The purpose of the review is to contribute to the analysis of human capital development, which we understand as ‘lifelong development of individuals’ skills and competences through the improvement of vocational education and training systems’.\(^1\) In the EU accession process the review can be used in socio-economic analysis for the preparation of the first Serbian Operational Programme for Human Resource Development, which will channel the EU funds to HRD as foreseen in the component IV of the Instrument for Pre-Accession Assistance (IPA) for Serbia from 2011. This version follows the draft review discussed with Serbian stakeholders\(^2\) in September and integrates their comments. It is another step towards an in-depth ETF analysis planned for the first half of 2010.

Our approach to the review has been to produce a concise analytical document outlining key challenges related to education and training rather than providing lengthy descriptions. The aim at this stage is to direct the attention of the readers of our country review to issues that may be crucial in the context of wider reforms in Serbia and in relation to accession preparation. We hope that the review will stimulate discussion among the key Serbian partners which could single out and further specify the most relevant and critical key policy areas of the country. This would help our team to focus for the next stage and go deeper in our analysis, complementing the work of Serbian policy makers and researchers and involving them as much as possible in our analytical efforts.

The main emphasis is to provide a qualitative analysis of the extent to which the country’s education and training system is able to produce the learning outcomes that are needed to improve employability, competitiveness and equity. We do not consider education and training for young people only, but for people of all ages within a lifelong learning perspective. Our analysis does not cover higher education except where it relates to the areas of human capital development in compliance with our definition above.

1. Executive summary

The purpose of the review is to contribute to the analysis of human capital development and to assess the capacity of Serbia’s education and training system to produce the learning outcomes needed to improve employability, competitiveness and equity.

Serbia has made significant progress to becoming a market economy through wide-ranging democratic and economic reforms started in 2001. Macroeconomic stability has been restored providing a basis for fast economic growth, and GDP per capita, at $2,100 in 2002, has reached $5,400 in 2007. However, despite the economic growth the employment situation is still difficult and coordinating reforms in human capital development will be the key to improvement. The national, regional and local institutions involved in HCD require further institutional development and capacity building, including horizontal and vertical cooperation and partnership. Restructuring public services is an uneven and slow process, and in the private sector the social partners only start having a role in HCD policies.

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\(^1\) In line with the ETF mandate defined by Regulation (EC) No 1339/2008 establishing the European Training Foundation (recast).

\(^2\) Ministry of Education, Ministry of Labour and Social Policy, Ministry of Economy and Regional Development, Serbian Chamber of Commerce, National Education Council, Institute for Education Improvement, Adult Education Society, Social Inclusion and Poverty Reduction Unit (Deputy Prime Minister’s Office), and the EC Delegation.
In the education and training sector there is a need to expand public spending and to tackle some of the inefficiencies in the system; thus only 30% of municipalities fulfill their obligations to VET schools.

Transition problems still exist in the overall education system. Some pathways for progression are missing, e.g. graduates from three-year vocational profiles do not have equitable access to higher education. There is also a lack of horizontal pathways between secondary general and vocational streams, as well as an increasing gap between VET and higher education. An integrated vision based on the needs of the labour market is still absent. In contrast to the holistic EU approach, VET is reduced to secondary initial vocational education.

Existing policies and strategies include measures to improve access to education and training, especially for disadvantaged groups, but policy thinking and practice are still fragmented across the education and training sectors, without sufficient involvement of all the stakeholders in policy formulation and implementation processes. There is a strong attention to and plans for quality as the key underlining principle of reforming education and training in Serbia. Strategic documents, such as the National Action Plan for VET, recognize all the issues related to quality, cover numbers of important areas and propose a plethora of ambitious measures, to be implemented in short- or mid-term. However, reform strategies need to be more realistic, with further choices to be made among too many priorities, assessing carefully the resources and implementation capacities available. The foreseen new overall education strategy will be a good opportunity for that, especially if it is conceived as a lifelong learning strategy.

Adult learning in Serbia presents a developing and diversified picture. Capacity for continuing vocational training is still very small and the emphasis in policy thinking is mainly on adult education, including legal and institutional issues, capacity building, accreditation and quality control, and the need to establish a wide network of providers. The national priorities of economic development will need another set of measures. The VET and Adult Education Council, as well as the local councils, can be the right settings to discuss such questions. The development of the Regional Training Centres and closer partnerships with businesses at national, regional and local levels will support such reflections, while deliberations on new financing mechanisms can benefit from experiences developed in the EU.

