

KNOWLEDGE AND EDUCATION IN THE FUNCTION OF FASTER ECONOMIC DEVELOPMENT OF BOSNIA AND HERZEGOVINA

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Abstract: *Insufficient economic development of some countries can be result of insufficient financial investments in knowledge and education. One of those countries is Bosnia and Herzegovina. Authorities at all levels have appropriated minimal funds for these purposes so far. The importance of knowledge and education in economic development can be detected on the example of Turkey that, thanks to the adequate approach in these areas, has completely repaid its debt to the IMF and developed the economy further so that Turkey is one of the most developed countries in this region today. How we should solve the problem of insufficient economic development of Bosnia and Herzegovina? The answer is very simple. The knowledge that Bosnia and Herzegovina has at its disposal should be treated with respect, using it for development of our country. However, we have had just opposite experience so far. Namely, local youth with specific knowledge highly demanded in Bosnia and abroad have been disregarded easily, and young population continues leaving the country without an intention to come back.*

Keywords: *knowledge, education, economic development*

1. Introduction

At a time when many countries have major economic and social problems, the question arises of how to solve these problems in view of all the deficiencies they have in their socio-political and economic development. Nor did these problems bypass Bosnia and Herzegovina. The development of a society depends in part on the financial investment in one of the most important resources available to Bosnia and Herzegovina, which is the knowledge available to its inhabitants, among which the most educated are young educated people. These people, unfortunately, go abroad every day for various reasons. Given that they are one of the key factors in the development of the economy and society, much more attention should be paid to their understanding and investment in order to retain them in Bosnia and Herzegovina. In this paper we will make a brief analysis of the current situation in some of the countries that have paid sufficient attention to fostering one of the most important resources available to those countries, namely knowledge and education. Examples will be presented of some countries in the region that based their socio-economic development on greater financial support and greater investment in knowledge and education, such as the Republic of Turkey. Also, the importance of knowledge, education and scientific research will be presented in Bosnia and Herzegovina as well as in the countries of the region, Southeast Europe and the world as a whole.

2. The importance of knowledge and education in the economic development of society

Today, there is no sustainable and accelerated economic development without quality knowledge and education. Modern economics and economic development are

based on continuous acquisition of knowledge and constant investment in intellectual capital. Each country bases its economic development on knowledge and education, which have always been one of the basic instruments for the development of national economies. Today is characterized by daily changes, especially in terms of economic development. It cannot be said that some countries are independent from other countries, given that in the modern conditions of globalization, knowledge and education are something that is valued and valued in the global market. Knowledge and education depend in particular on the amount of investment supported by each state through budgetary allocations to science and research. How much money is allocated from the budget of individual countries to knowledge and education is best reflected in the speed of economic development. Since economic development is based on state incentives for innovation and scientific research, as they are a key factor in the development of a particular society and the economy as a whole. Unless sufficient attention is paid to innovation and research, it is not possible to expect faster development of the entire community. Throughout history, we have witnessed that countries that were politically and economically isolated from the rest of the world had slowed or stopped economic development. The result of this isolation is the economic and technological backwardness of both the economy and the population in every segment of economic and social life. Examples of countries that have been isolated from the rest of the world for various reasons (mostly political in nature) are interesting. In these countries, economic development was almost halted, which had a negative impact on the standard of living of the population. The most recent examples from recent history are Albania during the reign of dictator Enver Hoxha, Cuba during the reign of Fidel Castro, North Korea under the rule of

today's leader Kim and his predecessors from the same family. The reason for the economic backwardness of these countries is primarily due to economic sanctions and political isolation from the rest of the world, and especially to the large economically and politically powerful countries from which the US stands out. Also, the Balkan countries, among which Bosnia and Herzegovina is particularly prominent, were not left behind in the economic and social development of the 1990s when war was raging in these regions. Global trends in the 1990s have bypassed those economically, information, media, transport and technology lagging behind other countries that have been keeping pace with global change and adapting to global trends, especially investing in knowledge and education. . Bosnia and Herzegovina has not yet completed the transition, while privatization has been unfairly implemented and reforms in many areas of economic and social life have not been fully implemented. All of the above has a negative impact on the faster economic development of Bosnia and Herzegovina and the growing economic backwardness in other countries of Europe and the world.

3. Accelerated economic development of the Republic of Turkey through investment in knowledge and education

Differences in knowledge and its technological application are becoming major factors that separate developed countries from underdeveloped, rich from poor, high living standards from low.

A country is said to have sustainable economic growth and development if it has a GDP growth of at least 5% or more over a period of at least three years. The best example of accelerated and sustainable economic development is Turkey. By investing in education and knowledge, Turkey has dramatically increased the

number of schools, colleges, universities and students, and this has had very positive effects on the economic growth and development of the country and its economic and political roles in the world.

