44.75
	Female	179	55.25
Faculty	Economics	255	78.7
	Medicine	19	5.86
	Political Sciences	31	9.57
	Dentistry	18	5.55
	Engineering	1	0.31
Level	Undergraduate	286	88.27
	Master	38	11.72
Language Proficiency			
English	Excellent	147	45.65
	Good	106	32.91
	Average	59	18.32
	Poor	10	3.1
French	Excellent	12	8.05
	Good	20	13.42
	Average	53	35.57
	Poor	64	42.95
German	Excellent	9	5.77
	Good	24	15.85
	Average	50	32.05
	Poor	73	46.78
Spanish	Excellent	13	7.97
	Good	26	15.95
	Average	66	40.49
	Poor	58	35.58
Italian	Excellent	9	5.76
	Good	24	15.38
	Average	50	32.05
	Poor	73	46.79
Russian	Excellent	11	8.15
	Good	16	11.85
	Average	33	24.44
	Poor	75	55.55

4. IT
5. Economic growth
6. Globalization
7. Sustainable development

Many authors would agree that intangible capital, as the key comparative advantage, largely depends on investments geared to production and dissemination of knowledge (education, R&D) and investments geared to sustaining the physical state of human capital (health) [3]. Both types of investments can be categorized as investments in human capital. Innovation coupled with systematic and wise acceptance of best practices is becoming critically important. We can also agree that new technologies allow for diffusion of information and almost instant transfer of knowledge. On the other hand, it came as a surprise that the respondents rated “sustainable development” as the least important one. In our opinion, the key reason for a paradigm shift from a physical resource-based to a knowledge-based economy is the fact that the former was not sustainable in medium-run due to depletion of physical resources.

The last question in the second part of the survey aimed at determining which attributes respondents deem important for building a successful career in the knowledge based economy. Respondents were given 13 different attributes that are important for building a successful career and then were asked to mark the ones that matter to them and that in their opinion affect their future career. Table 2 presents all the attributes ranked by importance from the most to the least important ones.

As shown, most respondents agree that foreign

language competency, academic knowledge and ability to implement academic knowledge into practice are key attributes of knowledge workers. These results are rather different from results shown in a similar study in Malaysia where students stated that three most important attributes of knowledge workers are IT literacy, understanding current trends and certain personal attributes like being hard-working, disciplined and trained [15].

Finally, the third part of the study tried to determine respondents’ assessment of their educational readiness for challenges of knowledge economy and respondents’ perception of importance of knowledge in Serbia today. According to our survey, majority of students think that their educational experience at Serbian high educational institutions has prepared them to some extent for their future careers (77.47% of the surveyed students). Only 12.96% believe that undergraduate and graduate studies in Serbia prepared them for challenges that they will face in their future job. We can say that similar to the students in the Malaysian study [15], the Serbian students do not feel confident that they are able to face globalization and the knowledge economy.

The majority of the respondents also think that knowledge is not valued enough by Serbian employers. They claim that good education is necessary but not sufficient to secure a job after graduation. When prompted to justify their answers, the respondents offered different explanations. The answers gravitated towards explanation that today in Serbia, due to corruption, political and other connections are the most important factor for a successful job search.

Table 2: Ranking of attributes which contribute to successful career in knowledge-based economy

Rank	Attributes	No. of marks
1	Foreign language competency	160
2	Ability to implement gained knowledge into practice	154
3	Academic knowledge	132
4	Creativity and innovation	125
5	Communication skills	116
6	Discipline and dedication to work	102
7	Team work	94
8	Understanding current economic trends	88
9	IT literacy	88
10	Determination	87
11	Ability to adapt to changes	72
12	Willingness to risk	63
13	Independence	21

At the very end of the survey, we asked students about ways in which universities could better fulfill their role and prepare them for the new economy. We wanted to know how Serbia should change its high education system to allow students to gain the necessary knowledge and skills during their studies so that they are able to find successful employment in a globalized knowledge based economy. The interviewees were given a wide range of suggested solutions for improvement of the education system, and they were asked to mark the ones that they think are the most important. They could also write an additional suggestion since the question was open-ended. Here are the results:

Table 3 shows that Serbian students believe that the most important factors which can improve the current state of the Serbian education system are: a greater emphasis on practical knowledge (79.13% respondents who answered the question), a greater support from the state in terms of investments in education (49.61%), reducing level of corruption and bribery in the society (42.91%) and establishing international cooperation with foreign universities (40.55%). Students also believe that working in smaller groups and foreign language competency can substantially improve their educational experience.