Serbian laws regulating education are increasingly based on non-discriminatory access to quality education for all, facilitating learning of people with disabilities, and other types of support to vulnerable groups. The inclusion of ethnic minorities is gaining ground in the education system, in particular through the entitlement to selecting the language of instruction at all levels. Key achievements include professional development of teachers involved, successful promotion of inclusive practices, partnership between institutions and NGOs, and piloting a program for functional primary education of adult Roma. Challenges of social inclusion still exist, however, and key recommendations are to further increase education coverage of children/students from vulnerable groups; professional development of teaching staff on inclusive education; and to develop models, standards and encouragement of education of adults with disabilities.

The current National Employment Action Plan concentrates on measures for employment growth in the legal economy, such as maintaining the employment rate, finding solutions for redundant workers, increasing formal employment in private sector and reducing regional disparities. With only about 0.1% of GDP devoted to active labour market measures in 2008, labour market policies need to be given a more prominent place and become fully integrated with the overall economic development and education and training policies.

The VET system does not adequately serve the labour market in Serbia and skills mismatches exist. VET schools play only a marginal role in continuing education and training. The labour market is still in transition and the signal systems between the world of work and

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3 As evident in the Copenhagen process of European cooperation in VET and in the European policy framework for cooperation in education and training:
the world of education have not yet been properly established. The efforts to develop a national qualification system create a productive framework for a stronger social dialogue on skills issues and build bridges between employers and the VET system. An added emphasis in curriculum development and delivery should reflect the longer term need for broader key competences.

There is still a lack of communication between industry and the VET providers mediated through the social partner organizations in Serbia. The social dialogue is the best way to enable qualification needs to be channelled into the VET system and also to ensure that the social and nation-wide recognition of vocational qualifications is guaranteed. The state needs to support the social partners by helping them to play a much stronger role in human capital development. In Serbia the partnership for VET and adult education development should involve not only employers’ associations and trade unions forming the two sides of social dialogue, but also relevant ministries, national employment service, regional and local self-governments, chamber of commerce, representatives of business and crafts, teachers and experts, as well as NGOs active in education and training.

Policy-making is Serbia tends to be too supply driven and sector-based and would profit from a better coordination of strategies between economic, trade, employment, social and educational policies\(^4\). A functional and integrated view on VET and adult learning as central instruments for achieving overall national development goals would be an important stimulus for the education sector.

2. Country context and background information

Serbia has 7.33 million inhabitants, 52% of people live in urban areas, and the negative population growth rate is -0.46%\(^5\). The population is predominantly Serb (83%) with significant minorities of Hungarians (300,000 persons or 4.1 % of the total population), Roma (1.4 %), and Albanians (0.8 %). According to the UNHCR, at the end of 2007 there were 97,995 refugees\(^6\) and 226,350 internally displaced persons. The Serbian Diaspora is estimated at 4 million people.

Serbia has made significant progress towards becoming a market economy through a wide ranging program of democratic and economic reforms started in 2001. Macroeconomic stability has been restored which provided basis for fast growth of the economy, and incomes have risen strongly. GDP per capita, estimated at $2,100 in 2002, has reached $5,400 (PPP $10,248) in 2007. During the same period, poverty has fallen from 14% of the population to about 6.6% according to last year’s Living Standards Measurement Survey\(^7\); however, more than 500,000 citizens still live under the poverty line\(^8\).

The structure of GDP, amounting to about EUR 21 billion, by sector of economic activity has changed slowly during recent years, with a decrease in the share of agriculture (16.1% in 2006) and an increase in the share of services to 50.0% in 2006 (predominantly non-tradable services unfortunately), while industry has slightly increased to 33.9% in 2006. Small businesses have become an important segment of the economy of Serbia: they contribute over 45% of GDP, 27% of exports, and 55% of total employment. Still, around 30% of the GDP is attributed to the informal sector\(^9\). According to LSMS 2007, almost 35 percent of employed persons were engaged in the informal sector. The Statistical Office of the Republic of Serbia gives much lower figure of 23.6% in 2008 (Table 13 in the annex).