Along with investing in education, Turkey's economic growth, development and prosperity have started. It is the country that has invested most in education in recent years and during this period Turkey has experienced economic expansion, has repaid all its debt to the IMF and is developing in all fields. Turkey is one of the countries in the world with the highest annual economic growth, and Turkey is the best example of the hypothesis that investing in education and knowledge is the most profitable investment, bringing future economic growth, prosperity and prosperity at all levels. There are sufficient resources, resources and modern technology in the global market, but there are fewer and fewer people trained and prepared to work and operate in the open market. This is why they call this century a "life of knowledge", in which the "global passport" will receive only quality and innovative staff. Despite this fact, little has been done in Bosnia and Herzegovina to reform the curriculum, so that teaching is mostly done as it was at the beginning of the last century. Existing education is based more on information and less on research and facts, instead of teamwork, individual work is stimulated, instead of multimedia lessons, outdated textbooks etc. are used. Modern times and contemporary trends are generating new occupations, which are looking for a whole new way of training. The education system is not adapted to new structures in society, world trends and the ways in which knowledge is acquired today. Bosnia and Herzegovina has a chance for accelerated and sustainable economic development if it invests much more in education and science in the future and adjusts its educational programs to the needs of the labor market. The best example is the Republic of Turkey, while in Bosnia and Herzegovina

the key problem is unemployment and an inadequate education system, that is, its incompatibility with the labor market. The government and its bodies should focus on training to the required knowledge and skills as well as adopting an adequate education strategy and policy at all levels. Attention should be paid to the revision of school curricula in order to adapt the acquired skills and knowledge to market requirements. The unity, cooperation and integration of educational institutions with employers is necessary and necessary in order to start the economy, employment, accelerated economic development and progress (Bahtić S., 2018).

4. Knowledge - a resource of the new age

A knowledge-based economy is a modern economy, where the value of goods and services produced and realized is created on the basis of applied knowledge, which will say that the exploitation of knowledge plays a dominant role in the creation of material goods and social wealth. That is why it is said that today's world has entered a new age - the age of knowledge. The basic infrastructural elements for prosperity in the knowledge economy are: knowledge as a source of economic development, innovation - as the most valuable source of creating new value and creating change. The age of knowledge lays the foundations for a new economic order and the chance to create a new future, which is increasingly reliant on the value of human potential. The New Economic Age is defined by many scientists, one of them is Peter Drucker, who points out that in the knowledge economy, natural resources and labor are no longer basic economic resources, but rather intellectual capital, which is defined as "knowledge flowing through technology and residing in humans." From the above it follows that knowledge is a priority factor for competitiveness. In the global business in the knowledge economy,

competitiveness becomes tied to individual businesses, enterprises and other organizational systems. As a universal process, globalization pervades all aspects of society, it breaks borders and establishes new relationships and relationships, creating the conditions for faster and more efficient exchange of people, capital, goods, services, money, information and knowledge. Figure 1 shows a bridge from the Ottoman period built with the technique and materials available to the builders at the time.

Figure 1. Bridge from the Ottoman period



Source: <https://www.bing.com/images/search?q=mostovi&FORM=HDRSC2>

Globalization of knowledge can be understood as the growth, development and exchange of knowledge between different economic entities on a global basis. In the knowledge economy, knowledge acquires some specificities and becomes the focus of interest in economic science and practice. Today it is becoming organizational knowledge (at the level of the business system) and is increasingly becoming the essence and carrier of business development and growth, as well as the structure for creating new knowledge. Business in the knowledge economy is characterized by big and sudden changes at all levels and in all sectors and branches, business entities are becoming more numerous (new products, services, market expansion), business is international, nothing new forms of cooperation between business systems, competition in competition is becoming sophisticated and taking on new forms, the market is

becoming more assertive, new demands for competitiveness are emerging. The knowledge economy as a whole is a transformed industrial economy where employees in the industrial economy and all its economic entities are treated with a cost generator. In the knowledge economy, they are considered as the generator of income and wealth and constitute the most valuable economic capital. The power of management in the industrial economy depends on the level in the organizational hierarchy, in the knowledge economy the power of management depends on the level of knowledge. The basic form of profit in the industrial economy was "tangible" - money, in the new economy profit becomes "intangible", "invisible" - learning, new ideas, new qualities, new customers and clients, because they are the bearers of economic development. The bottlenecks were money and skills in the modern economy, they are becoming time and knowledge. The Age of Knowledge brings a whole new perspective on the world of economics and inaugurates a whole new management. A person with his knowledge, abilities, habits, skills, creativity, motivation and energy is the most important factor of all human creativity and the holder of all economic development. Thanks to the development of human knowledge, the modern world has found itself in a scientific and technological revolution characterized by an adequate concept of production, exchange and consumption. It shows that modern conditions of economy are interacting with new forms of organization and management at all levels from business system, branch, national to world economy, where quality human resources play a crucial role. The time we live in is therefore a time of knowledge, creativity and information. These are the resources of the modern economy that are expected to expand the boundaries of knowledge as well as productivity and business results. Without new creativity and knowledge, it is

