

CHAPTER 5

# Education and Depopulation

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# 1 Why does education matter?

Education is society's principal tool in the building human capabilities, it is the surest road to remunerative employment, and the acquisition of the skills necessary for individuals and societies to develop; but these three objectives are not automatically achieved once an education system is in place. Education as a public service is typically organized to serve all young people of a certain age and equip them with the competencies they will need if they are to live socially and economically satisfying lives. As a result, education systems react in complex ways to changes in the society, and this includes demographic changes. The education system will adapt to demographic changes (passively or proactively, creatively) but it can also influence those changes (compensate, prevent, direct or reverse trends).

The number of new-born children in Serbia decreased from 78,101 in 2002 to 64,399 in 2019. This is almost 18% fewer new-borns in just two decades and the student cohort in primary and lower secondary school has fallen by 29% since 2002. Cohorts in higher education enrollment are also declining. These trends certainly require that the school system consolidate to adjust to smaller cohorts and reduce spending in order to ensure a better targeted use of public resources. However, that is far from all – at the same time it has to enable a substantial increase in human capital development, and foster higher competencies and greater professionalism among teaching staff. An aging population requires more and better suited possibilities for lifelong learning in order to maintain its productivity in new working contexts – a requirement the education system has to respond to with adjustments to provisions. The effectiveness of fertility increasing measures can directly depend on the scope, distribution and quality of the early ed-

ucation system. The decreasing share of the productive population requires a new look at the educational opportunities of each and every child, better intake of and catering for vulnerable groups, and elimination of attrition, dropout, exclusion, segregation and all other barriers to the development of each child's maximum potentials.

The unfavorable demographic trends are projected to continue into the future, and create particular challenges that have a range of implications for the education system. The continued development of Serbia's human capital, in the face of ongoing demographic decline, will require many new fine-tuned policies. In this chapter we discuss the status, scope and effectiveness of these emergent policies. Firstly we address the most apparent ways the school system in Serbia is adjusting to the decline of the student population by consolidating infrastructure and staff. Thereafter we look into several education policy areas particularly important for developing human capital in the context of depopulation, the overall performance of the education system regarding learning outcomes, the way the education system responds to the increased needs of an aging population, the way it utilizes the benefits of early education, and the extent to which it includes all vulnerable groups. In all these areas we highlight the need for serious improvement. Subsequently, we address the availability and status of key resources needed for effective education change – the teaching force, digitalization and conducive finances. Finally, we outline additional challenges that the education system needs to overcome in order to increase its attractiveness and trustworthiness, and conclude with a set of broad recommendations.

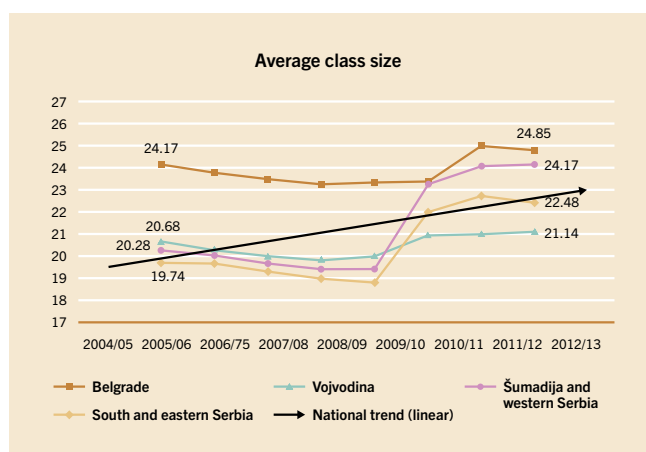
## 2 Adjusting the education system to the demographic decline?

In this chapter, we address the two most often cited and most visible areas in which education systems can and should adjust to demographic changes: *infrastructure* (number of classes and schools) and *staffing*. In both areas, appropriate adjustments create considerable savings that can be reallocated to other, developmentally important areas. Failing to embrace these changes increases inefficiencies in the education system, and withholds necessary impetus for change at the levels of quality, equity and relevance, etc. This, in turn, affects the availability and quality of human resources in the country and the general wellbeing of the population.

The demographic changes in Serbia are not fully mitigated by consolidation of school infrastructure and staff. The student decline of

approximately 10,000 per year, has been an acknowledged concern for more than a decade. Decreasing numbers of students are most often addressed by infrastructure and staffing reductions – uneasy measures that regularly create disputes and tensions. Examples can be found in The Netherlands, Germany, Saxony, and in the US, North New England (Haartsen and Wissen, 2012; Christiaanse, 2020; Steinführer, Küpper & Tautz, 2014; NEEPPC, 2020).

This has also been the case in Serbia, where, as a compromise, optimization focused on towns and cities, and on consolidating *the number and size of classes* in primary schools, while the number of schools and staff remained less affected. In primary education, the number of classes was reduced starting from 2009/2010 when a new regula-

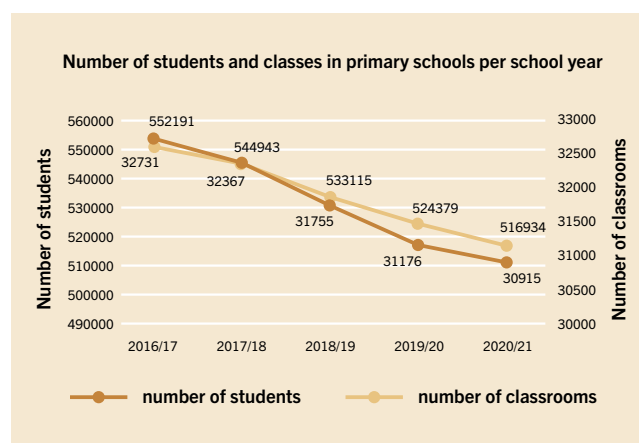


**Figure 1.** The effect of the new 2009/10 regulation on primary school class size in Serbia

Source: *Babin i Lažetić, 2016: 7*

tion on maximal and minimal class size was issued.<sup>62</sup> Consequently, in the last 10 or more years, the number of classes is in synchronicity with the number of students. Figure 1 shows the increase in class size after 2009/10, while Figure 2 shows how the number of students and classes converged from that point on. This convergence has been maintained since.

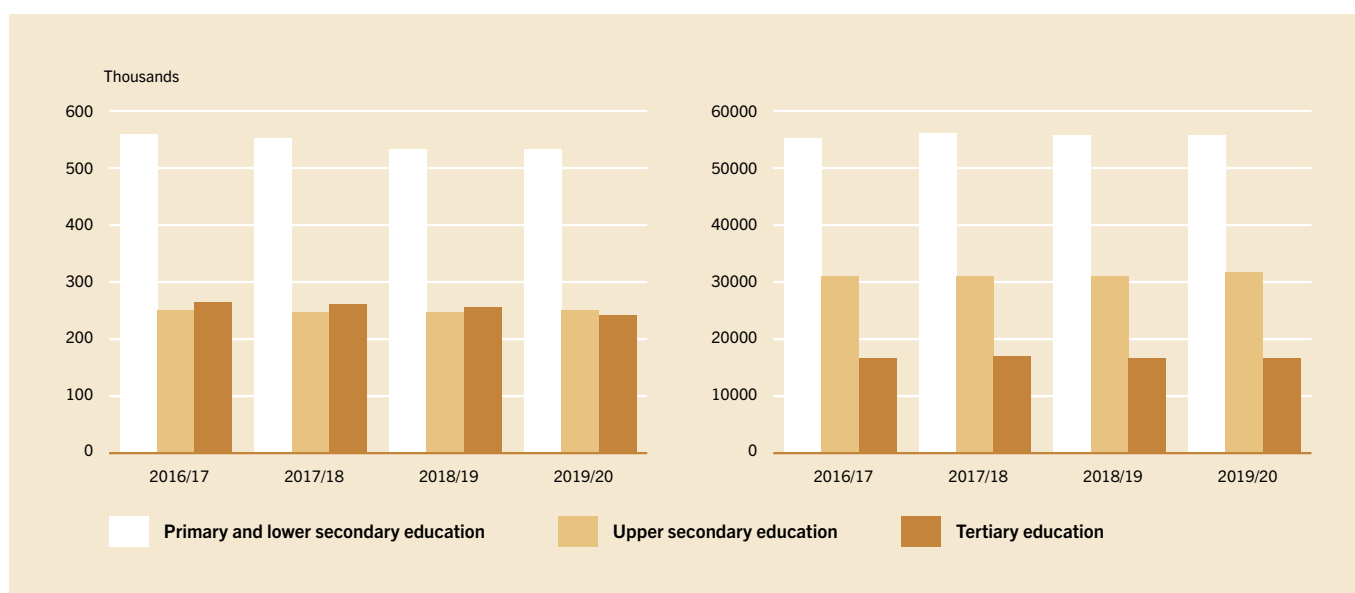
The number of primary school units (so called branch-schools) was also somewhat reduced, for example, from 3,350 in 2017/18 to 3,243 in 2020/21. However, the distribution of school units is still unclear – 1,918 school units (around 60% of school units) cater for only to 4.99% of students (50 or less students each), while 2.52% or 82 school



**Figure 2.** Number of students and number of classes, primary schools in Serbia, 2000/01 to 2020/21

Source: *Ministry of Education, Science and Technological Development*

units with more than 1,000 students educate 19.57% of students. Regional differences play out with an average of 96 students per unit in eastern and southern Serbia, and 109 in Šumadija and western Serbia, while the average in Belgrade is 453 students per school unit. The establishment and implementation of the network of schools requires cooperation between local and national government, which can require additional time and, consequently, slows down the pace of optimization of school infrastructure. For example, by the end of 2019, 35% of LSGs had not adopted such a law<sup>63</sup>, and, in December 2021<sup>64</sup>, discussions were still ongoing.



**Figure 3.** Number of students (left) versus number of all teaching staff (right) 2016-2020

Source: *Statistical Yearbook 2021, Statistical Office of Serbia*

<sup>62</sup> MoESTD (2009, 2010), Expert Instruction on Class Formation and Method of Financing in Primary and Secondary Schools, no. 401-00-481/1/2009-08.

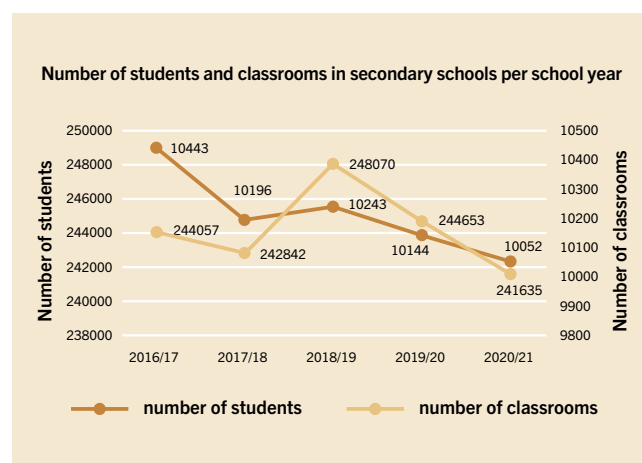
<sup>63</sup> MoESTD 2020. Report on the implementation of SROS in the period 2019-2020.

<sup>64</sup> see <http://www.skgo.org/vesti/detaljno/2837/odrzano-savetovanje-o-optimizaciji-i-racionalizaciji-mreza-osnovnih-skola>

The *rural small school units* are mainly scattered across the mountainous areas of Serbia. These areas have underdeveloped roads and means of transport, so school buses are not always an easily available option. Strategic development of the road infrastructure, drawing on innovative examples from other mountainous countries, such as Austria, where the network of small freight roads (so called *Guterweg*) the development of which is co-financed with private and public funds, should be a viable option that supports not only rural education but rural life and economy as well. Furthermore, other more sophisticated and flexible solutions should be sought that take into account pedagogical soundness, student wellbeing and community needs in parallel with economic and infrastructure arguments. Experiences from Nordic countries could be used to design digital options for rural children to participate in classwork with children from schools in towns in order to ensure high quality education; a flexible combination of occasional trips to a central school and vice versa could ensure both education and socialization outcomes; networking between rural schools could ease the burden isolated units sometimes face; strategic rural development and tourism could enrich the work of the small school with the additional activities of a community centre, adult education facility, cultural meeting point, etc.

As already mentioned, the consolidation and decrease in *teaching staff* due to the declining student body is modest and, over the 2017/18 - 2019/20 period, amounts to 400-700 per year, counting all teachers working in primary schools. The decrease is more discernible for teachers in full-time employment, where the yearly decline is around 1,000, which is roughly half the number who retire yearly. Figure 3 displays the trends regarding all teachers.

In *secondary education*, many aspects of the aforementioned trends are less visible and the trend is inconsistent – the number of students



**Figure 4.** Number of students and number of classes, secondary schools in Serbia, 2016/17-2020/21

Source: Ministry of Education, Science and Technological Development

also fluctuates, e.g. in 2018/19 their number increased by almost 4,000, followed by an increase of 250 in the teaching staff. A more stable decline is discernible only during 2019/20 and 2020/21 (Figure 4).

The demographic decline of the school-aged population is set to continue well beyond the next decade, following different trajectories in different areas of Serbia (Nikitović, this volume). Therefore, the education system needs to develop more flexible and sustainable mechanisms to adjust to the changes. One-off mechanisms (such as the regulation of class sizes in 2008/09) will not solve the problems. International experience shows that a higher level of local autonomy and decentralization would contribute to finding the best local solutions, with creative collaboration with the national authorities.

