CREATING HUMAN CAPITAL RESPONSIVE TO REQUESTS OF SUSTAINABLE DEVELOPMENT GOALS: SOME EVIDENCE FROM SERBIA

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Abstract: The paper analyzes the nature and importance of human capital for the sustainable development of modern business and economy. As a starting theoretical basis, studies on human capital by Gary Becker (1962; 1964) are used. According to Becker, investments in human capital could be divided into 3 groups: schooling investment, non-schooling investments and post-schooling investments. The structure of human capital is linked to the following main factors: the education, investments in health and investments in time for searching for the right placement (matching abilities and qualifications with the labor market possibilities/demand). Many efforts are introduced in measuring human capital. There is no unique understanding of the entire category. But, taking the new requirements that are challenging the creation of the human capital in the contemporary economies, some of the factors could be described as follows: knowledge, skills, habits, social characteristics, personal characteristics and creativity. Education presents an important factor on the UN list of 17 goals for sustainable development. Namely, Goal 4 refers to achieving quality and inclusive education, life-long learning and digital education. Keeping this in mind, the following hypotheses are tested in the paper: H1. Dynamic changes in the global economy seek more intensive post-school education; H2. Serbian companies are aware of the in-house education and team buildings. For that purpose, the research was conducted on a sample of 157 companies in 15 cities in Serbia. An online questionnaire with interval and Likert scales and closed answers was used for data collection. Managers of selected companies were interviewed. The data were processed using the statistical technique 'custom tables with column proportion' in the SPSS 25 software. The aim of the research was to determine the extent to which Serbian companies invest in employee education. Based on the results, it was found that the vast majority of companies invest in the training of employees in seminars and courses outside the company. Besides, the vast majority of companies invest in seminars and employee courses organized within the company. In both cases, large companies invested the most. Based on the results, it is concluded that most companies are aware of the importance of education and that by investing in seminars they improve the knowledge and skills of employees.
Keywords: Human capital, knowledge, sustainable development goals, Serbian companies

1. INTRODUCTORY REMARKS: INVESTMENTS IN HUMAN CAPITAL

The academic literature and number of scholarly articles on the economics of education is fast growing. But, even faster is a process of enriching the repositories of scientific works and researches on health (health economics), migrations and other "non-schooling" investments that could be understood as the constituents of human capital. Besides the fact that in number of studies, the works of Gary Becker (Becker, 1962; 1964) have been considered as the pioneering in the field of promoting the topic of human capital as such, and, more, in understanding human capital as a specific kind of CAPITAL (thus, being a subject of investing in, selling or buying on the market, an asset of entrepreneurial projects, the first who launched a textbook dedicates to human capital, was Theodor Schultz (1963). Schultz has put human capital in the focus of his scientific interest since 1960. Gary Becker states in his remarkable works that investments in human capital could be divided into 3 groups:

a. Schooling investment
b. Non -schooling investments, and
c. Post-schooling investments.

Having in mind the widely accepted, on global level, the set of the SDG's (Sustainable Development Goals) , that understand the road toward the goals as a long-term process for all the countries, it means that this requires more of the post-school investments in the human capital of those working in private companies, public institutions or, even, being self-employed.

The paper starts from the following hypotheses:

H1: Dynamic changes in the global economy seek more intensive post-school education.

H2: Serbian companies are aware of the in-house education and team buildings.

2. MAIN CONSTITUENTS OF HUMAN CAPITAL

Generally, two different approaches dominate in the discussion on human capital. One is the macroeconomic, where human capital is treated as one of the most important factor of the economic development (Zaric, 2015; World Bank, 2018). The discussion on the influence of human capital on national development is mainly considering the public finance approach in financing education and health services and, as a return on investment, the contribution of human capital to the economic growth. The microeconomics analyzes the category of human capital from the point of an economic agent (individual, company), being fully within the boundaries of the leading paradigm: neoclassical economics.