not possible to restructure large systems, address redundancies, and function large organizational systems. Creativity and ideas are the most valuable gifts an individual can possess, the greatest social wealth. Therefore, today's economic development focuses on the human side of the organization where human capital is central to strategic business. In today's conditions of development of globalization of the world economy, an appropriate system of international division of labor was created. That is why the world economic experts rightly claim that the functioning of the world economy is the most complex system that is developing and improving every day. . All developments on the world scene and in the global economy, as well as all developments in national economies and all economic entities, depend primarily on the knowledge and ability of the human factor (Radovanovic, V., Rendulic, G., 2014).

Fig. 2. A modern bridge built on the basis of knowledge and modern technologies



Source:

<https://www.bing.com/images/search?q=most+ovi&FORM=HDRSC2>

Today, most of the basic factors of production in the world are the most invested in the workforce, as the conditions of economy in the world economy are

increasingly demanding increasing knowledge, innovations and motives for work. In the world, in addition to all the revolutions that have taken place to date (industrial revolution, scientific and technological revolution, energy revolution), the "revolution of intelligence and profession" is very important. It implies the rapid transfer and application of intensive knowledge in the development of economy and technology. That is why no one today even questions the crucial role of human resources in overall development. Quality human resources require investment in their development as a "knowledge industry". This is achieved through the allocation of financial resources for the development of human resources - for education and for scientific research. Such financial allocations in the world are uneven and different, which depends on the development of individual countries, and therefore high knowledge and developed human resources are concentrated in certain parts (Radovanovic, V., Rendulic, G., 2014). Figures 1 and 2 show the technological development in the construction of infrastructure infrastructures in the world thanks to continuous investment in knowledge and education.

5. Education - a factor of economic growth and development

Equity can take the form of: physical capital, monetary and human capital. Without technological advances, neither physical nor human capital will lead to growth and development. Gary Becker, in his classic work *Human Capital*, points out that any activity that carries costs in the current period, and increases productivity

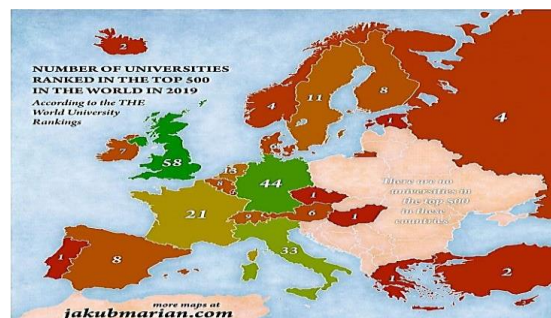
in the future, can be analyzed within the framework of investment theory, Grecic, V., (2004). All productivity enhancing activities require investment, investment but return with profit. Investments are related to the problems of cost and performance measurement, ie how to make a rational choice between the options available. Human capital is an economic term for knowledge, skills that workers acquire through education, training and work experience. The main form of human capital formation is education. Education has accumulated skills, which are also acquired through on-the-job training. Education, training and experience are not as tangible enough as machinery, buildings, but human capital and physical capital have the effect of increasing the economy's ability to produce goods and services. In countries where human capital is scarce, the gap between the earnings of educated and uneducated workers is greater. Good educational institutions should be provided and used. Investing in human capital has its opportunity cost. While in college, one gives up the earnings he or she can earn through work. However, educated individuals may have more ideas that can contribute to the overall development of a society's knowledge that anyone can benefit from. The contribution to society from schooling may be greater than the contribution to the individual. Knowledge must be used to solve many structural problems of the economy. The acquisition, improvement and use of knowledge certainly drives the growth and competitiveness of the economy (Mušikić. S., Krulj, Mladenović. M., 2015). No country has so far experienced rapid economic growth and development without

a more serious approach to education and the improvement of the education system.