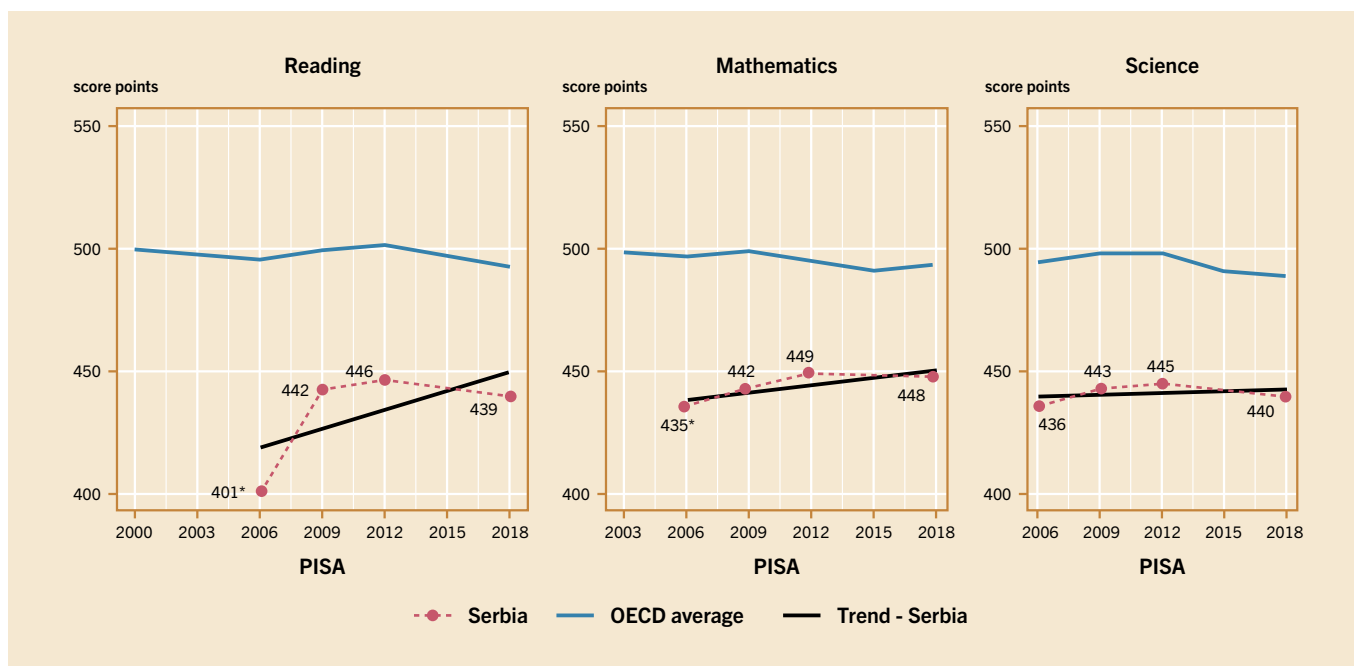
## 3 Developing human capital in the context of depopulation

In countries that face a declining and aging population, concern for productivity and human capital lead to calls for the prioritization of quality education. In such a context, demands for higher competencies and more relevant learning outcomes for students intensify. Therefore, enlarged capacities for preschool and adult education, and higher professionalism of the teaching force become education policy priorities. In this section we discuss several areas where the education system in Serbia did not fully utilize its potential to develop human capital.

### 3.1 Current indicators show underperformance of the Serbian education system

Serbia relies on two sources of data on education quality: international assessments and national evaluations<sup>65</sup>. According to international indicators, the education system is underperforming and inadequately equipping young generations with the competencies they need for a successful professional life and constructive participation in the community, particularly in comparison with EU and the OECD countries.

<sup>65</sup> Indicators of external evaluation of schools conducted by the Institute for the Evaluation of the Quality of Education.



**Figure 5.** Average achievement and trends in achievement in three domains of OECD/PISA study

Notes: The asterisk indicates mean performance estimates that are statistically significantly above or below PISA 2018 estimates for Serbia. The blue line indicates the average mean performance across OECD countries with valid data in all PISA assessments. The red dotted line indicates mean performance in Serbia. The black line represents a trend line for Serbia (line of best fit).

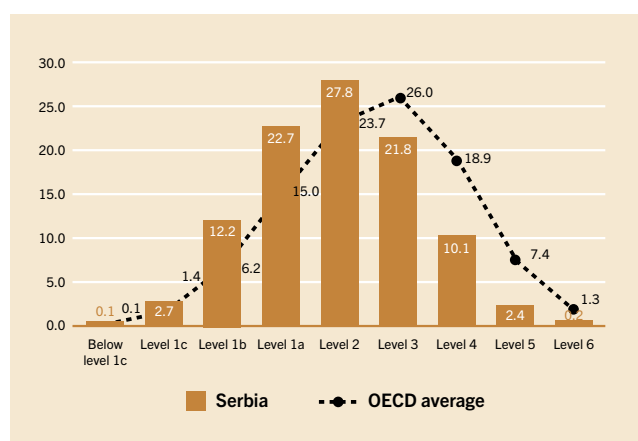
Source: OECD, PISA 2018 Database, Tables I. B1.10, I. B1.11 and I. B1.12. 2003-2018

Since 2001, Serbia has been participating in IEA/TIMSS (grade 4, starting from 2011) and OECD/PISA (15 years of age) studies. During this period, the education context was characterized by content-based curricula and traditional teaching and grading methods which placed students in the passive position of written reproduction of poorly integrated facts. International assessment studies revealed that achievements were disappointingly low and statistically below the international average in all examined areas, with a high percentage of students below the level of functional literacy and a very small percentage of them on the highest proficiency levels (Pavlović Babić, 2020). The international assessment studies (PISA 2003, 2006, 2009, 2012, 2018; TIMSS 2003, 2007) consistently show that the achievements of students from Serbia have been below the international average (Figure 5) by about one and a half years of schooling in OECD countries<sup>66</sup>, which is true across all tested areas. During this period only one increase has been noticed in reading, between 2006 and 2009.

A closer look at the distribution of achievements by levels (Figure 6) shows that the achievements of students from Serbia are concentrated at the levels of reproductive knowledge (levels 1a and 2), and national average achievement is also at level 2. At the same time, the share of students educated for achievement at higher levels (5 and 6) is below the OECD average. Reproduction is the level at which demands are placed on students, reproduction is the level at which the education system, as a whole, functions. For almost two dec-

ades, since Serbia has been participating in international assessment studies, this average level of achievement has not changed. In other words, whatever measures have been implemented across the system, they have not had a positive impact on student achievements.

This finding does not fully apply to student achievements at the end of the first cycle of education (TIMSS 2011, 2015, 2019)<sup>67</sup>, which is at



**Figure 6.** OECD/PISA 2018 Distribution of students by levels of achievements, comparing Serbia and OECD (Reading literacy)

Source: Pavlović Babić, Avramović, 2021: 12

<sup>66</sup> I.e. half of the standard deviation.

<sup>67</sup> There is a slight, but statistically significant decline in achievement in the last and more recent cycle.

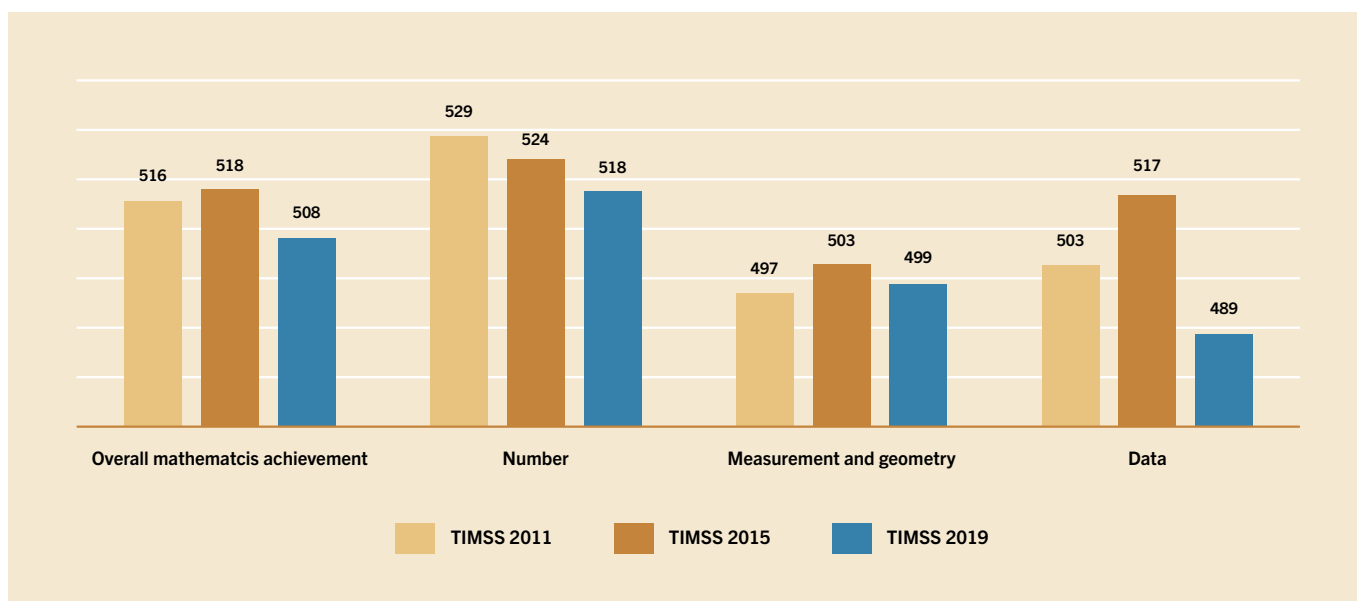


Figure 7. TIMSS Distribution of students in Serbia by levels of achievements; Trend analysis 2011, 2015, 2019: Mathematics

Source: ZVKOV, 2020.

the level of the international average (500) or slightly higher than that (Figure 7) (Đerić et al., 2020). The gap in the quality of education between the first and subsequent cycles in pre-university education is vast. It indicates a discrepancy in the quality of teacher initial education. Teachers teaching in the first educational cycle are educated at pedagogical faculties, while teachers teaching in the second and third cycle are typically educated as subject experts, with a very small share of psychological, pedagogical and methodological knowledge.

Problems with the quality of teaching and learning are detected through the external evaluation of schools, as well. This evaluation is organized in yearly cycles by the Institute for the Evaluation of the Quality of Education, and includes assessment of 30 areas of standards and 158 indicators. The evaluations conducted so far show that standards in the area of Teaching and Learning are not reached by half or more schools (Figure 8) (IEQU, 2020). Overview data summarizing the first six-year cycle<sup>68</sup> shows that all standards and all indicators in relation to them are, more or less,

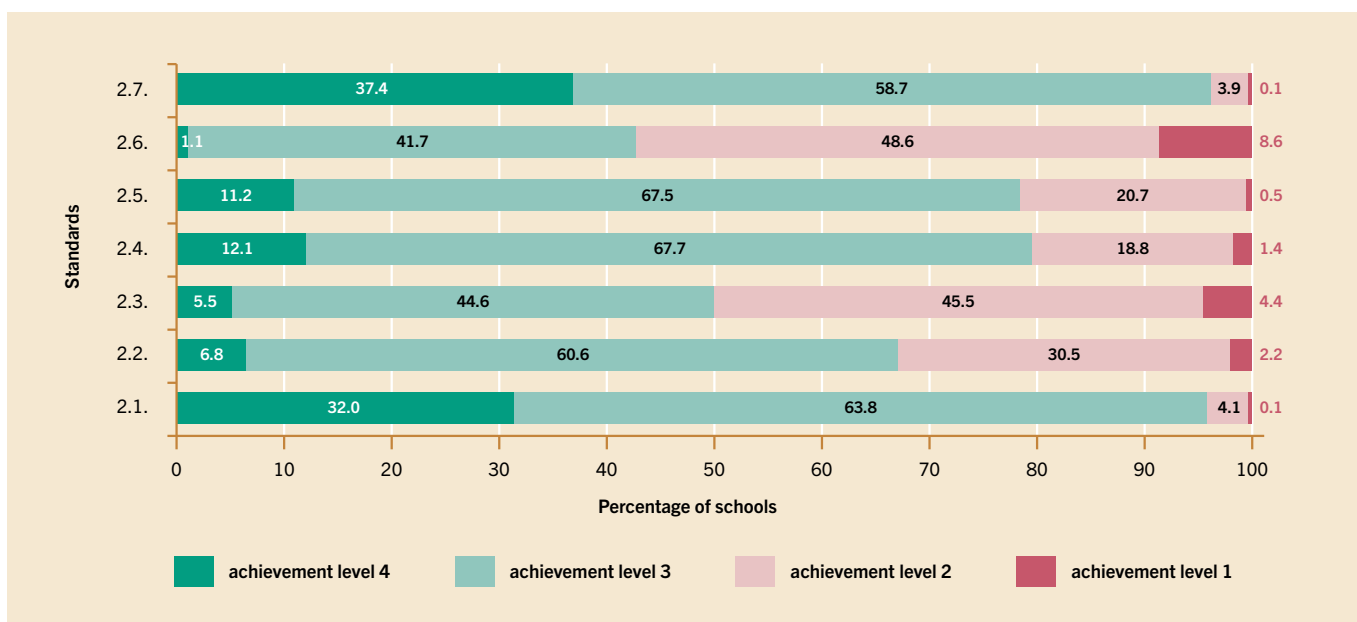


Figure 8. Achievement of the standards on teaching and learning

Source: ZVKOV, 2020.

<sup>68</sup> In which external evaluation was done between 2012 and 2018.

in the zone of good and positive results (green zone). The only one that dramatically deviates is the achievement of standards relating to the quality of teaching and learning; over 50% of schools failed to reach standard (2.6): The teacher uses evaluation procedures that serve further learning, is not achieved by more than 50% of schools. Also, around 50% of schools did not reach the standard (2.3): The teacher adjusts the work in the class to the educational needs of the students (IEQU, 2020).

If we intend to mitigate the consequences of depopulation and compensate for human capital losses, discussions of educational outcomes and the quality of the education system in certain respects need to be at the top of policy priorities. Infrastructure and financing are supporting pillars, however, the system should also aim to avoid compromising between efficiency and quality. Evidence collected so far gives us a good idea in which areas we need to prioritize interventions. Those are, undoubtedly, the quality of teaching and teachers, relevance of our curriculum, and alleviating underachievement at all levels through comprehensive support to students. In the next section we shall be discussing the possible policy options which ought to be explored further.

### 3.2 How can the education system compensate for the losses incurred through demographic changes?

In this chapter we discuss the neglected education opportunities of key target groups: the growing body of adults, young children at the age when education has the highest return, students from a low socio-economic background, vulnerable groups hitherto partially excluded from education, and children living in remote rural areas that are increasingly depopulated. We analyse current trends, highlight missing links, and suggest policies and measures that have the potential for major impact and positive change.