\(^4\) As of 2009, the Government starts the reform of the Central Policy Coordination (CPC) function.
\(^9\) The informal / grey economy constitutes about 35-40% of Gross Domestic Production (GDP), according to independent research by the Centre for International Private Enterprise, Economics Institute (May 2001/2002).
In the Ease of Doing Business Report 2010\textsuperscript{10} Serbia is ranked 88 (90 in 2009) out of 183 economies, but it holds a low position in the Global Competitiveness Report: in 2009-2010 it is classified 93 (85 in 2007-2008) out of the 133 countries analysed in the report\textsuperscript{11}.

The current economic and financial crisis slows down the economy, puts at risk poverty reduction and affects employment in Serbia. After 5 - 8\% during 2004-2007 the GDP growth fell to 2.8\% in the last quarter of 2008, 4.5\% negative growth in the first half of 2009 and further growth decline projected for Serbia is likely to have substantial impacts. The crisis may increase poverty most in those parts of the country where a significant proportion of the population lives just above the poverty line. Social exclusion is also likely to rise, although the main drivers of exclusion remain largely unchanged, namely disability, age, gender, ethnicity (national minorities especially Roma), spatial exclusion (those in rural, remote, declining, peripheral and/or war affected areas), unemployment, and low educational levels (those with incomplete primary education).

According to the National Strategy of Economic Development of Serbia 2006-2012 the Serbian economy in transition has a low-level and inefficient innovation potential which requires further development to be based on knowledge\textsuperscript{12}. The National Programme for Integration with the European Union\textsuperscript{13} sets the agenda for the integration process in all sectors of economy and society. For human capital development it includes a number of short- or mid-term priorities.

Human capital development is to become a real priority at state level as well as in the economy and the civil society. National, regional and local institutions involved in human capital development require further capacity building. This is an issue not only of the individual institutions, but also of their horizontal and vertical cooperation and partnership. Restructuring public services is an uneven and slow process, while in the private sector the employer associations and other social partners only start having a voice in the debate on education and training policies.

3. Key policy issues and strategies in education

Investments in education

In Serbia the public investment in education is relatively low but has an upward trend in this decade. According to the Second Report on the Implementation of the Poverty Reduction Strategy (August 2007), public expenditure for education (% GDP) increased from 2.7\% in 2001 to 3.5\% in 2006, and a further increase of up to 3.9\% is planned for 2009 (may not be achieved because of the crisis). In the total budget of the Republic of Serbia for 2007, the share of education was 10\%\textsuperscript{14}. The structure of the total budget for education is 50\% for preschool and primary education, 22\% secondary education, 19\% higher education, 7\% student welfare and 2\% cover the work of the Ministry of Education and other central bodies such as national education councils and institutes. Around as much as 85\% of public education expenditure is consumed by the salaries of the education staff\textsuperscript{15}.

Following the eight-year primary education the secondary education consists of the general stream (4 year gymnasium) with 24\% of students, and the VET stream with 76\% of students (53\% in 4 year technical pathways and 23\% in 3 year vocational ones)\textsuperscript{16}. Serbia also has 35 private secondary schools (high schools and vocational schools). In vocational education and

\textsuperscript{11} The report ranks the world’s nations according to the Global Competitiveness Index (http://www.gcr.weforum.org).
\textsuperscript{12} The National Strategy of Economic Development of Serbia 2006-2012, p. 80-81.
\textsuperscript{13} National Programme for Integration with the European Union (NPI), Government of the Republic of Serbia, May 2008.
\textsuperscript{14} Centre for Education Policy, Education in Serbia, 2008. http://www.cep.edu.rs/eng/?q=education
\textsuperscript{15} Serbia: Doing More with Less, World Bank, June 2009. According to MoE, in primary and secondary education it is 96\% (EU 15: 73\%).
training (VET) itself there are over 230,000 students in 333 VET schools with approximately
15,000 teachers and trainers.

Number of (public) primary and secondary schools, classes and pupils since 1990:

<table>
<thead>
<tr>
<th>School year</th>
<th>Primary education</th>
<th>Secondary education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Schools</td>
<td>Classes</td>
</tr>
<tr>
<td>1990/91</td>
<td>3616</td>
<td>32039</td>
</tr>
<tr>
<td>2006/07</td>
<td>3551</td>
<td>30077</td>
</tr>
</tbody>
</table>

Source: Statistical Office of the Republic of Serbia

In higher education according to the data of the Statistical Office of the Republic of Serbia, during the 2005/06 academic year (the Statistical Yearbook, 2006) there was a total of 229,355 students in Serbia, and 110,520 students (48% of the total number) were financed from the budget. During 2007, vocational post-secondary schools went through the process of accreditation in which 48 of them were accredited and became "schools of applied studies" as part of higher education system. These schools are now closer to universities17, but at the same time farther from VET schools, increasing the gap between VET and HE.