Conclusion

In today's globalized world, with no boundaries for trade, with increase in the intensity of competition and with free capital transfers, the source of each country's comparative advantage is knowledge. Knowledge is the key factor for

long-term sustainable development. Over time, developed countries have shifted their economies from orientation on physical resources which are scarce and limited to intangible factors such as information, knowledge and skills which cannot be spent and which can be easily duplicated and upgraded with almost no cost. Innovation and knowledge have become the bearers of competitive advantage not only for countries, but also for individuals and firms. This leads towards high demand for productive, efficient and innovative workers.

There is a real danger that developing countries may not be able to exploit and benefit from the creation of knowledge economies due to their internal economic and social imbalances. On the other hand, developing countries have scarce resources and thus, knowledge economy represents an opportunity for them to catch up more quickly and more smoothly. In particular, they can benefit from the adoption of the best practice and knowledge created and tested in developed countries which makes developing countries less dependent on R&D.

Development of the human capital is one of the most important elements of a learning society in knowledge economies. This development of human capital implies: comprehensive formal education, life-long learning and implementation of market feedback on labor supply and demand [9]. *Stiglitz* states that education has the highest importance for the development of knowledge economy in developing countries since education determines the speed of the development and level to which these countries can help themselves to access the positive influence of knowledge [20].

Table 3: How should we change the Serbian education system?

Items	Frequency (n=254)	Percentage (%)
More investment in education	126	49.61%
Greater emphasis on practical knowledge	201	79.13%
Raising awareness on the significance and value of knowledge	66	25.98%
Greater emphasis on foreign languages	93	36.61%
Better equipment at the University	58	22.83%
Enabling work on scientific research projects	89	35.04%
Working in small groups	99	38.98%
Establishing international cooperation with foreign universities	103	40.55%
Using foreign and up-to-date literature	78	30.71%
Involving employers in the education process	81	31.89%
Reducing the level of corruption and bribery	109	42.91%
Else	7	2.76%

Young people are bearers of all relevant changes in the society. They should be in focus of each country's economic policy since supporting them means securing long-term effects on manpower. At the same time, unemployment rates are high worldwide. One study which examined the impact of the recession on Britain's knowledge economy has shown that recessions (including the last one which started in 2008) are especially harsh times for young people [2]. However, although new graduates can do less well during the recession, the young without higher level qualifications do much worse. The study has shown that employment of knowledge workers went up and employment for some non-knowledge workers went down in 2008 in Britain. The biggest fall was among unskilled and administrative workers, while the biggest job gains were in personal services and in managerial services [2].

Youth unemployment in the Balkans is almost four times the EU average. In particular, Serbia had difficult periods in its recent past which affected the country's economy and its competitiveness. Knowledge Economy Index is a derivative of World Bank's Knowledge Assessment Model (KAM) which is calculated for 146 countries on the average score of all four pillars related to the knowledge economy – Economic incentive and institutional regime, Education, Innovation and Information and Communication Technology. Serbia holds 49th position in Knowledge Economy Index for 2012 with score of 6.02. Comparing to 144th position from 2000 KAM report, that is an advancement of 95 positions. However, there is no reason to be satisfied. Due to its political and economic setbacks in the 1990s, Serbia is below South-East Europe region average of 6.60 left behind by eight countries of the region and better only than Macedonia, Albania and Bosnia and Herzegovina.

The best way for Serbia to speed up its development is to focus on its young manpower by substantially improving its educational system. Our survey provides the following suggestions:

1. Serbia should rethink its educational strategy and try to take into account the labor market demand for knowledge workers. Then, it should allocate more meaningful resources to develop capacity of

its educational institutions. For example, its universities should possess all relevant and modern IT equipment; resources should be allocated to support international or regional research projects which could facilitate exchange and transfer of knowledge; each Serbian university should have an access to the latest foreign scientific literature; etc. Finally, the most important goal should be to fight corruption as to minimize negative selection and labor market distortions.