### 3.3 Preschool education brings wide-ranging social and economic benefits for individuals and for society

The early years are a period of intensive neuro-psychological development for the child. Developmental delays before the age of six are difficult to compensate for later in life because early childhood is a particularly sensitive period for brain formation (Naudeau et al., 2011). Children who participated in high-quality early childhood education and care (ECEC) were better prepared for school and tended to have higher achievement at school in maths and reading, and had better memory (Eurydice, 2009; Ivić & Pešikan, 2009, Havnes & Mogstad,

2009). There is cognitive development are especially important during the first six months to three years of life and continue later in preschool settings (WHO, 2009). These facts have led to a broad consensus that investing in the earliest phase of education yields the greatest economic and social returns throughout life, particularly in the case of disadvantaged children. It also alleviates the need for more expensive and often less effective remedial actions later in life (Heckman, 2015).

Expanding access to preschool education has been a stable policy priority in Serbia since the early 2000s, the effects of which have recently started to become apparent. The numbers, however, are still far from expectations. The coverage of children in preschool education is increasing over time in all age groups, but is still well below the Education and Training 2020<sup>69</sup> (ET 2020) or the 2030 benchmarks. The coverage of children from 6 months to 3 years increased to 28.1% in 2019 (Figure 9), as did the coverage of children from age 3 to 5.5 by preschool education (Figure 10) which was 66.4% in 2019. By way of comparison, the participation rate in early childhood education and care (ECEC) at the EU level in 2019, for pupils from age 4 to the age of starting compulsory education at primary level was 95.7%.<sup>70</sup> Despite the continuous increase in the participation rate, the coverage is still far below many. It is also below the target values set by the 2020 Strategy for Education Development in Serbia (coverage between the ages of 4 and 6 should be doubled and full coverage by the preschool programme achieved), and EU the benchmark (96% of children above age 4), and especially the new ET 2030 benchmark of 96% of 3-year-olds being included in organized early education and care programs (Eurydice, 2019; EC, 2021).

Equity remains a significant concern, as will be discussed in the next sections. Only 10.5% of children from the poorest quintile and 7% from the Roma population are enrolled in educational institutions.<sup>71</sup>

Preschools are open to enrolment for all children, but this applies in cases where there is sufficient accommodation capacity. If there is competition and selection, the application of this principle is not always consistent. There are major differences between the preschool institutions in terms of the share of children enrolled by priority, which may indicate that some pre-schools do not perform enrolment procedures respecting the right to priority enrolment.<sup>72</sup> In addition, some children in need

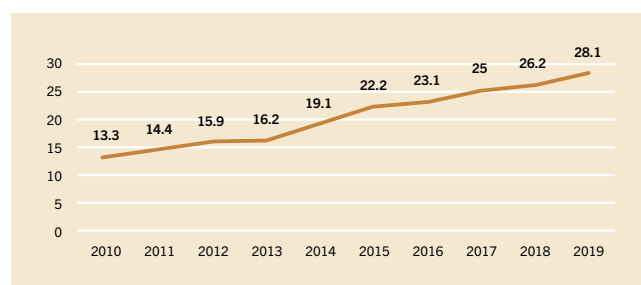


Figure 9. Preschool coverage of children from from 0 months to 3 years, from 2010 to 2019 (in %)

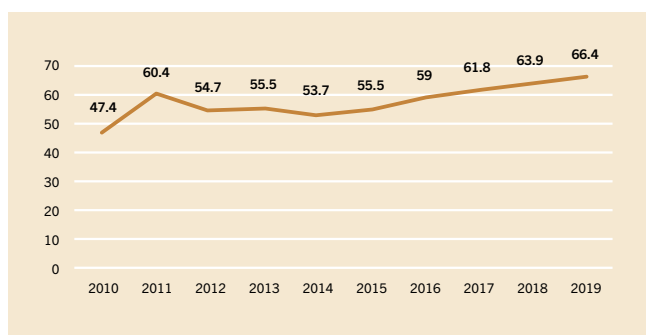
Source: SORS, DevInfo

<sup>69</sup> Education and Training 2020 (ET 2020) is the strategic framework for European cooperation in education and training, the new Strategic Framework 2030 is the successor of the ET 2020 framework.

<sup>70</sup> Eurostat. Source: [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ\\_uoe\\_enra10&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_uoe_enra10&lang=en)

<sup>71</sup> Public-Private Partnerships for Equitable Preschool Education in Serbia (2020).

<sup>72</sup> Educational Research Association of Serbia. (2020). Evaluation of preschool inclusiveness in Serbia (unpublished report).



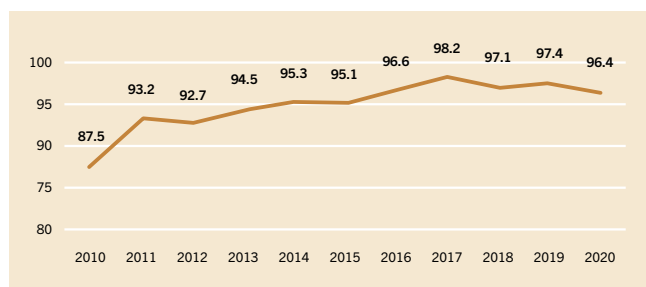
**Figure 10.** Preschool coverage of children aged 3 - 5.5 years from 2010 to 2019

Source: SORS, DevInfo

of additional support remain unenrolled because the preschool cannot make adequate provision (such as a personal companion).

The Preparatory Preschool Programme was introduced as early on as 2006, as a mandatory, free of charge, 9-month-long, 4-hour daily programme for all children between the ages of 5.5-6.5. Even though available capacities are sufficient for full coverage, given that this program takes place in both preschools and primary schools, the current coverage rate is 96.4% (Figure 11). The target value of 100%, set by the 2020 Strategy for the Development of Education in Serbia, has not been reached so far. Those missing to full coverage are mainly children from vulnerable groups – Roma and lower SES families (MICS, 2019: 27).<sup>73</sup>

Although capacities in preschool education are gradually increasing, the existing capacities of public and private preschool institutions are not sufficient to meet requirements. In addition, the network of pre-school institutions is not well-developed (Table 1). The lack of capacity is particularly pronounced in large urban areas, but also in rural and mountain areas where the nearest facilities are very far from the villages. In 2019, there were 5.2% more children included in preschool institutions over the optimal capacities. In addition, a significant number of children were waiting for their opportunity to enrol. In 2019, 6,740 children were on a so-called waiting lists, which amounts to 3.07% of current capacity.



**Figure 11.** Coverage of children by compulsory preparatory preschool programme 2010 - 2020 (in %).

Source: DevInfo

<sup>73</sup> see [https://www.unicef.org/serbia/media/16301/file/Serbia%20\(National%20and%20Roma%20Settlements\)%202019%20MICS%20Statistical%20Snapshots\\_English.pdf](https://www.unicef.org/serbia/media/16301/file/Serbia%20(National%20and%20Roma%20Settlements)%202019%20MICS%20Statistical%20Snapshots_English.pdf)

<sup>74</sup> Group 1 is made up of municipalities in which the per capita GDP is above state average; group 4 is made up of the poorest municipalities where the GDP per capita is less than 60% of state average; and group 5 are devastated areas from the 4th group with less than 50% of the state average.

	Total	Urban area	Other
<b>Number of enrolled children</b>	224,563	182,640	41,923
<b>Children enrolled over capacity</b>	11,680	10,371	1,309
<b>Children who were not enrolled due to overcrowding</b>	6,902	6,454	448

**Table 1.** Preschool education capacity in 2019

Source: SORS (2019)

The coverage rate is the highest in the most developed municipalities and the biggest cities (Group 1 municipalities<sup>74</sup>). In these localities, the majority of children are enrolled in public preschool institutions. These municipalities have the highest and constantly growing number of private preschool institutions. Nonetheless, overcrowding has led to the longest waiting times and a large number of children not being enrolled. This almost never occurs in the least developed areas (groups 4 and 5) where private preschool institutions are rare, while public capacities seem to be sufficient to meet the needs of families living in the vicinity of institutions. Here, the main obstacle is the availability of the preschool institutions to children living in remote, mostly rural areas.

### 3.3.1 Full inclusion of vulnerable groups in education

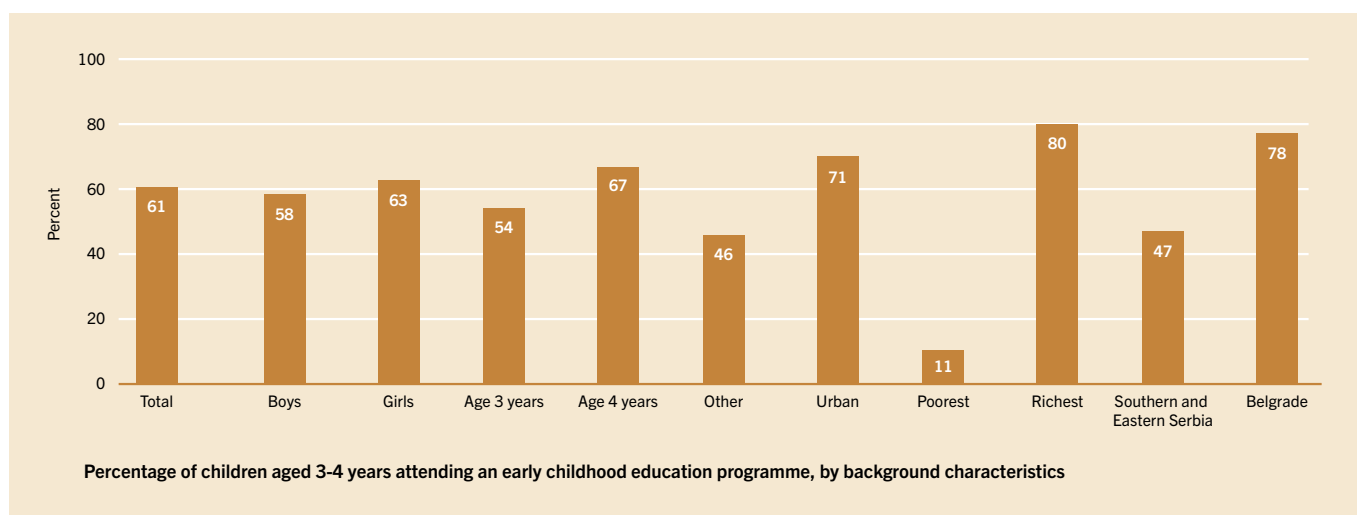
Despite anti-discriminatory legislation in education and equity-oriented policies, the education system in Serbia is not really equitable. Even with all the reform initiatives and developmental projects, several groups of children and youth are being left undereducated or even without any education whatsoever. Among them are children from lower SES and Roma families and students with disabilities.

Socio-economic status spurs differences regarding education attendance and attainment from early childhood onwards. The Multiple Indicator Cluster Survey (MICS), conducted by UNICEF, detects a huge difference in enrolment to early education programmes between the richest and poorest families (Figure 12).

The 69% gap in ECE attendance between the richest and poorest quintile is additionally exacerbating the situation of children in poverty, among whom only 48% have at least 3 books at home, compared to 90% among the richest quintile. Children from the poorest quintile are also less frequently involved in the compulsory preschool program 1 year before starting primary school (83% compared to 100% in the richest quintile) (UNICEF, 2020).

At enrolment to primary education the gap between children from the poorest and richest SES quintile decreases to only 1%, as primary





**Figure 12.** Attendance in early childhood education (ECE) in Serbia, 2019

Source: MICS 6 Rezime, 2019

education is compulsory, while in secondary education it reappears again, where 79% of the poorest versus 98% of the richest attend.

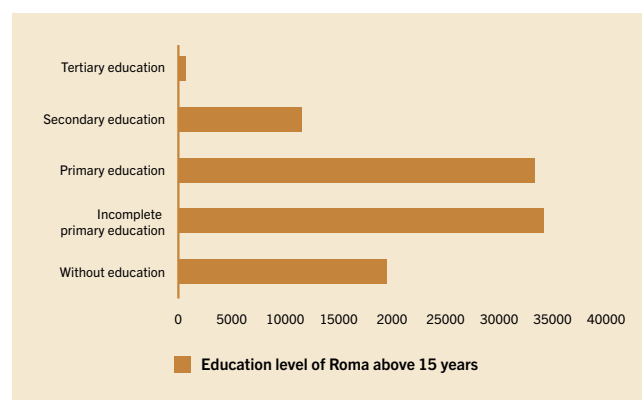
Economically better advantaged students outperformed the disadvantaged ones in reading by 73 score points in PISA 2018. Although this difference is somewhat smaller than the average difference between the two groups (89 score points) across OECD countries, it indicates a huge loss of human capital for Serbia – students from low SES families lag behind those from the highest SES quintile by almost 2 years of educational proficiency. Compared to PISA 2009, when the performance gap in Serbia related to socio-economic status was 66 score points, the gap only widened in the period between 2009 and 2018.

The impact of poverty on education outcomes profoundly enforces the circle of poverty and has lasting detrimental effects on the level of human resources in Serbia. Lower SES students will often drop out of school or choose easy to access, but low quality vocational education and training (VET) qualifications not leading to decent employability. Children in families where the head of the family has no secondary education have a 4.5 times higher chance of falling below the poverty line (Čekić Marković et al. 2021). Many students, especially disadvantaged students, hold lower ambitions than would be expected given their academic achievement. In Serbia, one in eight high-achieving disadvantaged students – but 1 in 50 high-achieving advantaged students – do not expect to complete tertiary education (OECD, 2019). This puts Serbia in danger of having a high percentage of low skilled or uneducated people who cannot contribute to economic development or satisfy their own material needs, and ensure a decent life for their families. In the search for job opportunities, they might also migrate to countries that are lacking in lower skilled labour (Aranđarenko, this volume). Although students from low SES families can be partially jeopardized in other countries as well, Serbia cannot afford to lose the human capital of these young people. Other countries

The Roma population in Serbia, as in most European countries, is the youngest population and represents a demographic asset. The average age of the Roma in Serbia is 28.3 years, and it is estimated that over 50% of Roma are under the age of 25, thus creating a higher percentage of Roma in the school aged population than in the adult population (SIPRU, 2021). Informal assessments state that the school age cohort of Roma children could increase to 5,000-10,000 per cohort (FOD, 2010).<sup>75</sup> Therefore, a high quality of education and the development of competencies of Roma students should be seen as a priority and competent, well-educated young Roma as a comparative advantage and a cherished asset for the country.