Compulsory education (preparatory preschool and primary) and secondary education are free and funded from the state budget, but parents and students have to cover the expenses for textbooks, stationery, school trips etc. In higher education students pay tuition fee which is however waived for those who study with good results.

The system of financing education in Serbia is based on inputs using a formula for each type of school, including salaries, number of students, differences between school profiles, etc. But the formulas are not fully binding and their coefficients were set up in the 1990s18. While salaries are paid from the national budget, about 20% of public expenditure on primary and secondary education comes from local governments for financing the operating costs of schools and school staff development19. Many municipalities however fail to fully cover these expenses; for example it is estimated that only 30% of municipalities are able to fulfil their obligations towards VET schools. Large differences in local government spending on education reflect local policy priorities, but also severe budgetary constrains of municipalities in poorer regions.

The trend of declining numbers of pupils in primary and secondary schools has not been reflected by declines in teacher employment or number of classes taught (see also the above table and tables 9 and 10 in the annex). As a result the efficiency of the system has deteriorated. This is true not just because of a large number of very small classes in rural schools but because class sizes in standard schools have been allowed to fall as well. The teacher to student ratio went from 1:16.5 in primary schools and 1:13.6 in secondary schools in 2000, to 1:13.8 in primary and only 1:10.7 in secondary schools in 200620, while the OECD average is 15.2 and 13.0. Another source of inefficiency is a large number of small schools.


17 In terms of duration of studies aligned on the bachelor level, of proportion if PhD graduates among teachers, and other accreditation criteria.
http://www.clds.org.rs/newsite/Reforme08-eng.pdf
National Plan of Action for Children (2004-2015) (under revision), National Youth Strategy (2009-2014)\textsuperscript{24}, and in other strategic documents. It is therefore assumed that the positive trend of public expenditure on education will continue and that more funds for developing the system will be gained by consolidating the numbers of schools, classes and teachers. In terms of improving the system of financing education the new Law on the Fundamentals of the Education System adopted on 31 August 2009 opens the door for per capita financing. It can also be expected that issues of financing will be tackled in the new overall strategy to be defined for all levels of education, as foreseen in the latest annual memorandum of the Ministry of Finance\textsuperscript{25}.

For vocational education and training the National Action Plan\textsuperscript{26} outlines the modified financing system to be developed as a ‘dynamic model’ combining the existing system with new elements of output based financing, namely the numbers of diplomas obtained and graduates employed, as well as short programmes implemented by VET schools in a co-financing mode in response to local needs. The Plan also proposes tax relieves for employers who organise student practice.

We would join the national strategies in arguing the need for increasing the public and private investments in education. However, this is bound to remain uncertain among the many other claims for increased funding, especially in the time of the global financial and economic crisis. It will be just as important to address the inefficiencies in the system which could bring more immediate gains.

**Policy recommendations:**

- Pursue a holistic approach, looking at the entire education system in a lifelong learning perspective.
- Demographic changes may free resources from pre-school and compulsory school education and enable investments in VET and adult learning; a principle of per capita costing should therefore be implemented to avoid gliding of cost standards.
- Analyse and reduce through mergers the number of 333 VET schools in Serbia.

**Access to education and training**

Overall in Serbia the education system enables young people to access adequate learning opportunities and national authorities together with education providers are increasingly engaged in the debate on how to remove barriers to learning and solve persisting issues, especially regarding specific groups of people disadvantaged for different reasons in their access to education. Section 5 of this review deals with social inclusion through education and training and looks more closely at some of these groups. The following data illustrate some of the issues of access to education in the whole youth and adult population.

Pre-school attendance of any kind was very low (39.2% in 2005) until recently when the compulsory six-month preparatory programme was introduced in the 2006/2007 school year, covering according to preliminary data over 90% of children. The official school enrolment rates slightly increased over the last years\textsuperscript{27} to 98.4% in primary, 77.8% in secondary and about 40% in tertiary education (2005/2006). The drop-out rates were 0.4% in primary and 2.3% in secondary education. However, other data show much higher drop-out rates of 15% for primary and around 30% for secondary\textsuperscript{28}, as compared to the official data which do not follow pupils by age cohorts.