2. Serbian educational institutions should modernize their programs. In the today's world generic learning abilities (learning how to learn, knowing what we do not know, etc.) are becoming more important than mastering a specific repertoire of technical skills [3]. Developing these skills allows us to understand a broader picture, to become familiar with new trends and to anticipate new requirements that we will face. Some additional skills also allow both students and professors to be tuned in an intensive life-long learning process. Foreign language competency, IT literacy, good communication skills and ability to work in teams foster our capacity to keep up with continuous changes and to exchange our experience internationally in an efficient way.
3. Finally, a stronger link should be created between educational institutions and employers. Universities should try to develop different types of cooperation with private sector which can make their study programs more practical and relevant for students' future employment.

With implementation of suggestions and recommendations from this paper Serbia would make significant steps towards creation of knowledge economy. Any further research regarding implications and conclusions of this paper would provide additional support for the necessary shift which needs to happen in educational system of Serbia.

References

1. Azman, N., & Ahmad, A. R. (2006). History, trends and significant development of adult education in Malaysia. *Journal of Historical Studies*, 7(2), 66-82.

2. Brinkley, I. (2009). *Recession and the knowledge economy*. London: The Work Foundation.
3. David, P. A., & Foray, D. (2002). An introduction to the economy of the knowledge society. *International Social Science Journal*, 54(171), 9-23.
4. Drucker, P. (1990). *The new realities*. London: Mandarin.
5. Dulcic, Z., Visic, M. M., & Silic, I. (2012, April). Values and the value system of the youth using the example of student population – comparison of Germany and Croatia. *Proceedings from the 1st International Scientific Conference Economic and Social Development*, Frankfurt am Main, Germany.
6. Florida, R., & Kenney, M. (1991). The new age of capitalism: Innovation-mediated production. *Futures*, 25(6), 637-652.
7. Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. New York: Longman.
8. Govindan, K. (2000, November). *Globalization, K-economy and the virtual state*. Paper presented at the 12th National real Estate conference. Kuala Lumpur.
9. Houghton, J., & Sheehan, P. (2000). *A primer on the knowledge economy*. Melbourne: Centre for Strategic Economic Studies, Victoria University.
10. Jhamb, R. K., & Kaushik, S. (2008). Changing dimensions and growth of knowledge based economy in India. *Journal of Academy of Business and Economics*, 8(3), 163-168.
11. Machlup, F. (1962). *The production and distribution of knowledge in United States*. Princeton, NJ: Princeton University Press.
12. Michailova, S., & Sidorova, E. (2010). Knowledge management in transition economies: selected key issues and possible research avenues. *Organization and Markets in Emerging Economies*, 1(1), 68-81.
13. Papulova, Z., & Mokros, M. (2007). *Importance of managerial skills and knowledge management for small entrepreneurs*. E-learning: Prague.
14. Powell, W. W., & Snellman, K. (2004). The knowledge economy. *Annual Review Sociology*, 30, 199-220.
15. Ramlee, M., Karim, F., Yasin, R. M., Azman, N., Yamat, H., Muhammad, A. W., & Takriff, S. (2008). K-economy and globalization – are our students ready?. *Jurnal Personalita Pelajar Bil*, 11, 1-23.
16. Schultz, T.W. (1963). *The economic value of education*. New York: Columbia University Press.
17. Sheehan, P. (1999). *The global knowledge economy: Challenges for China's development* (CSES Working Paper 15). Centre for Strategic Economic Studies, Victoria University.
18. Sigismund, C. (1995). The new knowledge organization. *SRI International*, 11.
19. Sirbu, M., Doinea, O., & Mangra, M. G. (2009). Knowledge based economy – The basis for insuring a sustainable development. *Annals of the University of Petrosani, Economics*, 9(4), 272-232.
20. Stiglitz, J. E. (1999). Knowledge as a global public good. In I. Kaul, I. Grunberg, & M. A. Stem (Eds.), *Global public goods: International co-operation in the 21st century* (pp. 308-325). Oxford, NY: Oxford University Press.
21. Uppenberg, K. (2009). *The knowledge economy in Europe: A review of the 2009 EIB Conference in Economics and Finance*. Luxembourg: European Investment Bank.
22. Velmurugan, M. S. (2010). Revisiting accounting in the knowledge-based economy. *Journal of the Knowledge Economy*, 1, 318-332.
23. Zaharia, C., Tudorescu, N., Zaharia, I., & Zaharia, G. C. (2011). The evolving process of the knowledge-oriented economy. *Economics, Management and Financial Markets*, 6(3), 160-165.



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