However, although serious education boosting activities have resulted in positive changes in the education trajectory of the Roma (Figure 13), the majority of this population is still undereducated.

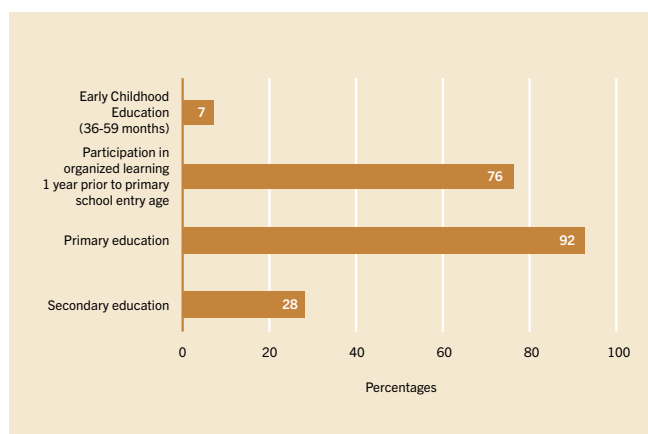
These numbers correspond with population census data from 2011, which revealed 33.3% of Roma with completed primary school, 11.4%



**Figure 13.** Education attainment of Roma in 116 municipalities in 2020 (absolute numbers)

Source: Overview of data of cities and municipalities on measures of social inclusion of Roma in 2020. (SIPRU)

<sup>75</sup> In Serbia, the overall cohort at school age is estimated to number around 66,00 children.



**Figure 14.** School net attendance rate, Roma settlements, 2019 (in %)

Source: MICS 6 Rezime, 2019

with a secondary school diploma, and 1% with a high education degree. Current education indicators of Roma children and youth imply that the education system in Serbia is still not on the right track and is not integrating all Roma students (Figure 14). Roma students living in Roma settlements are in a worse position; their attendance rate is somewhat lower than for the majority population, even at the compulsory education levels, such as primary school and the preparatory preschool programme, while their attendance rate for the non-compulsory but still essential education levels (ECE and secondary education) is far below the rate in the mainstream/basic population.

Serbia has a well-developed set of policy measures regarding the integration of Roma students into mainstream/regular education. Integration policies in Serbia include the Decade of Roma Inclusion 2005- 2015, the EU Strategy for Roma Integration (European Commission, 2020),<sup>76</sup> the work of the Roma Education Fund as of 2005,<sup>77</sup> and two national Strategies for the social inclusion of Roma (2009-2015 and 2016-2025).

As a result of these efforts, the education indicators of Roma have increased, and numerous Roma professionals are being employed in schools and preschool institutions (e.g. 175 Roma pedagogical assistants); changing the school ethos and the school-parent communication wherever they were active, and making desegregation measures more effective (Daiute & Kovač Cerović, 2017; Kovač Cerović & Orlandić, 2016). The Government’s report on the achievements of Roma integration measures is quite favourable. Nevertheless, the implementation of national level measures often stalls, illustrating the system-wide neglect of the Roma population.

A recent policy mapping reported additionally disturbing findings indicating that, despite the great need to integrate the Roma population into education, local level support to Roma students provided by LSGs is lacking (SIPRU, 2020b). For example, among the 116 LSGs

School year	No. of scholarships	School achievement criteria	% of girls
2015/2016	176	Excellent grade average	65%
2016/2017	150	Excellent grade average	60%
2017/2018	303	Excellent and very good grade average	63%
2018/2019	547	Excellent and very good grade average	60%
2019/2020	704	Above passing average (2.0 and more and at least grade 3 in behavior)	
<b>Total</b>	<b>1880</b>		

**Table 2.** Number of scholarships for Roma students, 2015/2016 to 2019/2020

Source: MPNTR

that contributed to the mapping (out of a total of 174), only 9 provided scholarships for secondary education students, and 6 for higher education students,

Around half of the analysed municipalities provided funding for primary school Roma students’ transportation costs (69 LSGs) and for Roma students’ school meals (54 LSGs).

The number of scholarships for Roma secondary education students from the RS Budget has increased in the last five years, owing to enrolment criteria which are increasingly being adjusted, but the actual numbers still cover only a fraction of the Roma cohort.

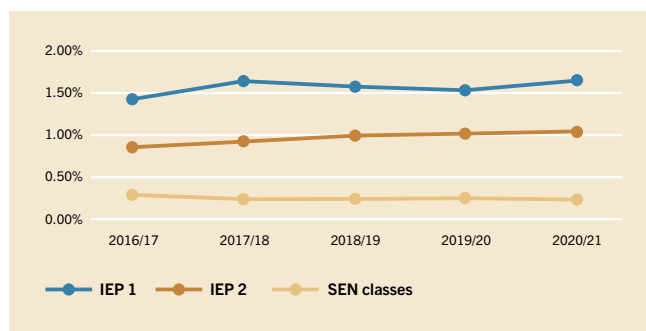
The major source of scholarships for Roma higher education students is the Roma Education Fund and the Roma Memorial University Scholarship Programme (RMUSP) - in 2019 alone 62 students from Serbia received the RMUSP scholarship, and 5 more received other international scholarships.<sup>78</sup>

Nevertheless, all these measures are far from covering the needs of Roma children and students and assisting their education to completion of the secondary or higher level. As a result, Serbia is losing enormous human capital, and unless the integration policies are implemented with much greater care, this trend will not only continue but increase.

<sup>76</sup> The first EU strategic framework for Roma integration was adopted in 2011. A new strategic framework until 2030 was adopted in 2020. European Commission (2020), “Recommendation of the Council on Roma equality, inclusion and participation”, Brussels 2020.

<sup>77</sup> Serbia was among the first of the Roma Education Fund /REF/ supported countries to have a detailed policy and situation analysis and developed framework of REF action, see: “Advancing the education of Roma in Serbia”, 2007 <https://www.romaeducationfund.org/publications/studies-policy-documents/country-assessments/>

<sup>78</sup> See: <https://www.romaeducationfund.org/scholarship-beneficiaries/>



**Figure 15.** Trend in the share of students who need additional support in regular primary education

Source: Ministry of Education

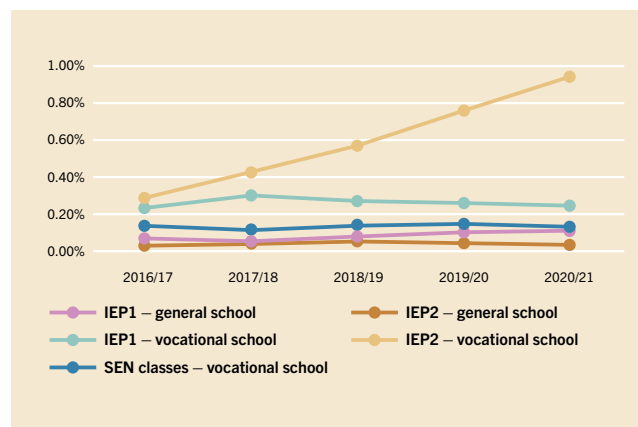
### 3.3.2 Incomplete integration of students with disabilities and learning difficulties

The traditional practice of educating children with disabilities and learning difficulties in special schools has left these people cut off from the community, without employment, and without the capacity to live independent lives. Such traditional policies burden the budget for social assistance/payments, do not respect human rights (and the rights of the child), diminish the development of human capital, and prevent the possibility of social integration and the capacity of the majority population to develop a positive attitude and acceptance of people with disabilities and learning difficulties. Therefore, even if we are referring to a small percentage of the population (2-8% according to various criteria), their integration through inclusive education and the development of their capacities to their maximum are important goals in the context of depopulation.

The aforementioned traditional orientation started to change through-out Serbia after 2009. Individual education plans (IEP) were introduced and children with disabilities and learning difficulties were integrated into regular schools. While the inclusive education policies and their implementation gave rise to public interest and debates, the inclusion policies had certain effects. Their impact, however, is still far from the required level (see figures 15 and 16). From the 2.5-3% of students who have been identified as needing additional support for their education in regular primary schools, most of them are educated according to IEP1, where changes in teaching approach have been prescribed, but not major curricular reductions, as well. The up-take of IEP1 is increasing steadily in the years/ages observed, which indicates more sensitivity towards students with learning difficulties.

A small proportion of students enrolled in regular primary schools are still educated in separate classes for children with disabilities and learning difficulties only. However, that trend is declining, and is coupled with a slight increase of children with IEP2 (major curricular changes) in regular classes. All three of these trends indicate a growing capacity of primary schools for non-restrictive inclusion of children needing additional support (Figure 15).

The share of students who need additional support for their education is much smaller in secondary than in primary education. This



**Figure 16.** Trend of the share of students needing additional support in regular secondary education

Source: Ministry of Education

indicates a low transition rate between the two levels for these children, but also the fact that inclusive education policies have begun to reach secondary education. The share of these children in general education secondary schools (Gymnasiums) is particularly low, only modestly increasing through the years. The trend has changed in vocational schools - from less than 0.6% in 2016/17 to around 1.3% in 2020/21. There has been a particular increase in the share of students with IEP2 in vocational education (Figure 16).

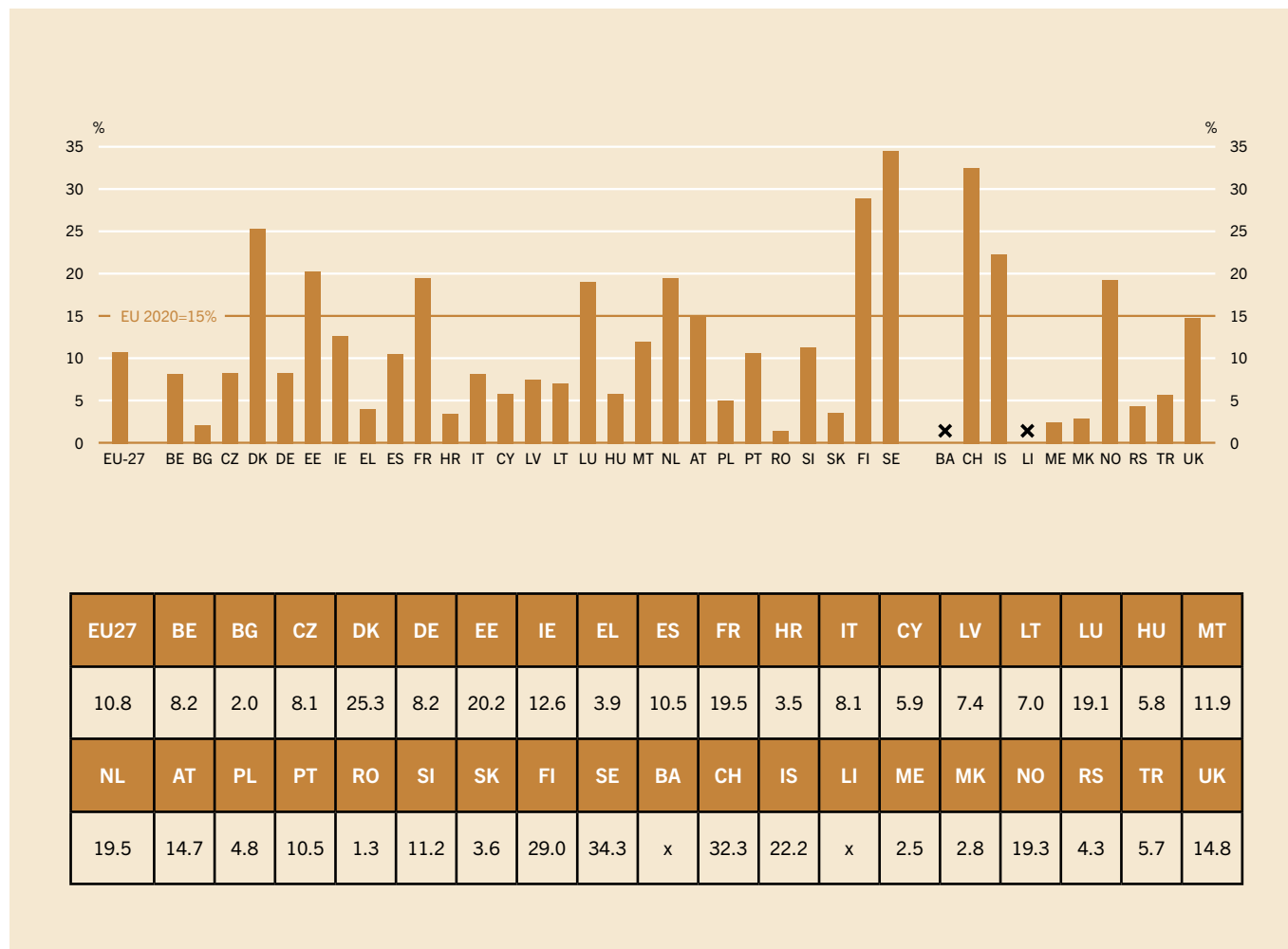
More efforts are needed to fully embrace the potential of inclusive education for the development of all potentials of students contributing to the overall development of the country's human capital.

### 3.3.3 Access to life-long learning (LLL)

Along with Croatia and Bulgaria, Serbia is among countries with the oldest population in the world on average (Nikitović, in this volume) with pronounced regional imbalances. It is paramount to ensure that such a population stays actively and competently in the labour market, although skills requirements have changed manifold from the time when the older population were completing their formal education, and ever-growing mismatchings of skills are far from uncommon. This is even more significant in the context of depopulation, when the overall working age population is shrinking and the country's human capital that should ensure productivity, innovation, and competitiveness is eroding.

The EU education and training benchmarks from the early 2000s place focus on making lifelong learning a reality. The benchmark for 2010 was set at 12% of adults (aged 25-64) who participated in education and training in the four weeks prior to the survey for 2010. Subsequently, it was raised to 15% (for 2020) and to at least 47% of adults aged 25-64 who participated in learning during the last 12 months prior to the survey (for 2025) (EC, 2021). These benchmarks are set high for many EU member states as well. For example, in 2019 fewer than one third of them reached the benchmark of 15% (Eurydice, 2021).