According to UNESCO Institute for Statistics adult literacy rate for Serbia was 96.4% in 2003, with a significant gender difference: 98.9% for males versus 94.1% for females, while youth

\begin{itemize}
  \item \textsuperscript{23} http://www.prsp.gov.yu/download/Nacionalni%20akcioni%20plan%20zaposljavanja.doc
  \item \textsuperscript{24} http://www.mos.gov.rs/upload/dl/ENGLISH/nys.pdf
  \item \textsuperscript{25} Memorandum on the budget and economic and fiscal policy for the year of 2010 with projections for the years 2011 and 2012, Belgrade, June 2009.
  \item \textsuperscript{27} European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Social protection and social inclusion in the Republic of Serbia, 2008.
  \item \textsuperscript{28} Government of Serbia, Poverty Reduction Strategy Paper, 2003.
literacy rate was 99.4% with almost no gender difference. The educational attainment of adult population is relatively low. Based on 2005 LFS data, almost 40% of adults (25+) had completed primary education or less and only 14% achieved higher education. Women are better educated than men: the attainment at primary - secondary - tertiary level is 30.6 - 53.3 - 16.1 for women and 47.8 - 40.0 - 12.2 for men\textsuperscript{29}.

Some issues of access to education and training can be observed in the structure of education system, the existing learning pathways and the enrolment policy for transition between the education sectors:

- Differentiation between high and low achieving primary schools without effective support towards improvement of the latter does not guarantee their pupils equitable access to compulsory education.

- The current qualification examination at the end of primary education appears to lead to rather arbitrary decisions on secondary school enrolments, thus becoming a barrier to more equitable access to secondary schools. Concept of the new final examination planned to replace the qualification examination already in the school year 2010/2011 is still unclear.

- Planned new national examinations at the end of 4-year secondary education (General Matura and VET Matura) aim to enable progression to corresponding higher education institutions without having to pass entrance examinations. Though the two Maturas are to be introduced in the school year 2013/2014 the development of new secondary education standards has not been started yet.

- Those who graduate from three-year vocational profiles do not have equitable access to higher education, e.g. through a one-year additional general education programme leading to Matura examination.

- The existing gaps in the supply of education and training can also be seen as problems of access due to non-availability of post-secondary VET, short higher education VET and adult education and training opportunities in general.

In general there is a need for rethinking the overall structure of secondary education, through better links and horizontal and vertical pathways between general and vocational routes, and for promoting transition between secondary VET and higher education. These changes have to be considered in close relation with the development of medium and high level qualifications, and in close dialogues with the social partners.

Existing policies and strategies do include measures to improve access to education and training, especially for disadvantaged groups, but a number of general issues of access, such as those mentioned above, seem to be neglected. One of the reasons appears to be that policy thinking and practice are still fragmented across the education and training sectors, over the many different groups of people disadvantaged in access to education, and without sufficient involvement of all the stakeholders in policy formulation and implementation processes.

Policy recommendations:

- Improve transition and transmission barriers in the overall education system.
- Remove blind alleys, in particular for 3 year VET programmes, to make VET more attractive.

\textsuperscript{29} Krstic, G., Corbanese, V., Situation analysis of youth employment in the Republic of Serbia, ILO Employment Papers, 2008.
Quality of education and training

Serbia strives for a modern education system which would contribute more efficiently to the economic recovery, in line with the EU policy as formulated in the Lisbon Strategy, support the development of democracy and contribute to the European integration process of the country. The evidence of that are the first achievements of the reform process improving the quality of education and training.

The reform of primary education brought new curricula: one foreign language is obligatory since grade one, and second foreign language is obligatory starting at grade five. Information technology was introduced to both primary educational cycles and health education was integrated into the curricula of the existing subjects. In both cycles obligatory optional classes and facultative classes were introduced.

Further improvement of primary education quality appears to be necessary. A recent study of Serbia’s results in the PISA tests points out that performance of 15 year old students in three surveyed domains (mathematical, scientific and reading literacy) is significantly below the OECD average and also lower than the performance of students in Croatia and Slovenia (mostly in the domain of the reading literacy). It implies that the students in Serbia would require from one to almost three years of additional education in order to catch up with students from these countries. Apart from that, developing the competence of initiative and entrepreneurship remain to be addressed at the system level, as well as other key competences that serve for personal fulfilment, social inclusion and active citizenship, further learning and employability.