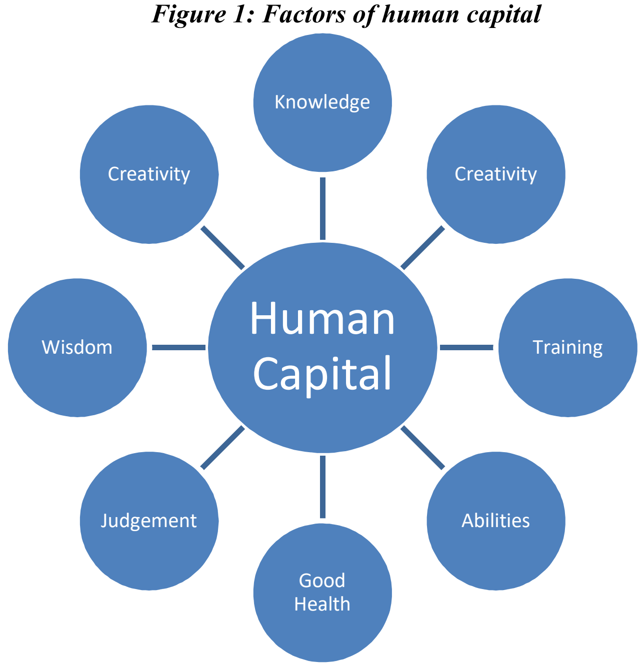
If we strictly follow the program of human capital, explained by the Nobel prize winner Gary Becker, then the main factors are the education, investments in health, investments in time for searching for the right placement (matching abilities and qualifications with the labor market possibilities/demand). The leading methodologist of economics, Mark Blaug (1992) stands that Beckers monograph "Human capital" could be understood as a "locus classicus" of the theoretical issue and discussion.

Many efforts are introduced in measuring human capital (UN, 2016**).** Still, there is no unique understanding of the entire category. But, taking the new requirements that are challenging the creation of the human capital in the contemporary economies, some of the factors could be described as follows:

1. Knowledge
2. Skills
3. Habits
4. Social characteristics
5. Personal characteristics.
6. Creativity

As all these factors contribute in creating goods and services, it is understandable that habits and social characteristics are strongly affecting the attitude toward the sustainable development. These are, unfortunately, the factors that are resistant to quick changes, thus being often a strong obstacle to the road toward the sustainable development. New challenges need some new solutions. Thus, some of the authors are adding to the above list. The XXI century is called a "century of creativity" and many authors speak about the newly created - creative class. The Nobel prize winner, Romer, speaks about the "economics of ideas". Figure 1 shows the author's concept of factors that model human capital:

Figure 1: Factors of human capital



Source: Created by Own

3. SDG's AND HOW TO REACH THEM

The global institutions adopted the 2030 Agenda for Sustainable Development, promoting the relatively old idea of the "common future" (Harris, 2000). United Nations (United Nations, 2019) are reporting on certain positive steps that could be seen in the general attitude toward the sustainable development goals, but also marking the obstacles. As it could be learnt from the documents, the goals are to be achieved in a long-term perspective requiring the changes in the relation toward the environment, climate changes, marginal groups, etc - what requires also certain changes not only in everyday behavior, but also getting specific knowledge and skills that could have not been gained throughout the traditional education process.

It is important, from the economic point of view to emphasis that producing and doing business under the new conditions, condition of respecting sustainability has the impact on the costs and technology processes, Thus, the R&D centers are highly placing on their agenda the efforts in creating new ways of producing goods, transportation and other services, energy in a creative way, reducing the negative impact on human environment and , in the same time, not increasing the level of costs.

Serbia has adopted and launched the National Strategy for Sustainable Development in 2008 (Nadić, 2011). Since there was no good institutional setting and deeper understanding of this goals, no significant results are reported by now. Unfortunately (or fortunately), the new ways of practicing so-called "new protectionism" are embedding certain criteria, that belong to the SDG's, and that are not achieved nor implemented in the number of national economies that not belong to the so-called "innovation-driven economies". Thus, among the measures of the "new protectionism" is so often "the green protectionism". Developed and developing countries have different expectation from the process of implementations of the SDGs agenda, and, it is producing further discussions among scientists (Bali Swain and Yang – Wallentin, 2020) and leaders. These type of standards and labels could eliminate a number of economic agents from various countries from the world market. In order to reach these standards and adapt and innovate the production processes, specific knowledge and skills are required. It is important to say that this kind of knowledge could not be acquired and learnt within the traditional education, with traditional programs in the schools and universities. Finally, this discussion proves that the theory (Beckers theory, in fact) could be understood as a progressive theory, theory that is opened for new additional improvements and scientific contributions.

4. RESEARCH METHODOLOGY AND RESULTS

An online questionnaire with interval and Likert scales and closed answers was used for data collection. The research was conducted on a sample of 157 companies in 15 cities in Serbia, of which 60 small and 34 medium-sized companies. When creating the sample, the size of the city was taken into account, and the companies were selected from *the Serbian Business Directory* (Stojanovic, 2020) by the method of simple random sampling.The criteria from the applicable Law on Accounting (Vlada RS, 2013) were used in defining the company's size. Managers of selected companies were interviewed. The data were processed using the statistical technique 'custom tables with column proportion' in the SPSS 25 software. The aim of the research was to determine the extent to which Serbian companies invest in employee's education-as part of human capital.