With 4.3% of adults engaging in lifelong education, Serbia is far below all the aforementioned benchmarks (Figure 17), although adult



**Figure 17.** Adults (aged 25-64) who participated in education and training in the four weeks prior to the survey

Source: Eurostat, Survey on the European Union workforce, [tmg\_lfse\_01] (data published on 22 April 2021); Serbia marked as RS.

education and lifelong learning had started to strategically develop after the early 2000s, and implementation intensified in parallel, as well.<sup>79</sup> Participation in adult education in Serbia is lagging behind the Strategy for the Development of Education benchmark set at 7% for 2020, and there are still no regular mechanisms to monitor the participation rate of adults in organized education and training.

Currently, there are several types of adult education and training in Serbia. Basic education and upskilling is carried out through primary or secondary schools providing functional basic education with the first qualifications for adults (Formal Adult Education). Requalifications or further qualifications in VET are provided by VET schools acting as adult education centres. Finally, there is a wide array of different nonformal education opportunities, provided by various institutions, including:

- Publicly subsidized institutions such as: the National Employment Service (NES) with its branches in 30 towns throughout Serbia, focusing on the unemployed;

- The Education Centre within the Chamber of Commerce and Industry of Serbia that offers continuous adult education in the areas of business and entrepreneurship;
- Remnants of Adult Universities – centres for the professional development of adults located in 12 towns in various parts of Serbia, now working on identifying labour market needs and educational priorities, on collaboration with local authorities, schools and other relevant institutions, and on proposals for adult education programmes and their implementation;
- The National Agency for Regional Development, that provides various modes of support for start-up companies and entrepreneurship at the local level, including the professional development of adults;
- Programs of publicly recognized organizers of adult education activities (PROAEA), such as companies, civil society organizations, cultural institutions, associations, open universities, career centres, consulting and training centres, and private schools; in order

<sup>79</sup> Functional adult education began with Roma adults, though a 2005 REF grant, and grew into a widely-implemented policy with IPA support. Adult education centres were established, also with IPA support starting from 2008.

for a programme to be recognized, it needs to be approved by the Qualifications Agency and Ministry of Education, Science and Technological Development (MoESTD).

Two other possible types of lifelong learning opportunities are markedly underdeveloped and underused in Serbia. Specialized training or liberal arts adult education is provided by higher education institutions as short, non-degree courses. Universities have started establishing centres for continuous education, but both supply and demand are still low. Informal learning, which implies learning activities that occur in the family, workplace or local community, or as part of daily life, on a self-directed, family-directed or socially directed basis is also a type of skills acquisition that builds the human capital of a country. In Serbia, formal recognition of informal learning has, admittedly, been announced but has yet to be implemented.

There are substantial regional and rural-urban differences as well. Belgrade municipalities take up more than half of the total coverage (67% of all participants are involved in some form of adult education in Belgrade municipalities). Higher participation is recorded in Sombor, Leskovac, Novi Pazar, Čačak and Štrpce. However, it is clear that the distribution of adult education services in primary and secondary schools is very poor and that the majority of LSGs do not have any kind of offer.

Formal secondary adult education for those without ISCED 3 was attended by 447 adults in 2019, which is significantly less than the 2,776 places available. Out of the 23,772 places in secondary schools for programmes leading to qualifications, additional qualification and specializations in formal education, only 8,554 were filled.

An important step made in an effort to improve the quality of adult education was the adoption of the Bylaw on closer conditions for PROAEA, and the Bylaw on the pedagogical and andragogical assistant. Aside from these documents directly focused on adult education, the Law on the National Qualifications Framework was adopted and the Agency for Qualifications was established. Nevertheless, in Serbia, skills audits indicating regular evaluation of non-formal and informal learning are not yet the practice, despite the 2012 Council Recommendation on the validation of non-formal and informal learning, followed by two thirds of European countries (Eurydice, 2021).

However, problems remain and present a significant barrier to quality LLL and adult education. Low participation in Serbia is the consequence of several factors.

- Many programmes are not relevant for the labour market and there is a lack of coordination between the qualifications offered and the needs of employers<sup>80</sup> (SRHS&GIZ, 2019). Programmes offered by some PROAEA and NES are still not recognized or considered relevant by employers, which makes them useless for

participants. Promotional campaigns planned by the NES were insufficient and did not reach all potential beneficiaries.

- Recognition of prior learning is still not regulated (it has been delegated to the Agency for Qualifications). Once this procedure is established, many could obtain qualifications of levels 2, 3 and 5 that are recognized by the National Qualifications Framework (NQF).
- Short cycle programmes, which would provide a certain number of ECTS points that would accumulate for obtaining qualifications, are not developed.
- Online education and blended learning<sup>81</sup> is still limited in adult education. This is a major obstacle as these programmes should be the most flexible in terms of time and place where activities are taking place. Also, the potentials of personalized learning, contextualized learning<sup>82</sup>, and collaborative learning<sup>83</sup> are rarely recognized and utilized in adult education.
- Financial and organizational barriers to participation are significant. On average, across the EU-27, around one in three adults who wanted to participate (or participate more) in education and training (32.2%) reported costs among the obstacles that prevented them from doing so (Eurydice, 2021). In Serbia in 2019 FAE had 5,633 participants but only 2,930 finished (52%). Those who did not, identified high transportation costs as a major barrier and the need to take part time jobs that were impossible to fit in with education.<sup>84</sup>

In order to support human capital development throughout an entire lifespan and adapt the education system to addressing the needs of an ageing population, Serbia will need to revise its LLL system. This means focusing on creating a more robust system that avoids fragmentation, embraces online learning strategies and modern contextualized blended learning approaches, and, in addition to expanding the offer and rendering it more equitable, speeding up the implementation of established policies (such as recognition of prior learning, ECTS accumulation, strengthening the connection of education and the labour market), developing a monitoring framework for relevant indicators in adult education.

The renewed European agenda has set priorities for the participation of older learners. In order to achieve progress, concrete objectives need to be set and the developments closely monitored. Serbia will also need to invest in broadening the scope/outreach and promotion among potential participants in adult education, and include them in career counselling and orientation services. Adult education providers should offer information, guidance and counselling services on non-formal and informal learning to help older people better understand the skills they have gained through their life-experience and to better recognize how these skills can be used.

<sup>80</sup> Report on Implementation of SED 2020 Action plan for 2019-2020

<sup>81</sup> Blended learning is commonly used as a generic name for a variety of instructional styles, where online education is combined with face to face instruction.

<sup>82</sup> Contextualized teaching and learning engages students in active learning while assisting them draw out the meaning from the information they are receiving.

<sup>83</sup> Collaborative learning<sup>83</sup> is an umbrella term for a variety of educational approaches which imply joint intellectual effort by students, or students and teachers together. Usually, students working in groups of two (or more), mutually searching for understanding, solutions, or meanings, or creating a product.

<sup>84</sup> Report on Implementation of SED 2020 Action plan for 2019-2020

# 4 Essential resources for education change in the context of depopulation

In this chapter we focus on key mechanisms that need to be built up in order to enable education to maximize impact in strengthening human capital and the wellbeing of the population in Serbia. More specifically, we deal with creating an effective teaching force with the competence needed to respond to the challenges, using digitalization in education, creating a conducive financial and strategic framework and preventing corruption in education.

## 4.1 Maximizing the effectiveness of the teaching force

The status of teachers and policies regulating or developing the teaching profession in Serbia are among the most controversial topics in the education realm. Although the quality of teachers is the main contributor to the quality of students' learning outcomes (Hattie, 2008), this issue is burdened with major controversies, creating serious risks for the future of the country.<sup>85</sup> We shall list only the most obvious ones:

### 4.1.1 Teacher salaries

Teacher salaries are an issue of constant discussion. Their size has contributed to rendering teaching a non-attractive profession, and to an overall negative selection of staff working on levels ISCED 2 and 3. In 2015, teacher salaries were additionally jeopardized by an overall 10% cut in order to consolidate Serbia's fiscal space. This cut has not yet been compensated for. Country level averages in public service

Teachers (16 years of experience with homeroom teacher top-up):	90,945
Employee with qualification level 6 (education of 180-240 ECTS), Serbia:	104,875
Employee with qualification level 6 (education of 180-240 ECTS), Belgrade:	126,175
Employee with qualification level 7-8 (education of 300 ECTS and more), Serbia:	125,673
Employee with qualification level 7-8 (education of 300 ECTS and more), Belgrade:	155,604

Table 3. Average gross salaries, 2020

Source: SORS, Statistical yearbook 2021

are usually used as reference points for teacher salaries. The teaching profession is far more educated than the average employees in public service, therefore teacher salaries should be comparable to salaries for professions requiring higher education qualifications and/or MA degrees (240-300 ECTS). In that comparison, generally speaking, teacher salaries are below the averages for comparable qualifications overall in the country, irrespective of sector and source, and particularly so in Belgrade (Table 3).

In recent years there has been a relative decrease of teacher salaries compared to the average salaries in the country, i.e. in public administration and the public sector (Figure 18). Teacher average net salaries have been lower than the average salaries in the public sector in varying degree (with values 0.7% below the average in 2018 and 6.4% in 2021) while the gap compared to public administration net salaries is even higher, between 6.4 and 9.3%.

Annual teacher net salaries as a percentage of GDP per capita, an internationally used reference point, fluctuate below GDP per capita in the case of an average net salary to the level which is somewhat above the GDP in the case of an average annual gross salary. In comparison, a recent Eurydice overview of teacher salaries (Figure 19) depicts teachers in Serbia at the very low end of the scale, while their working hours are the highest among European countries (24 teaching hours weekly in lower and upper secondary education – compared to e.g. 17 teaching hours in Germany, 14-17 in Finland, 18 in Norway and Italy).

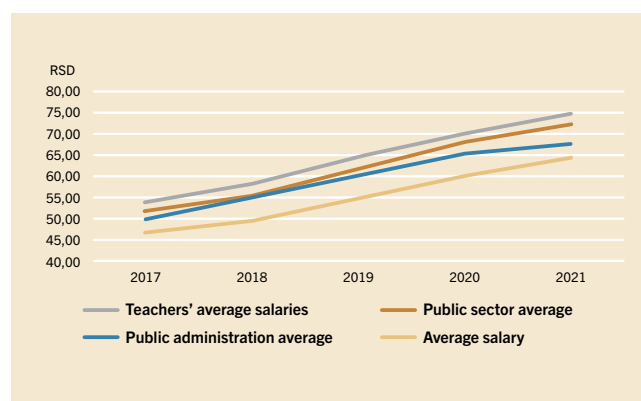
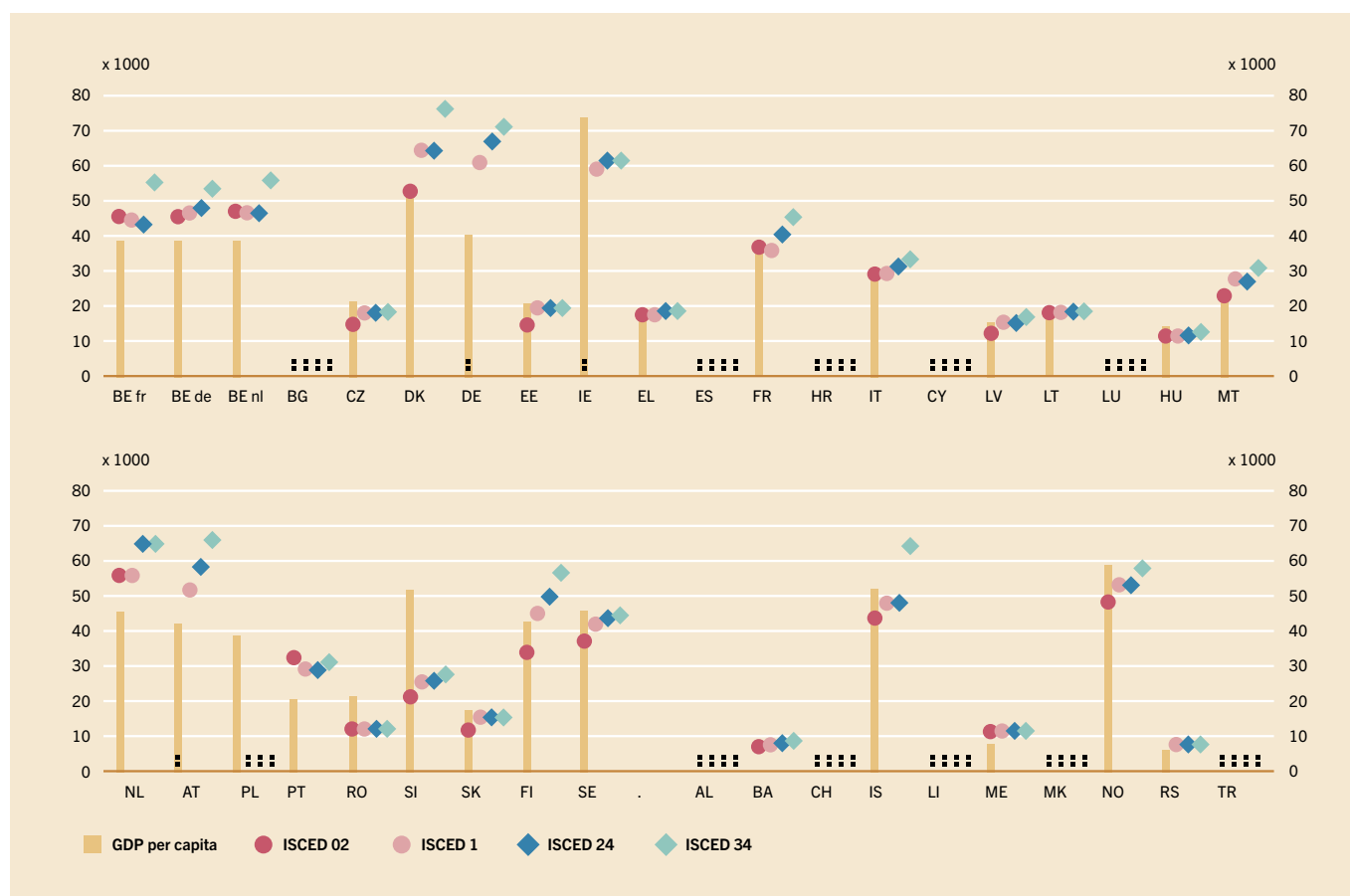


Figure 18. Comparison of average net teacher salaries with public sector, public administration and overall net salaries, 2017-2021

Source: Data from the Statistical Office of the Republic of Serbia. For calculating teacher average salaries coefficients for 16 years of work was used and the top-up for class home teacher. These calculated salaries are higher than the average salary in education, by 6-8%

<sup>85</sup> Paraphrasing the title of the famous US study on the teaching force "A nation at risk."