General secondary education obtained in high schools (gymnasia) with four profiles (general, natural sciences and mathematics, data processing, and social sciences and languages, plus specialised high schools for languages and mathematics) is to be reformed in terms of new education standards and curricula.

The secondary vocational education provided in around 250 profiles in the three or four year curriculum undergoes the reform process driven by the EU CARDS programme since 2002. In total 58 new profiles were created and are implemented in 164 schools. The new curricula were developed in cooperation with employers and reflect their needs for new or improved knowledge and skills. However, the outcomes of the programme have not been properly evaluated so far and according to the data of VET Centre and Ministry of Education only 8.2% of the VET students are currently in the new profiles. This is still a pilot process and the major part of the VET system remains unchanged, with obsolete profiles, low in-company experience and inadequate practical skills training.

The National Programme for Integration with the European Union includes the following priorities related to quality of education:
- Introduction of evaluation, self evaluation and development planning for schools
- Creation of national final examinations in primary and secondary education
- Mainstreaming the CARDS pilot VET profiles
- Development of quality standards for pre-school and primary education
- Definition of National Qualifications Framework
- Establishment of a certification and accreditation system in VET
- Development of education standards in secondary education
- Definition of standards for teachers.

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31. Programme for International Student Assessment.
In order to support the education reform in line with the above national strategies the Ministry of Education has currently undertaken a major legislative initiative by substantially revising the comprehensive Law on the Fundamentals of the Education System governing the pre-, primary and secondary education. The draft law was put up for public debate in June 2009 and adopted by the Parliament on 31 August 2009. The key innovations in the new law include:

- New principles of equity, improved access, individualised approach to learners, lifelong learning, and of better planning, quality and efficiency of education
- Educational goals of investing in human capital, developing key skills, matching competences to the requirements of jobs, economy, science and technology
- Standardisation of learning achievements, teaching and school leadership competences, and quality
- Establishing the National Council for VET and Adult Education
- Increased autonomy of schools and more flexible learning programmes
- Introducing per capita financing
- Quality assurance based on self-evaluation, external evaluation and development planning
- Redefining initial and in-service teacher training.

The National Action Plan for VET\textsuperscript{35} developed by the EU CARDS programme in 2006 and adopted by the Government in March 2009 defines the following priority areas:

- Social partnership and VET
- National qualifications framework
- Curriculum development
- Professional development of teachers, associates and instructors
- Career guidance and counselling
- Entrepreneurship.

The plan proposes to establish a National Council for VET and Adult Education and an independent Centre for VET and Adult Education. The new education law codifies the Council but it leaves the VET Centre as part of the Institute for Education Improvement.

A high-quality teacher workforce is crucial for the performance of education and training systems as a basis for future global competitiveness. Of the same magnitude are the professional capacities of school principals in VET and adult education. In 2006 the Vocational Education Development Strategy was adopted. However, the implementation is slow - less than half of VET schools have participated in VET reform. PISA and TIMMS results point to the lack of standards regarding the quality of the teaching process and the teachers themselves. Another problem is the status of vocational subject teachers who are specialized in profiles made redundant by the changes in the labour market. While a lot of teacher training has taken place since 2002 through pilot projects under the CARDS programme support, these efforts need to be taken forward to the systemic level. Important planks to capitalize on are the ongoing implementation of school development plans, which should be underpinned by a systematic school principals’ training initiative, and broader provision of in-service teacher training and other forms of continuing professional development of teachers.

The National Action Plan for VET 2009-15 put forward clear guidelines for a strategy of teacher professionalisation based on continuous professional teacher development; this is a good choice in a situation where most teachers already employed will need upgrading in subject and pedagogical skills. Another important reform strategy for modernizing the overall system of professional teacher development is the proposal to create a system that will connect initial and permanent education at the same time.

However, in Serbia as in many EU countries, the critical factors are the need to reform initial teacher education in universities and critically assess the modern pedagogical competences of teacher educators in higher education and to upgrade these competences. The strategic first step should probably be to stimulate an in-depth innovation of VET teacher educators,

optimally as part of higher education reform along the lines of the Bologna Process, and enable universities on the one hand to effectively connect initial and continuing teacher training\(^{36}\) and on the other become key ‘drivers’ for improvement of general pedagogical competences and skills of teachers.

