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## From the Editor



Since the Enlightenment, there has been a belief that mass education of the population is a necessary condition for economic and social progress. Education affects productivity in the current period but also drives technical progress that increases future productivity, thus enabling sustainable growth in citizens' standards of living. Numerous empirical studies conducted on large samples of countries over several decades provide evidence that a country's long-term economic growth depends on the quantity and quality of its education. Empirical research suggests that achieving a middle level of development requires general primary and secondary education with solid quality higher education that enhances employee productivity. To reach a high level of development, broad access and high-quality education that allows for the improvement of existing technologies and the creation of new ones are essential.

Given that the quality of education in Serbia's primary schools has stagnated at a low level for over a decade while higher education shows modest progress, it is important to consider the causes of this situation. The quality of education in any country depends on many factors, some common to all education levels and others specific to certain levels. Important general factors influencing the quality of education at all levels include the amount of public investment in education, the quality of the institutional framework, and the quality of teaching staff.

One factor affecting the quality of education is the amount of public investment in education. It is expected that if the state invests more in building a network of educational institutions, equipping them, paying teaching and non-teaching staff, providing quality textbooks, creating adequate regulations and supervision, and other related aspects, the result will be higher quality education. According to various data sources, total public investment in education in Serbia ranges between 3.3 and 3.6% of GDP. Investment in education in Serbia, expressed as a percentage of GDP, is significantly lower than in European Union countries, which on average allocate around 5% of GDP for education. According to Eurostat data, of the 11 CEE countries for which data is available, only Romania allocates a smaller percentage of GDP for education than Serbia. According to United Nations sustainable development data, public investment in education in Serbia amounted to 3.3% of GDP in 2021, while the average for all European countries was 4.9% of GDP. Of the 34 European countries for which data is available for that year, only three countries invested a smaller percentage of GDP in education than Serbia. The five European countries that achieve the best results on PISA tests on average invest 5% of GDP from public sources, and excluding Ireland this average investment is 5.5% of GDP.

Based on the above, it is quite clear that higher public investment in education is needed to improve its quality in Serbia.

Increasing the allocation for education relative to GDP would reduce the wage gap in education compared to wages of employees in other sectors with the same level of qualification, improve teaching staff performance, enhance school equipment, advance teaching procedures, improve school supervision, and more. A fiscally sustainable increase in the share of public expenditures for education in GDP implies that expenditures for several other state functions would grow more slowly than GDP in the coming years. Creating fiscal space would allow the growth of education expenditures as a percentage of GDP without increasing the fiscal deficit or necessitating higher taxes. It is estimated that achieving the goal of increasing education expenditures to about 4.5% of GDP over a medium-term period of 5-7 years would not jeopardize macroeconomic stability or crowd out other state functions.

Increasing public expenditures is necessary but not sufficient to improve the quality of education in Serbia. To enhance education quality, it is necessary to improve the institutional framework of the education system, enhance employee selection, improve pedagogical skills of teaching staff, introduce regular external evaluations of student, teacher, and school performance, and more.

The quality of education in a country depends on formal institutional rules regulating education and general institutional solutions in that country. The formal institutional rules in Serbia's education system result from historical development from the early 19th century to the present, including the period of self-managing socialism. Since 2000, education reforms have largely been aligned with the rules in developed countries, particularly EU countries. Formal rules are contained in numerous regulations adopted by state bodies and educational institutions governing the functioning of education. In addition to the Law on the fundamentals of the education system, there are specific laws for primary, secondary, and higher education, adult education, dual education, textbooks and other teaching materials, science and research. General laws regulating labour relations, public procurement, and others are also relevant for the functioning of educational institutions. Besides laws, education is regulated by a large number of decrees, rulebooks, standards, manuals, and more adopted by various state bodies, while the goals and directions of education development are defined by strategies adopted by the state. In addition to regulations adopted by state bodies, education is regulated by regulations adopted by educational institutions with varying degrees of autonomy (statutes, rulebooks, strategies, decisions, instructions, and more).

Formal rules regulating education are generally aligned with good practices in developed countries with a long tradition of education where the quality of education is high, based on va-

rious studies. However, there are still certain deviations from good practice that negatively impact education quality. In Serbia, unlike most European countries, secondary education is not yet mandatory. Rules for the promotion and reward of teachers in primary and secondary schools are not firmly linked to their students' success. In the case of master's and doctoral studies in Serbia, studying while working predominates, negatively affecting the duration and quality of studies. The main reason for most students choosing to study for a master's and doctoral degrees while working is the lack of adequate state funding for these studies.