**Figure 19.** Average actual gross salaries for teachers aged 25-64 in public schools, compared to GDP per capita, in 2019/20 (in Euros)

*Serbia is referred to as RS*  
*Source: Eurydice, 2021*

The aforementioned data directly spotlight the sources of negative selection in the teaching profession in Serbia, and underpin the strategy used by students of various academic disciplines to mostly seek out other careers, and resort to the teaching profession only if they do not succeed in their search.

These data also indirectly indicate that the consolidation of classes exercised hitherto did not have a positive impact on teacher salaries, contrary to expectations in the education sector. Leaving teacher salaries at the current level will jeopardize the effectiveness of all future development policies and investments in the development of education, and contribute to new problems in the quality and equity of education, eventually enlarging the negative impact of depopulation on human capital in Serbia.

There are several mechanisms for increasing teacher salaries. Salary increase can be connected to top-ups for additional engagements or unfavourable working conditions, or to years of experience in order to make the teaching profession more attractive to novice teachers. Tying salary increases to additional qualifications in critical competency areas (such as digital education or inclusive education) can motivate teachers

to engage in implementing new policies. Increase can also be linked to a system of career advancement that includes professional development and innovation activities. Furthermore, of course, an overall increase of a certain percentage should be planned within the budget.

Serbia currently uses only the first mechanism – salaries increase with seniority and as top-ups with additional engagements in school activities such as form master duties, holding additional classes above the norm, and working in remote areas with multigrade classes. The incentive value of this mechanism is very low – years of service are accumulated irrespective of quality, and the top ups are not a stable increase, allocation of such possibilities are negotiated between teachers and the principal on a yearly basis and can depend on interpersonal and intragroup processes not related to the quality of the teachers’ pedagogical work.

A new incentive mechanism was established in the early 2000’s and additionally specified several times since<sup>86</sup> – career advancement through 4 levels, connected to relevant professional development, innovation, quality assessments and coupled with salary increase. This system has, however, not been fully implemented, and only a small percentage of

<sup>86</sup> Rules on permanent advanced professional training and advancement into the positions of school teacher, educator and research assistant, RS Official Gazette, no. 109/2021.

teachers have acquired higher titles to date. This system, however, has not been fully implemented, and only a small percentage of teachers have acquired higher titles to date. Those who have, still have not received salary increases, as the current fiscal legislation does not recognize the career ladder in education as relevant (Eurydice, 2018).

Establishing an effective and relevant incentive structure that mobilizes teachers for developing their practice is paramount for an effective education system, therefore neglecting this area should not be an option. As a rule, a more developed economy can create teacher shortages, as teachers have new, better options of employment, and vice versa, economic downturns increases the teaching force, as professionals from closing businesses seek a teaching career. In the next section, human resources management in education is discussed.

#### 4.1.2 Planning and management of teachers is not well developed and teachers' wellbeing is jeopardized.

Serbia is among those rare countries that do not use any planning modalities regarding the teacher workforce, either at national or municipal level (Eurydice, 2018). Data on the teaching force is unclear, especially in respect of full time and part time teachers, and teachers with temporary or tenure contracts. Moreover, the data are not readily retrievable for any policy, research or intervention purposes. The fact that teachers are employed by schools and not by LSGs or regional or national authorities contributes to the fragmentation in the teachers' data. Therefore, qualification mismatches, shortages and oversupplies of the teaching force are present, that create both teacher dissatisfaction and lost investments in the area of teacher education. Serbia is among a small number of European countries (with Portugal and Lithuania) that face both teacher shortages and oversupply, as well as shortages of students in initial teacher training (Eurydice, 2018).

Teacher wellbeing, including stress levels, working conditions, teaching and administrative workload, their self-esteem and self-efficacy and collegial atmosphere in schools, is a new policy area in the EU Member States, as it is a key factor for enhancing the attractiveness of the profession. It is argued that “the wellbeing of teachers and trainers influences their job satisfaction and enthusiasm for their work, and has an impact on the attractiveness of their profession, and subsequently on their retention in the profession. It is an important factor in quality and performance, correlating with their own motivation and with the motivation and achievements of their learners” (Eurydice, 2018).

Teacher working conditions in Serbia are affected by the lack of HR planning, with many teachers working in several schools and losing time on commuting and having fragmented working hours. The number of required teaching hours is higher for teachers in Serbia than in most of their European peers (table 4). The law stipulates 24 hours weekly, while in most EU Member States it is between 15 and 20. A smaller teaching load allows far more time for teachers to prepare, teamwork, communicate with parents and students, individualize their approach, and engage in professional development.

Moreover, teachers in Serbia are overburdened by administrative tasks, and do not have much autonomy in curricular decisions. Both of these conditions are high stress factors for teachers Europe-wide (Eurydice, 2018). Teacher professionalism, needed for the development of high competencies in students, subsumes reflection, autonomy in designing the school curriculum and selecting teaching methods, innovation, and collaboration with fellow teachers, team teaching, and lots of support, including also assistants taking over administrative and easier tasks (Hagreaves & Fullan, 2015; Moursher, Chijioko & Barber, 2010). In countries where education outcomes are high measured by international assessments, this is the case. In Serbia it is not, creating additional barriers to a fully effective teaching force needed for high quality human capital development.

	BE fr	BE de	BE nl	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT
<b>A</b>					40	37	40	35		30	38	35	40			40	36	40	40		40	40
<b>B</b>				40						30	30				31	30		24	32	27		
<b>C</b>	min.	18	18	16			17			22	23	18	15	14			21	22	22	17	20	17
	max.		20	19	19							21	20	17				22	26			18
	PL	PT	RO	SI	SK	FI	SE		UK- ENG	UK- WLS	UK- NIR	UK- SCT	AL	BA	CH	IS	LI	ME	MK	NO	RS	TR
<b>A</b>	40	35	40	40	38		40					35	30	40	42	40	42	40	40	38	40	
<b>B</b>		24				21	35		32	32	32	28					23		25		31	
<b>C</b>	min.			16		14													15			12
	max.	14	22	18	17	17						23		24	21	17	21	15	17	18	24	16

**A** - Overall working hours    **B** - Hours of availability at school    **C** - Teaching hours

**Table 4.** Average working hours of lower secondary teachers in Europe

Serbia is presented in Table 4 as RS.  
Source: Eurydice, 2018



### 4.1.3 Serious shortcomings in teacher education and development

High quality teacher education is essential for high quality teaching (Bucherberger et al. 2000). The education of teachers is a continuous process, encompassing initial education, induction, licensing, continuous professional development and career advancement (Bera & Petrović, 2020), aiming to facilitate the development of teacher competencies formulated in teacher competency frameworks (TCFs). While all the listed elements exist in Serbia, all of them suffer from certain glitches, and their quality, relevance and effectiveness need to be placed under heightened scrutiny if the country expects its teachers to perform at their highest capacity and have a positive impact on the country's human resources in the future.

*Initial teacher education* (ITE) is an education policy area marked by slow development but long-term impact. To date the modernization of ITE in Serbia has not proved very successful. Two major changes that align ITE to dominant practices in the member states of the EU were introduced in 2003 and 2009. They require an MA degree from teachers<sup>87</sup> of a 30 ECTS module for professional studies of psychological, pedagogical and methodological disciplines coupled with a 6 ECTS practice in educational institutions, which is a modest requirement, compared to EU wide practice.<sup>88</sup> Both changes are very slow in their implementation, despite sizeable support from European assistance through TEMPUS and IPA projects. The Development of relevant accreditation standards is also stalled allowing for haphazard practices to mushroom, endangering the quality of teacher preparation (Kovač Cerović, Radišić & Stanković, 2016).

On the other hand, the professional development of teachers in Serbia is a well-developed policy, established during the early 2000's and widely distributed since then. Catalogues offer accredited courses from diverse providers (NGOs, universities, institutes, businesses, teacher associations, schools), teachers select among these according to their self-assessment of their own competencies, and accumulate 120 hours or more of divers training on a 5-year basis. More training is linked to the career ladder, less training jeopardizes the teachers' license. The implementation of this policy is frequently endangered by a lack of financial resources and the quality is hampered by a lack of monitoring, particularly the monitoring and evaluation of the impact of the training on the teaching process. Therefore, the effectiveness of the investments in training (both time and resources) might become questionable and render this, otherwise powerful and high impact measure, less useful than it could be.

A system of induction and licensing is in place in Serbia, while, as already mentioned, career advancement, although regulated by laws and bylaws is not connected to salary increase, therefore not many teachers have embarked on the complex process of acquiring higher career levels.

In summary, there is a serious need to reconsider, reform and reinvent the teaching profession in Serbia in all of its aspects – in respect

of finances, work conditions and autonomy, and the quality of teacher education. Without such focused reconstruction of this field, many other reforms will be stalled, major investments in human resources lost, and the development of human capital in Serbia additionally jeopardized.

## 4.2 Digital transformation in and through education as a resource in human capital development in the context of depopulation

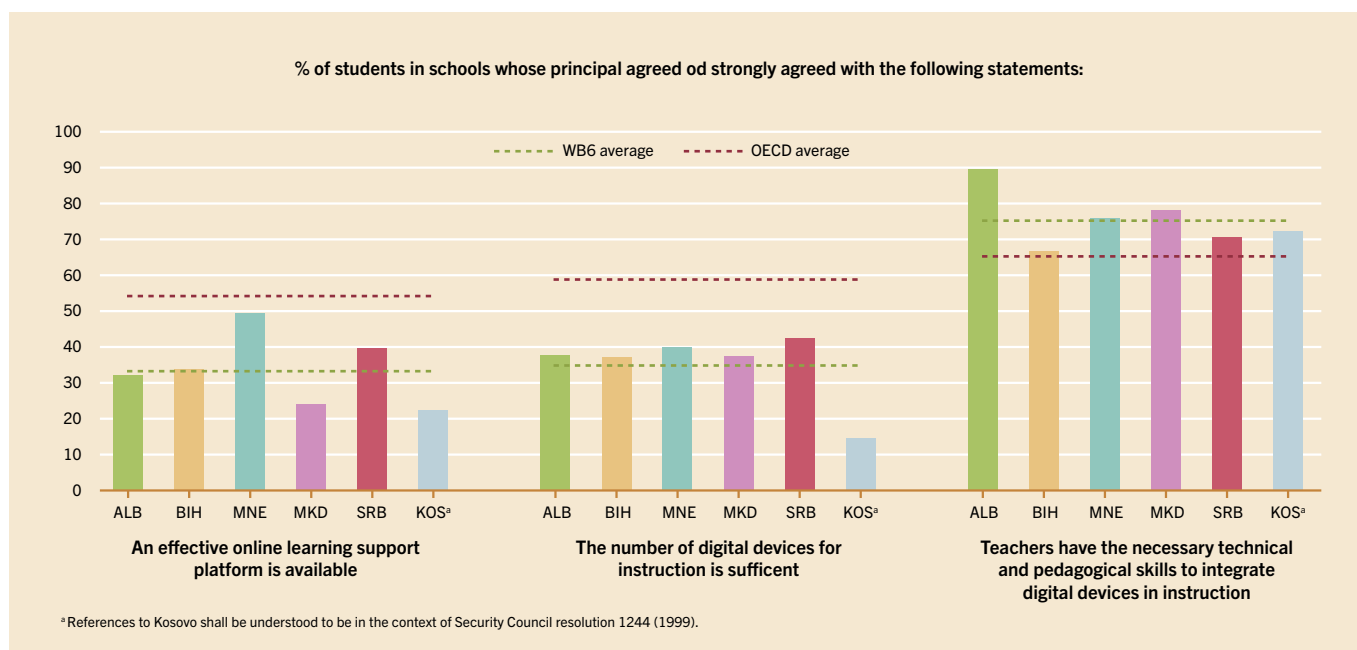
Digital technologies have changed economies and societies globally during the last 20 years. Initially, Serbia lagged behind as a consequence of the 90's, but is swiftly catching up with a vibrant IT sector. The value of Serbia's IT export grew from 0.5% of GDP in 2007 to 2.5% in 2018 (Arandarenko, 2020). Although IT professionals have an easy road to migrating to developed countries, Serbia has, to date, managed to build and retain a pool of professionals and talents in this area. In the academic year 2020/21, around 10% of all students are enrolled in higher education institutions focusing on information technologies (23,061 out of 242,550), while almost 20% of graduated students were from IT study tracks (3,174 out of 16,010) (SORS, 2021). This demonstrates both the attractiveness and high efficiency of these studies.

In the context of depopulation, it is paramount to capitalize on this trend, and further broaden and strengthen the pool of professionals in the IT sector. Reforms in the education sector, particularly if based on the EU Action Plan 2021-2027 are major vehicles for further developing the digital competencies of the population. Lessons learned from worldwide and Serbian experience with distance education during the COVID-19 emergency can substantially contribute to these reforms, as well.

The area of digitalization in education in Serbia is addressed in three recent partly overlapping strategies: the Strategy for the Development of Artificial Intelligence 2020-2025, the Strategy for the Development of Digital Skills 2020-2024, and the Strategy for the Development of Education to 2030. These strategies are based on the EU Digital Education Action Plan, and the first experiences with COVID 19 lockdown in Serbia, and provide for digitalization in education as an important objective. The strategies encompass, in somewhat fragmented fashion, several broad measures, that are, however, more oriented towards informatics as an education subject or education track, preparing the system for providing online or hybrid education for compensatory or emergency purposes (for certain target groups such as rural children, dropout prevention, education of children abroad or sick children, etc., as well as in emergency situations, such as partial or total school lockdown), than towards equipping all students with IT skills to be used in all subject areas in order to foster learning focused on IT, teamwork and innovation.