The issue of quality receives due attention in Serbia and it is perceived as a key underlying principle of reforming education and training. The strategic documents available, such as the National Action Plan for VET, recognise all the issues related to quality of education and training, cover numbers of important areas and propose a plethora of ambitious measures, to be implemented in short- or mid-term. At the same time however, the reform strategies should be more realistic, with further choices to be made among the too many priorities, assessing carefully the resources and implementation capacities available. The foreseen new overall education strategy will be a good opportunity for that, especially if it is conceived as a lifelong learning strategy.

**Policy recommendations:**

- Prioritise among too many policy proposals and concentrate on one thing at a time.
- Reform of pre-service and in-service teacher training as well as a programme of professional training for VET school principals is an acute need.
- The pilot school approach in VET reform needs to be evaluated and then generalised to all VET schools.

**Adult learning**

Adult learning in Serbia presents a developing and diversified picture\(^{37}\). Education and training of adults is organised in different formal education institutions, agencies, companies, professional associations, by private providers and NGOs, as well as a range of public institutions such as museums, libraries etc. Thanks to the booming of private providers and NGOs the expansion has been particularly substantial in education to human rights, democracy and civil society, sustainable development, entrepreneurship, health care and prevention, IT literacy and foreign languages.

Companies have contributed to this expansion. Recent statistics from the World Bank about the percentage of firms offering formal training to employees reached 39.5% in Serbia, less than Slovenia (62%), Croatia (47.8%) or Bosnia and Herzegovina (42.4%), but markedly more than Bulgaria (28.1%), Romania (25.3), Hungary (33.9%), Albania (33.2%), FYROM (29.5%) and Turkey (21.4%).

Continuing training in technical fields for the unemployed as well as for the needs of increasing competitiveness and/or preparing restructuring of companies is developing but at lower pace. The National Employment Service (NES) organised training for about 12,000 unemployed in 2007 out of a total of 450,000, making less than 3% unemployed involved in training. The Ministry of Education (MoE) started to set up pilot regional training centres based on existing and dynamic VET schools with the support of CARDS. But only 5 regional centres are in place but with limited capacity\(^{38}\), and 3 new centres are planned to open soon. However, evaluation shows that this experience is promising, particularly in terms of close cooperation mechanisms set up between schools and companies for the design and implementation of targeted courses. Another MoE initiative well worth mentioning here is the new network of regional centres for professional development of teachers, established with support of the Swiss Agency for Development and Cooperation.

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\(^{36}\) The Law on the Fundamentals of the Education System foresees the implementation of reformed pre-service teacher training as of 2013/2014.


\(^{38}\) A report made in the context of the CARDS programme in November 2007 about evaluation of the 5 Regional Training Centres showed 1500 participants between March 2006 and October 2007.
As noted in the CONFINTEA study, one of the key problems for the development of adult education and training is the weak link between formal and non-formal education. There is no validation system for prior learning and non-formal training is not recognised, although the regional training centres based on VET schools have managed to develop 50 professional training programmes and delivered certificates well recognised in public. Another explanation is the low involvement of social partners in the establishment and management of CVET policies, as noted in a recent ETF report\textsuperscript{39}. Finally, the lack of public financing as well as the lack of co-financing mechanisms between the state and businesses and the lack of incentives aimed at businesses and at individuals hamper the development of adult education and training. More broadly, the problem may also come from the ways adult education and training is conceived in Serbia.

Adopted by the Government at the end of 2006, the Strategy for the Development of Adult Education defines the following objectives:
- securing the accessibility of education and training to all categories of adults
- decentralisation and a partnership approach
- quality assurance through legislation and the establishment of educational standards
- establishing effective ways of participation of social partners
- distribution of responsibility among relevant ministries and their agencies
- development of various programme options for better availability of adult education
- development of capacity and quality.

Just adopted by the Government in March 2009, the related Action Plan\textsuperscript{40} identifies four main priorities in line with the strategic objectives above:
- further development of legislative, conceptual, strategic, organisational and institutional foundation for efficient participation of social partners in adult education
- establishing organisational and personnel basis for delegating responsibilities among relevant ministries in adult education
- creating the background for and encouraging the development of different programme options and making education more accessible to adult population
- further development of financial and systemic basis for the improvement of the capacity and quality of adult education and training.