In addition to deviations from formal rules, there are important instances of non-compliance or circumvention of regulations. For example, in the case of closing primary schools in rural areas, the state often does not provide transportation for students to neighbouring primary schools. The state occasionally fails to meet the legally prescribed financial obligations to state faculties necessary to cover material costs, particularly negatively impacting the quality of education at faculties with high exercise and experiment costs. Some private faculties simulate meeting accreditation conditions, which regulatory bodies tolerate. An extreme example of violating legal rules was the organization of doctoral studies by private universities not accredited for them. The state tolerated this practice to the point of recognizing about 1,000 doctorates defended at unaccredited universities through a special law! One incentive for such university behaviour is the legal provision conditioning the establishment of universities on the existence of doctoral studies, which is not common practice worldwide.

The quality of education is also influenced by informal institutions, i.e., customs, inherited practices, and the belief system of students, their parents, and teachers. The quality of education in a country depends on the prevailing attitudes toward education among its citizens. If education is treated as a virtue, it positively impacts education quality. Conversely, if education is not considered a particular value, it will negatively impact education quality. The low quality of education in primary and secondary schools is negatively affected by the pedagogical tradition that requires students to reproduce extensive teaching content instead of insisting on understanding and connecting different knowledge. This pedagogical tradition could be changed with additional training for teachers and professors, accompanied by external supervision and linking teacher advancement to their students' results. In recent decades, poor class attendance by students has become more common in Serbia, complemented by the practice of paying for private lessons by students and parents. Poor class attendance negatively affects education quality and leads to unproductive resource waste due to paying for private lessons and prolonged studying. The solution is to introduce regulations requiring class attendance, with special treatment for working students.

A significant incentive for education quality is the existence of positive selection in hiring and promotion in the public sector, which represents the largest employer in all countries. Positive selection means that those who achieved better results in school and at university and graduated from higher-quality schools and universities have an advantage in public sector employment, and that expertise is the key criterion for rewarding and promoting employees. A negative incentive for education quality is the practice of mass employment of party activists

of ruling parties who graduated from low-quality universities, with advancement in the public sector increasingly depending on party affiliation. Party employment and advancement based on party affiliation in Serbia have a long tradition that has escalated over the past decade to levels that existed in the early period of socialism. This practice sends a signal to young people that party affiliation and loyalty to the ruling party are more important for getting a job and career advancement than diligent and dedicated studying.

The quality of education is expected to be better if teachers and professors have higher social prestige. The social prestige of teaching staff depends on how society values their work and their performance. Significantly lower salaries for teachers and professors compared to employees in other sectors with the same education level indicate that society does not highly value education. An important signal that education work is not highly valued by the state and society is the exclusion of education employees from state housing subsidy programs over the past decade. This treatment of education results in negative selection of employees in the education sector, reducing the prestige of teaching staff and education quality.

An important factor affecting education quality is the quality of teaching staff. Generally, if teaching staff have better professional and pedagogical knowledge, educational outcomes will be better. In East Asian countries and European countries leading in education quality, teaching staff are selected from the top 5-10% of university graduates. In OECD countries, salaries of employees with university degrees in education are 5-15% lower than those of employees with the same level of qualifications in other sectors. In Serbia, according to data for October 2023, the average salaries of employees with university, master's, or doctoral degrees in education were 27% lower than the average salaries of employees with comparable education levels in Serbia. Salaries in education in Serbia lag behind comparable salaries in other sectors much more than in OECD countries. Due to the large salary gap in education compared to other sectors, it is very difficult to attract the best university-educated personnel to education in Serbia. Moreover, primary and secondary schools face a drain of good personnel, while universities struggle to hire the best students. Reducing the salary gap in education compared to salaries of employees with comparable education levels in other sectors is possible only by increasing total education expenditures as a percentage of GDP, as salaries account for about 80% of education costs.

The fact that education employees are willing to accept lower salaries compared to what they would earn in other sectors indicates that other motives for working in education exist, such as social prestige, job security, free time, affinity for education, and more. These other factors are relevant for most people if salaries in education are moderately lower than those they could earn in other sectors. If salaries in education are significantly lower than those earned by employees with the same level of qualifications in other sectors, it is unlikely that the best personnel will work in education.