Table 1 shows the percentage of employees whose companies finance attending seminars and courses outside the company. Based on the results, all large companies in the sample invest in this type of employee training. However, the largest number of large companies (76.9%) invests in this type of education for a contingent of 1-10% of employees. The situation is similar in the case of medium-sized companies. Based on the results, 80% of small companies invest in this type of employee training. 56.7% invest in a contingent of 1-10%, while 15% invest in a contingent of 26-50% of employees. The largest investments in the contingent of 26-50% of employees were observed in micro companies. However, it should be borne in mind that these companies employ a very small number of workers.

Table 1: Attending seminars and course outside the company

			Company Size				
			Micro	Small	Medium	Large	Total
			(A)	(B)	(C)	(D)	
Attending seminars and course outside the company %	0%	Column N %	37.8% (C)	20.0%	5.9%	0.0%	17.8%
	1-10%	Column N %	21.6%	56.7% (A)	73.5% (A)	76.9% (A)	55.4%
	11-25%	Column N %	10.8%	8.3%	17.6%	15.4%	12.1%
	26-50%	Column N %	29.7% (C)	15.0%	2.9%	7.7%	14.6%
	Total	Column N %	100.0%	100.0%	100.0%	100.0%	100.0%

Results are based on two-sided tests. For each significant pair, the key of the category with the smaller column proportion appears in the category with the larger column proportion.
Significance level for upper case letters (A, B, C): .05[a]
a. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.
Source: Authors

Table 2 shows the percentage of employees whose companies finance attending seminars and courses in the company:

Table 2: Attending educational seminars and course in the company

			Company Size				
			Micro	Small	Medium	Large	Total
			(A)	(B)	(C)	(D)	
Attending educational seminars and course in the company %	0%	Column N %	40.5% (D)	21.7%	20.6%	7.7%	23.6%
	1-10%	Column N %	16.2%	26.7%	41.2%	34.6%	28.7%
	11-25%	Column N %	10.8%	23.3%	14.7%	7.7%	15.9%
	26-50%	Column N %	32.4%	28.3%	23.5%	50.0%	31.8%
	Total	Column N %	100.0%	100.0%	100.0%	100.0%	100.0%

Results are based on two-sided tests. For each significant pair, the key of the category with the smaller column proportion appears in the category with the larger column proportion.
Significance level for upper case letters (A, B, C): .05[a]
a. Tests are adjusted for all pairwise comparisons within a row of each innermost subtable using the Bonferroni correction.
Source: Authors

This type of investment in human capital is also most practiced by large companies. As many as 50% of large companies invest in a contingent of 26-50% of employees. The largest number of medium-sized companies (41.2%) finance educational seminars for 1-10% of employees, while 28.3% of small companies organize seminars for 26-50% of employees. Observed with micro firms, 40.5% do not invest in this type of human capital. On the other hand, 32.4% of these companies organize seminars for 26-50% of employees, which is a surprise due to the realistically limited financial opportunities.

Based on the results, it is concluded that most companies are aware of the importance of education and that by investing in seminars they improve the knowledge and skills of employees. It is stated that hypothesis H2 has been confirmed.

5. CONCLUSION

Besides the importance of the movement “school to work” (ILO, 2009), there is a need to get a deeper insight into the processes of investment in permanent education, such could be the process “work to school to work”. It comes as a must of the modern world that is characterized of the permanent adaptation to the everlasting changes. The Covid 19 pandemic crisis has clearly shown that people and business must adapt and change in a short term – learn how to work online, teach via internet platforms, organize hybrid events or prepare food for home delivery. The role of the actors and market institutions is changing (what could be the new role of shopping malls in the era of online shopping?). But, it means that the companies must invest in education in order to offer the needed skills and knowledge to their employees. One of the SDG`s, namely Goal 4 means achieving quality and inclusive education, life-long learning and digital education.

The research done in the Serbian economy is showing the level and number of education courses and seminars within and out of the companies. It is proving the hypothesis that the human capital is not having its full value when leaving the school. There is a theory called “credentialism” (from latin. *credo, credere* – to believe). The employers, when “buying” human resources on the market just believe what value they gain, via believing in the diploma/formal qualifications. The problem is even sharper in the weak economies (Kahn, 2010). But, in the process of creating goods, producing services and ideas, the additional learning is required proving that the creation of human capital does not end with the graduation ceremony.

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