<sup>87</sup> In 2018, approximately 55% of teachers in Europe held an MA degree, while in several countries this percentage was above 75%, i.e. in Finland, Czech Republic, Portugal, etc. (TALIS, 2018).

<sup>88</sup> Among countries which have national legislation on school practice, only in Romania is the amount lower (5 ECTS), whereas in other countries, it is 30 or more. Expert studies in most countries comprise 60-120 ECTS (Eurydice, 2021).



**Figure 20.** PISA 2018 data on the possibility of home/based learning for Western Balkans countries and territories<sup>89</sup>

Source: OECD, 2021

It is indicative that Serbia is not monitoring teacher digital competencies and student performance, and is not yet participating in the International Computer and Information Literacy Survey (ICLIS), conducted on a 5-year basis.

#### 4.2.1 Providing appropriate infrastructure – hardware and connectivity

Infrastructure, in terms of hardware and especially connectivity, has advanced in the period from 2012, from 55.2 % of households possessing a PC in 2012 to 74.3% in 2020. In 2012, broadband internet was available only to 38% of households, while it is now accessible to 80.8% of them. Laptops are less frequently found in households – 52.1% of households in Serbia have laptops. Nevertheless, the average percentage covers sizable regional differences, Belgrade being above 90% on both key indicators, while all other regions except Northern Serbia are at around 70-77% on both indicators.

Connectivity of schools is supported by the Ministry of commerce, tourism and telecommunication that has equipped most of the existing schools with broadband free of charge internet access, and it is expected that all schools will be connected. However, this applies only to the main building of schools and not the satellite units which are often in remote rural areas where access to broadband internet would be a game changer. An online survey, conducted in 2020 with more than 50,000 teachers, showed that 56.5% complained about the lack of computers and the unstable internet connectivity of their schools, while 42.6% pointed to the unavailability of technologies for teachers, indicating that the process of equipping schools is far from completed (ZUOV, 2021).

<sup>89</sup> OECD. (2021). The COVID-19 crisis in the Western Balkans Economic impact, policy solutions and short-term sustainable solutions. <https://www.oecd.org/south-east-europe/COVID-19-Crisis-Response-Western-Balkans.pdf>

#### 4.2.2 The need for upgrading teacher digital skills and competencies

Data on teacher digital competencies is not available, but the COVID-19 school lockdown showed that the vast majority of teachers had serious competency gaps and were unable to use synchronous learning platforms for conducting instruction. Only 15.6% of teachers reported substantial experience in using digital technologies for teaching, while one third of them listed the lack of digital competences in their self-assessment as the main problem during distance education due to the emergency situation (ZUOV, 2021).

The IT competency gap in the teaching profession is of such proportions that it requires thoughtful, sustained and well-supported, monitored and evaluated interventions. The interventions should encompass all segments of continued professional development, including initial teacher education, licensing, mentoring, and blended learning courses with digital teamwork, contextualized learning tasks and whole school engagement.

#### 4.2.3 Use of digital technology for teaching and learning

In the COVID-19 emergency situation distance education painfully witnessed how moving from contact instruction to distance education is not simply “moving” learning from one place to another. In order to produce quality learning outcomes, distance education requires not only technical readiness in terms of equipment and skills, but also curriculum readiness (i.e. appropriate digital content prepared for teachers and ready to use), pedagogical readiness (i.e.

mastering a wide range of digital interactive pedagogical tools) and assessment readiness (using assessment formats that maximize students initiative and exploration of digitally available knowledge) (ZUOV, 2021). Without fully observing these four types of readiness, distance education easily runs a great risk of becoming monotone and boring – and of being an undue burden on students; it requires higher motivation and self-regulation. Research shows that student motivation and student self-regulation are becoming critical aspects of distance education worldwide.<sup>90</sup>

Appraisals of the possible worldwide impact of COVID-19 related school lockdown are predicting learning losses of various proportions, depending on a number of factors. The length of school closure and preparedness of the education system for switching to digital education are major determinants of learning losses. The loss is expected to correspond to 0.3-0.9 years of a usual year's schooling attainment, or a high percentage of the yearly learning gain (63-68% in reading and 37-50% in maths), or even 1.5 years' worth of learning, if taken cumulatively.<sup>91</sup> The reduced learning time during a school day can be another loss factor (Garcia & Weiss, 2020).

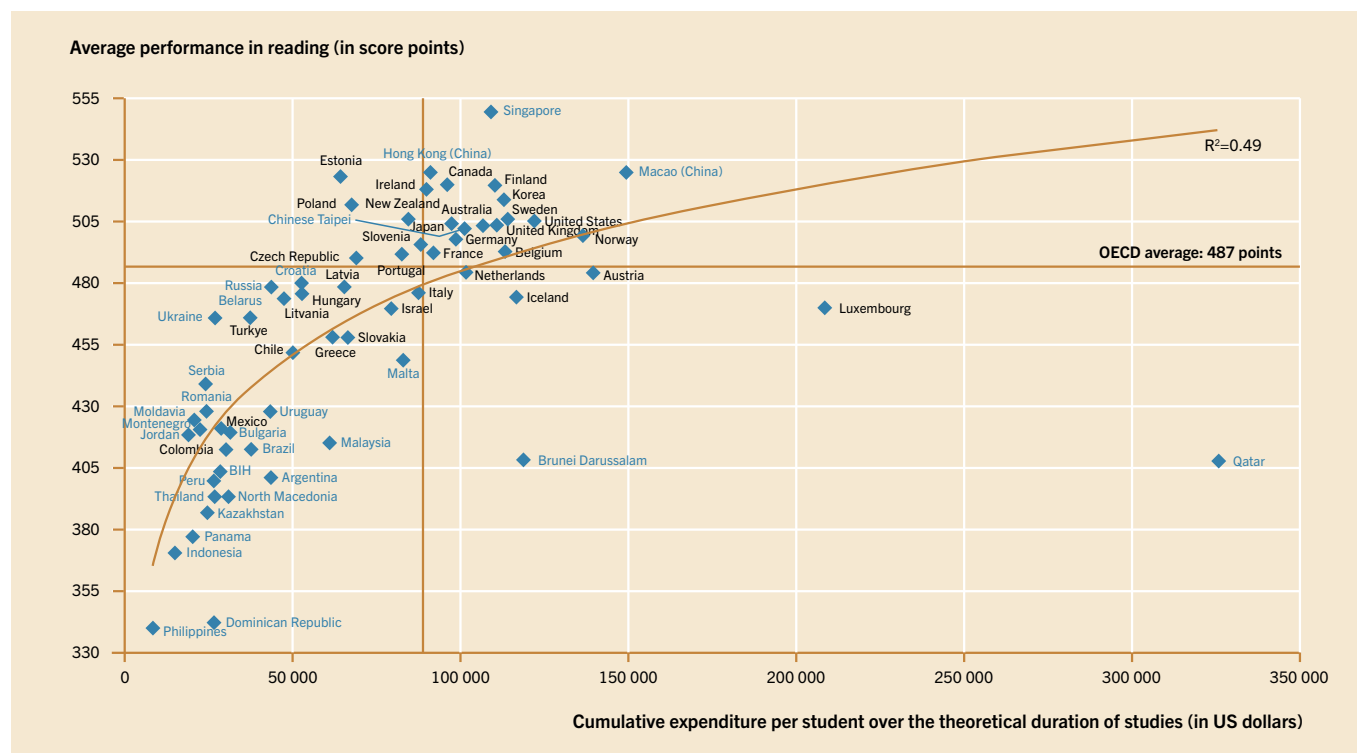
Empirical research on the impact of the COVID-19 crises on learning performance in the Western Balkans is not yet available. Therefore, it

is imperative to use the current academic year to conduct standardized learning assessments in order to assess the impact and design appropriate remedial measures. However, predictions for the Western Balkan countries based on PISA 2018 data (Figure 20) on the possibility of home-based instruction, indicate towards the prospect of more pronounced learning losses than are found in highly developed countries.

It is expected that the PISA score may drop by 16 points, and that the percentage of students below basic proficiency in reading may increase from the current 53% to 61%, which would have a drastic negative impact on human resource development (WB, 2021).<sup>92</sup>

### 4.3 Designated education financing

A decrease in the student population could also affect changes in financing, and ensure savings that could be reallocated to areas with developmental needs in education. On the other hand, future changes in the system of education financing, and the overall level of education expenditure, could contribute to more effective consolidation, but also to increased opportunities for the development of human capital.



**Chart 21.** Spending on education and reading performance

Source: OECD, PISA 2018 Database, Tables I.B1.4 and Figure; 1.4.4

<sup>90</sup> For a good overview on motivation and self regulation see Pelikan et al. 2021.

<sup>91</sup> For an overview of prediction methodologies see Maldonado & De Witte, 2020.

<sup>92</sup> This estimation is based on the following facts: (a) accessibility of high speed internet, essential for online instruction, is generally low in the Western Balkans; (b) availability of home computers will be limited in the scenario of competing demands for using the home computer for support for the schooling of siblings, and parental home office; (c) availability and quality of digital content are questionable; (d) teachers lack digital competencies; (e) parents are not prepared to cope with distance learning and home schooling, and might not even have the time to assist their children, (e) the already short instruction time in the Western Balkans countries will additionally shrink during distance education; (f) protracted school lock-downs are likely to push up school leaving.

### 4.3.1 Low investment in education, compared to other countries

Serbia's level of public expenditure on education has always been an issue as it was always at around 4-5% of GDP (4% of GDP in 2015, and it remains under the OECD average of 5.3%) (Maghnoui et al., 2020). The strategic goal from SED 2020 of increasing investments in education from 4.5% of GDP to 6% was not achieved (MoESTD, 2020).<sup>93</sup> Investment in education is still lower than in countries with the same income (4.7%) but also compared to the countries in the region (4.6%) (Figure 21).

The level of resources each school receives has been similar for years because there are very limited financial incentives to consolidate and adapt school networks, and also due to serious political and social pressure to keep the existing structure, despite Serbia's demographic decline.

### 4.3.2 The ineffectiveness of the current education financing system

Teacher salaries take up the largest share of the Serbian education budget. More than 90% of the ministry's budget goes towards teacher salaries (the notable surplus of teachers partially contributes to this – the latest list of redundancies goes up to 1,076 redundant teachers<sup>94</sup>) leaving only a fraction of the education spending for investments and development, while the international standard is to use not more than 80% of education budget for salaries (Maghnoui et al. 2020). In the 2021 budget this trend will increase even more (95%), leaving the schools virtually without funds to cover running and investment costs. Infrastructure modernization will take up 2.8% of the budget, while only 0.03% is intended for professional development of both preschool and primary school teachers.

Such an allocation plan will actually halt every development-oriented activity. To corroborate this prediction, the financial justification of SED 2030 states that, for 2022 and 2023, there will be no need to increase the educational budget for development. All additional costs will be covered from international grants and loans, and an increase of the GDP share allocated for education is not planned. SED 2030 only mentions that the aim should be not to decrease it even more.

### 4.3.3 Non-implementation of discussed and prepared new financing

The school education system is financed in a traditional way – based on the calculation of approved school classes and teachers. Innovations in terms of introducing a per capita student funding scheme and financing formula that would allocate a higher coefficient for schools in remote areas, and for students from vulnerable groups, have never materialized although all the calculations and piloting was prepared during the first decade of the 2000's, although this was provided for

by the 2009 Law on the Foundations of the Education System and implementation planned to start from 2013. After several initiatives and projects, the funding formula still remains the same. Also, grant schemes for innovations are implemented only as part of donor projects or loans, never from the budget.

SED 2030 provides for a feasibility study for the intersectoral financing of inclusive education and a new model of higher education financing. This new model of higher education financing, as described, should be focused on increasing quality through incentives for excellent students, scholarships for low SES students and more funds for HEI infrastructure.

## 4.4 Increasing education integrity

All measures aimed at maximum impact on education can easily come to grief in a context where corruption and integrity violations occur. Corruption in education is not merely a governance issue – it directly or indirectly impacts the effectiveness of adopted policies and the quality of learning outcomes. It also threatens the equity of education, trust of stakeholders in education, and their motivation to engage in education (OECD, 2012). Education is rarely at the forefront in big corruption cases, but illicit and illegal activities, corruptive practice, bribery, favouritism, nepotism and conflict of interest are frequent and common phenomena that seriously jeopardize the integrity of education (Hallak & Poisson, 2007). Occasionally, there are cases of major fraud, such as the purchasing of diplomas or certificates, as well as plagiarism at a high level, which attract greater public attention. Corruptive practices usually become part of informal policy and are used to bypass or compensate some systemic shortcomings or lack of resources. Often unrecognized, they mask the real problems in the education system's functioning, and cause the collapse of all resource investments (financial, human, infrastructural, etc.). Therefore, in the context of the challenges created by depopulation, it is essential to take corruption in education into account. This can contain several warnings, pointing to factors ranging from diminishing the effects of the efforts for human capital development, through reducing the quality and equity of education, to having an impact on mobility, i.e. instigating the emigration of better educated professionals.

Serbia has strengthened its anti-corruption systems by signing the UN Convention against Corruption. However, progress is slow and the implementation of existing legislation, policies and oversight by relevant public bodies remains weak. Serbia's position according to the Transparency International's Corruption Perceptions Index is repeatedly weak, and further declining in recent years. In 2021 Serbia ranked lowest to date, as 96th out of 180 countries and territories, with a score of 38 out of 100, placing it in the company of Brazil, Ethiopia, Kazakhstan, Peru, Shri Lanka, Suriname and Tanzania, far below OECD countries, as well as those in the region, except Kosovo,<sup>95</sup> Bosnia and Herzegovina and North Macedonia.<sup>96</sup>

<sup>93</sup> 3.1% according to the DevInfo database in 2018 3.1%, i.e. 3.7% according to new the Strategy of Education Development 2030.

<sup>94</sup> Available at: [http://liste.mpn.gov.rs/tehnoloski\\_viskovi\\_15.11.2021.xlsx](http://liste.mpn.gov.rs/tehnoloski_viskovi_15.11.2021.xlsx)

<sup>95</sup> References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).