6. The University of B&H is not among the best ranked in the region and in the world

The British newspaper specializing in higher education annually publishes a ranking of the world's universities, with more than 1250 top universities in the world. And a Czech linguist, mathematician, cartographer and musician, Jakub Marian, published a map of Europe with the number of top universities in each country on his blog, which publishes educational geographic maps with different data. He took the top 500 in Times Higher Education's last rankings as a criterion. And as it can be seen, B&H is one of the countries that have no universities among the best. Only Hungary, the Czech Republic and Estonia each have one top university. Admittedly, in Eastern Europe, except B&H, almost all of Eastern Europe, all the countries of the former Yugoslavia, Albania, Bulgaria, Romania, Poland, Ukraine, Moldova, Belarus, Lithuania, Latvia and Latvia, belong to this infamous category. Yet even Estonia, a country with less than a million and a half inhabitants, has one university among the top 500 in the world, according to these statistics. Hungary and the Czech Republic also have one top university. Western European countries, on the other hand, are performing far better.⁷¹

Figure 3. Map of the top ranked universities in Europe



Source: <http://tip.ba/2018/11/09/objavljena-karta-najboljih-univerziteta-u-evropi-evo-kako-stoji-bosna-i-hercegovina/>

Germany has 44 top universities, the UK 58, France 21, Italy 33, and relatively small Western European countries are not bad either: Ireland has 7 top universities, Denmark and Austria 6 each, Sweden 11, and Switzerland 9. And as Marian explained in its article, Times Higher Education values universities according to the following criteria: teaching (learning environment), research (quantity, revenue, reputation), quotes (research impact), international perspective (international students, staff and collaboration) and industrial income (transfer) knowledge. But since these statistics do not take into account the population and students in a country, it is logical to expect that a larger country will have more universities, and thus more top universities than a smaller country. US universities dominate the list of top ranked universities and are the most represented within the top 100 higher education institutions. British universities Oxford and Cambridge are in the top two places. US universities dominate the list of top ranked universities and are the most represented within the top 100 higher education institutions. So the third place on the list is Stanford American University,

⁷¹ Based on the latest research recently published on <http://tip.ba/2018/11/09/published-map-of-the->

[most-universities-in-the-Europe-Evo-How-to-Bosna-andHercegovina/\(Download:10/11/2018\)](http://tip.ba/2018/11/09/published-map-of-the-most-universities-in-the-Europe-Evo-How-to-Bosna-andHercegovina/(Download:10/11/2018))

the fourth Massachusetts Institute of Technology (MIT), and the fifth California Institute of Technology. Japan is the second highest ranked country after the US with its 103 universities on the list. As far as Europe is concerned, eight of the top 100 places are from Germany, of which the Ludwig Maximilian University in Munich ranked 32nd on the list. Two French universities, Paris Sciences et Lettres (PSL) and Sorbonne, and one Belgian, KU Leuven, ranked in the top 100 of the world's top universities.⁷²

7. Scientific research in the function of economic development

1. Fundamental (basic); 2. Applied (Applied); 3. Developmental. Fundamental or basic research aims at discovering the interdependence and legality of phenomena in nature and society. This research contributes to the broadening and deepening of existing knowledge, their fuller understanding, facilitating the redefinition of existing laws and theories, while basic research creates the foundations and source of ideas for applied and developmental research. Fundamental research aims to discover new laws and hypotheses and expand knowledge. Basic research is the initial research that results in scientific discovery, and in further research, it translates into practice and translates into innovation, ie. invention applied and tested in practice. The result of fundamental research can be epochal knowledge, ie. scientific discoveries that cannot be appropriated and legally protected but

represent a common property of humanity. Applied or applied research aims to solve a practical problem, that is, to find new solutions related to products, processes, materials and other technology. Applied research supplies the production process with innovation, that is, inventions and other scientific and technological information on possible better solutions to certain problems. Developmental research or experimental development does not, in principle, involve some new methods and results, but is based on already verified results of fundamental and applied research. Development research is targeted research for the development of new technologies (Lajović D., Vulić. V., script, 2015, pp. 32-33).

8. Conclusion

The importance of knowledge and education in the development of a social community is best demonstrated by the degree of economic development of individual countries. In this paper, we have come to the conclusion that those countries that have taken a serious approach to supporting education and research have developed rapidly, become politically and economically independent from the influence of international financial institutions, have raised the quality of life of their citizens through rising living standards and experienced a rapid increase in GDP for a short time. One of the bright examples presented in this paper is the Republic of Turkey. Given that in Bosnia and Herzegovina there is little budgetary allocation at all levels of government for science and scientific-research work, in

⁷²Top rated universities in the recently published list. <http://tip.ba/2018/11/09/published-card-the>

best-universities-in- Europe-evo-how-to- stand-bosna-i-hercegovina/(Download/10/11/2018.)

such circumstances faster economic development and socio-political independence cannot be expected. In today's market economy, knowledge is one of the most valuable and expensive resources. Many developed countries allocate significant financial resources from the budget for the purpose of acquiring knowledge and improving educational institutions. Bosnia and Herzegovina is not investing sufficiently in the education system, which is reflected in the lagging behind of research institutions and higher education institutions such as universities. There are no universities in Bosnia and Herzegovina among the top ranked universities in the world. This information tells us that with this approach to knowledge and education, no positive changes can be expected in the economic and socio-political development of the country.

9. Literature

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