<sup>96</sup> See: <https://www.transparency.org/en/countries/serbia>

The education system in Serbia has been part of several integrity assessments. Since the first review of the education system's integrity, conducted by the OECD in 2011 (OECD, 2012) and followed by a re-view by the Council of Europe in 2017 (CoE, 2017), several national reports (BCPB, 2018), and the latest report conducted for the EU project The Fight Against Corruption<sup>97</sup> certain areas of major corruption risk in education have been continuously highlighted. One area of concern is the functioning of the municipal-level education inspection, which is understaffed, undertrained, and dependent on the LSG management at the local level. Conflict of interest is also a major concern and the system can be easily influenced by different stakeholder interests. The lack of an effective mechanism to enforce the law often leads to policies that affect human resources (the hiring and firing of teachers, appointment of school principals etc.) and has a direct negative impact on the quality of the education provided by the school. Public procurement and renting out of school facilities is another area of concern. Cash flows are not fully transparent at the local level and it is hard to monitor the spending of funds allocated for education institutions, support to students or professional development of teachers. Untimely assessment of learning outcomes, private tutoring, illicit entry into preschool or higher education levels, preferred school or educational profile are commonly mentioned in the assessments.

The total capacity of the education system to identify and prevent corruption risks is also found to be insufficient (OECD, 2012). The delay in implementing the information system in education leaves the education system without a critical tool for overall monitoring, but also for identifying corruption risks.

## 4.5 Conclusions and main points

The education system in Serbia, in its current state, is not equipped to address the complex nested problems entailed in the depopulation processes underway in the country. The education available is not effective enough to furnish the young with sufficient skills, even for the current needs of the economy and an active social life, and certainly cannot respond to the increased need to build human capital.

Serbia is falling behind OECD countries on PISA, teaching and learning is not vibrant or innovative, and the education system is troubled by the presence of numerous integrity problems. The education and training system is failing to provide attractive and relevant opportunities and motivation for upskilling and further education for the increasing body of adult and older people, disabling the economy with a growing number of employees who do not possess the required skills. Early and preschool education is still underdeveloped and leaves approximately one third of children without appropriate support for a successful start in school. The schools and the system in Serbia are not ensuring that every child has the chance of developing, learning, and entering into a profession that will ensure his/her decent employment and income, and are, thereby, contributing to the perpetuation of poverty cycles and to the erosion of human capital in Serbia.

<sup>97</sup> See: <https://www.protivkorupcije.rs/srb/Novosti.php?pg=3> (unpublished report)

The education system, although influenced by emergency distance education, and fairly well equipped with information and communication technologies, connectivity and education opportunities for gifted students, has not yet fully embraced digitalization in education as a comprehensive cross-curricular developmental focus, and is losing time instead of helping the country to catch up with international digital agendas in ways that could partially compensate for the declining human capital. The Serbian education system is not utilizing the readily available levers and resources that could help the system in achieving better results. In general terms, Serbia has a neglected, pauperized and disregarded teaching force that will not be able to carry out major developments needed for boosting human capital in the country, unless its financial, social and educational status is swiftly improved. The financing of education is not sufficient even for the current education situation, let alone for supporting the vigorous changes needed in education in order to help the country cope with depopulation and human capital losses – overall financing is low, the distribution of running costs is unreasonable, and innovative schemes are blocked. Serbia has not managed to handle consolidations in education infrastructure and staffing constructively which would ensure better funding for quality and equity development. Finally, schools and preschools are not attractive places which would provide young parents with safe and happy institutions that will help their children develop values, knowledge and skills, while the parents are working.

Education systems are huge and very resilient to change, and education goals are usually considered an objective to be reached in 10 to 20 years' time. Among other reasons, this is why education sometimes fails in achieving a priority status in national development policies, and, as a consequence, contributes to countries failing in their long-term development. Furthermore, education systems are complex, and interdependent with diverse stakeholders, involving multi-layer legal, administrative, human resources and institutional structures, all in theory focused on facilitating such fragile processes as human learning, development and wellbeing, and they can easily drift away from their original purpose. Education policies, evidence-based and problem-focused, need to concentrate on critical areas, especially in times of social change and crisis

## 4.6 Recommendations

### 4.6.1 Effective consolidation of the school network

The optimization of the school network is not yet satisfactory. In order to optimize resources, the number of staff, school units and schools themselves needs to be aligned with the declining number of students. More effective cooperation between national and local governments is needed, and flexible solutions cooperatively designed and implemented.

A new concept of revitalized rural education has to be developed and implemented, that combines infrastructure and community develop-

ment work with education provision, and uses a wide range of effective mechanisms, from digital and blended education and teaching (where appropriate), to developing community education and cultural centres in existing school facilities.

## 4.6.2 Enhancing the quality of education and high competencies for all

An outcome-oriented and flexible curriculum that nurtures not only subjects-specific but also cross-curricular competencies, creativity, innovation and critical thinking, teaching methodologies that facilitate knowledge construction instead of reproductive learning, a school atmosphere oriented to teamwork, authentic assessment, constructive use of ICT for independent exploration and information selection are all ingredients of a high quality, motivating education that develops competencies and high learning outcomes. In order to provide the expected outcomes, the education system in Serbia needs to utilize all these ingredients. Much of them are already developed but not yet fully implemented, some call for further reform, but all require highly committed and quality oriented high level leadership in the government.

## 4.6.3 Making adult education and lifelong learning a reality in Serbia

For optimizing the benefits of LLL, key failings need to be removed. The difficulties of integrating the adult population, due to unfamiliarity with basic skills for lifelong learning and lack of access to services, needs to be overcome. Increasing the attractiveness of on-going programmes and improving the methods and organization of this training (cost, location, programmes, effectiveness) would be paramount. More programmes should target older adults and be provided, not only in person, but utilizing the possibilities of distance learning, as well. The gap between the skills that adult learners acquire through training and those required by employers needs to be bridged, which can be accomplished only in cooperation between the two sectors.

Recognition of prior and informal learning is a long-standing goal and appropriate mechanisms need to be put in place. During a pilot self-assessment that involved more than 20 VET schools, exam methodologies and instruments were designed, based on the learning outcomes of qualification standards, but are still not part of the system.<sup>98</sup> This also requires making educational paths flexible and facilitating movement through education and training, changing qualifications, etc. The system of career guidance and counselling should be accessible to adult learners and adapted to their needs, within and outside of formal education.

Improving access to and the quality of lifelong learning, especially adult education (formal and non-formal), requires rethinking financing schemes. Financial constraints are likely to be particularly acute for low-income individuals. Funding mechanisms in which

adult learning expenses are co-funded by firms and adult learners, or which allow individuals greater choice, can raise the efficiency of service provision. Other options are tax deductions for companies organizing trainings. Individual learning and subsidies, such as vouchers and allowances, can also be a good tool, as long as schemes are appropriately targeted (OECD, 2005).

## 4.7 Further increase of coverage of children in all preschool education groups

The existing capacities of state-run and private preschool institutions are insufficient to meet coverage requirements, so measures need to be directed at improving capacities, as well as at the development of a network of preschool facilities in order to enable easier access (“Kindergarten on the doorstep”), especially for children living in remote areas.

Preschool education must take into account the needs of children from vulnerable groups. Further diversification of educational support and increasing investment in compensatory and social protection measures could help children from vulnerable families enter and stay in the education system.

### 4.7.1 Full inclusion of vulnerable groups

Measures directed at full educational inclusion of all vulnerable groups should be one of the priorities in Serbia, especially because, in a situation of demographic decline, the groups traditionally excluded can compensate for the loss of human capital. The birth rate among the Roma population, and among the poorer population is higher than that of the mainstream population, and cohorts of Roma and poor children have a growth trend in parallel with the decrease of the mainstream population cohorts.

Sector strategies (SROS), legislation (starting from the 2009 ground Law on the Foundations of the Education System) and thematic policies (Roma inclusion, children with special needs in education, dropout prevention), as well as international or EU accession instruments (such as SDG4, or accession chapter 23) already contain a rich set of such measures but their implementation is usually weak.

The most important groups of measures from these, which need to be accelerated, financed, facilitated, monitored, and periodically revised, are the following:

- Additional human resources to support integration of vulnerable groups: more pedagogical assistants, better functioning of inter-sectoral committees, mobile support teams;
- Institutional reorganizations to prevent segregation (accelerating the transformation or closure of special schools, desegregation of Roma schools);

<sup>98</sup> <http://noks.mpn.gov.rs/en/2021/02/on-the-road-to-recognition-of-prior-learning-workshop-for-the-development-of-training-programs-based-on-the-qualification-standard/>

- Support to students (transportation, meals, free textbooks and other learning materials);
- Dropout prevention, early warning system, and modernized and quality remedial classes need to be an integral part of every school's regular work, and they need to be planned, monitored, reported on, and evaluated.<sup>99</sup>

In addition to this, a serious reconsideration of tuitions, scholarships, and student loans is needed, which implies their wider scope, Analysis demonstrates that all these investments have a high return (UNICEF, 2014).

#### 4.7.2 Essential resources: the teaching profession, digitalization, financing, and integrity

In order to ensure high quality learning outcomes, a far more advanced teacher policy has to be developed. This policy should address the needs of teachers for higher salaries, stronger developmental incentives, higher status, wellbeing and attractiveness of the profession, better initial education and more effective professional development linked to career advancement options, in parallel with student needs for higher quality education.

As a prerequisite, a full and updated database of teachers is necessary. The new legislation on pay grades should provide sufficient flexibility in order to establish the link between career advancement and salary coefficients, and thereby render the teaching profession more attractive. Also, other areas of benefits for teachers need to be explored and implemented, such as targeted tax reductions, a reduced teaching load, etc.

Teacher salaries need to be increased overall, as does the GDP share devoted to education. The education budget should have a higher percentage for developmental costs, and innovative financing mechanisms need to be explored.

Digital equipment, competencies, platforms, the curriculum, pedagogy and assessment modalities well-suited to the development of student competencies in a digitalized education context, should be prioritized. Lessons learned from the COVID-19 crisis in education need to be analysed and used for the introduction of new elements. Digitalization in education is an important crisis management and resilience-building policy, but also a lasting asset for education development. Hybrid models will be increasingly used for mitigating many challenges, from rural education in remote areas, through catch-up and enrichment activities, and as part of regular schoolwork that builds broadly defined student digital competencies.

The integrity of the education system is both a matter of appropriate policies and enforcement mechanisms, and a matter of the willingness of participants in the education system to comply. The improvement of policies and enforcement mechanisms is highly dependent

on the availability of monitoring tools and analytical capacities in governing institutions. Therefore, an effective Education Management Information System is a crucial tool for providing data, and raising human capacities in inspection and analytics departments should be a developmental priority within the MESTD and other institutions. Compliance of participants can be ensured by regaining trust in the education services by providing quality and ensuring equity, and incriminating all practices that are, by nature, violations of integrity, but are seen as a grey area of informal practice. The education inspection should be trained to recognize potential integrity risks within their jurisdiction but, also, pedagogical advisors need to work with schools on recognizing, understanding and removing current malpractices or integrity risks that have become part of everyday practice.

#### 4.7.3 Recommendations to increase school attractiveness

The education system and education institutions need to become more responsive to the evolving needs of children, parents and communities, in order to play a role in helping young parents decide to stay in the country for the benefit and wellbeing of their children, and to facilitate learning that leads to high-quality human resources. That is currently not the case. In Serbia, schools are often places of anxiety, fear of failure,<sup>100</sup> rudeness, and, occasionally, peer violence (Popadić, 2009). Students often lack self-confidence, have low motivation, and almost half of students hold a fixed growth mind-set - they do not believe that intelligence and competencies can be developed, and that commitment and engagement are important for their own development (OECD, 2021b).

The school ethos oriented towards student wellbeing and student learning needs to be developed across the entire education system. In addition to the relevant curriculum, challenging learning tasks, authentic assessment and constructivist pedagogy, the school should focus on supporting the social and emotional development and wellbeing of its students. Active, meaningful student participation in all matters that concern their learning and wellbeing, should become the dominant practice, across all curricular areas. Positive, caring and respectful student-peer, student-teacher, teacher-parent and teacher-teacher relationships need to be fostered and maintained. The social and emotional learning of teachers (and educators) should be a must in order for teachers to knowledgeably manage social interactions and support the social and emotional development of their students. School leaders should play an active role in building a positive learning environment where the whole school community feels included, connected, safe and respected, and where trust and partnership dominate. Such schools will not only ensure better learning outcomes but will also provide a trustworthy basis for student social development, and respond to the parents' need for a safe, stimulative and encouraging environment in which to leave their children.

<sup>99</sup> Although prescribed by law, this has not become widespread in practice. Good examples do exist though, such as the dropout prevention system piloted and promoted by the Centre for Education.

<sup>100</sup> PISA 2018 Database.

## 4.7.4 Increasing education attractiveness and relevance

In order to be relevant, education should take into account the national context and the EU area of education and training, since Serbia has committed to becoming a part of this. In its Economic Reform Programme for the period 2021-2023, Serbia has committed to developing digital skills, lifelong learning, and qualifications in line with labour market needs, and to improving school-to-work transition through work-based learning. In addition to the overall reform efforts to be undertaken, the focus needs to be on digital education, training and apprenticeships - all in partnership between public and private actors. Sector Skills Councils /SSC/ are the main instrument for identifying qualification needs, and are a cooperation platform for employers and education. The priority in building institutional capacity should be to raise the competencies of SSC members, which has already begun to unfold through certain trainings that included two main areas: profiles and qualifications. We advise that more time should also be devoted to different methodologies for skills forecasting, especially those taking into account demographic changes as a variable. Focusing only on secondary education, as mentioned in previous Chapters, Serbia spends the lowest portion of the budget on secondary education. The mostly theoretical nature of Serbia's VET programmes help explain the low per-student spending, whereas these programmes tend to be more costly across OECD countries, because of the need to adapt infrastructure and materials for practical learning (ETF, 2020). In order for VET programmes in Serbia to become more relevant, changes in financing need to ensure sufficient funds for improving practical teaching, investing in new technologies, and raising teacher capacities in VET (especially of practical subjects). Moreover, postsecondary and short-cycle courses at higher skills levels are in demand from employers and individuals, but provision of such training is insufficiently developed in the Serbian VET system. Expanding the VET system with postsecondary and short-cycle courses should be a priority, especially having in mind the serious needs of the economy in the context of depopulation.