All this shows that the prevailing concept is adult education which insists on the needs of individuals and makes ample reference to illiteracy issues and where most responsibilities are given to MoE and other ministries, but which neglects training activities initiated by companies and in particular the development of on the job training/learning. It is also supply driven since little room is given to the ways and means to analyse and reflect on the needs of the labour market and the economy. On the contrary, emphasis is on legal and institutional issues, capacity building, accreditation and quality control, including the need to establish a wide network of providers. There is some reference to social partnership, but mainly with the objective to have social partner representatives involved in the National VET and Adult Education Council, as well as in Local Councils. There is no clear reference to any strategic economic development objectives, or any specific support for key sectors in development or in restructuring. Finally, even though decentralisation is mentioned, the approach remains centralised with programmes to be designed and accredited, a new financing system with no reference to cost sharing mechanisms and other incentives.

It is not clear how far the action plan will have an efficient and effective role in developing adult learning and establishing links between formal and non-formal education. As it is, it can serve social objectives albeit on the condition of receiving considerable amounts of funds, but the national priorities of competitiveness and economic development will need another set of measures. However, the VET and AE Council, as well as the local councils, can be the right settings where such questions would be raised. The development of the activities of the Regional Training Centres will certainly support such reflections; and the thoughts concerning the new financing mechanisms can also benefit from experiences developed in the EU.


\textsuperscript{40} Action Plan for the implementation of the strategy for the development of adult education in the Republic of Serbia 2009-2010.
Policy Recommendations:

- Concentrate first on creating access to adult learning instead of establishing a complicated LLL “system”.
- Empower VET & AE Council to ensure effective articulation of the demand side of adult learning.

4. Job creation, skills and employment in Serbia

The labour market in Serbia

The economic transition has brought profound changes in the structure of the job market. The Serbian economy is still in a phase of transition from a socialist planning economy with socially-owned and state large companies towards a market economy with private companies and where production decisions are based on the price system. This creates a whole range of problems for the labour market. The structural adaptation of the economy has created serious pressures on the labour market and job creation in Serbia remains a challenge. Socially-owned and state enterprises have been over-manned and workers protected and therefore comparatively immobile, all creating a rigid employment system. In April 2009[41], Serbia had a population of 7,528,262, out of which 35.1% were employed, 6.5% unemployed, 42.8% inactive, and 15.6% aged under 15.

The total number of employees, according to the 2009 Labour Force Survey, was 2,642,686, with the following structure:

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employed</td>
<td>30,5%</td>
<td>14,8%</td>
<td>23,7%</td>
</tr>
<tr>
<td>Employees</td>
<td>65,1%</td>
<td>70,3%</td>
<td>67,4%</td>
</tr>
<tr>
<td>Unpaid family workers</td>
<td>4,3%</td>
<td>14,8%</td>
<td>8,9%</td>
</tr>
</tbody>
</table>

Source: Statistical Office of the Republic of Serbia

The distribution of occupations by sector shows a prevailing role of services (45.5%), while the primary sector accounts for 25.3% and industry 29.2%. Private sector wage employment, which should be the main engine of sustainable employment growth in the future, comprises less than 1,000,000 persons compared to the working age population of approx. 5,000,000. The labour market failed to absorb the employees shed by restructuring and privatisation processes, and to generate enough jobs for youth and adults queuing in the labour market. Despite a shrinking youth population, young people experience a troubled transition from school to work. According to LFS from April 2009, the youth unemployment rate was 40.7% (43.7% in 2007 and 35.1% in 2008).

The informal sector is still having a role in the absorption of employment and income generation for a remarkably high percentage of mainly unqualified and unskilled workers. According to Statistical Office of the Republic of Serbia, in October 2008 the informal employment was 23.6% (for more details see table 13 in the annex).

Based upon education attainment, the majority of those without or with low education are employed in agriculture, while those with medium and high education are more employed in industry and services. Only 1% does not have any education at all, while the largest number, more than half, has secondary education (see figure 1).

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[41] Labour Force Survey.
According to the Labour Force Survey 2009, unemployed were estimated at 488,595, out of which 49% were female, and 36% were seeking job for the first time. In April 2009 the LFS unemployment rate was 15.6% (14.0% in 2007 and 18.1% in 2008). Concerning the length of unemployment, 29.3% are seeking job for less than one year, 16.9% for less than 2 years and the vast majority for more than two years. A relevant percentage (14.8%) of unemployed is seeking for a job for more than 8 years (in Slovenia 5.7%, in Croatia 12.0%). The huge majority is without educational attainment.

Thus, the impressive growth of the GDP in the past 7 years has not led to a significant increase in job creation. This is due to many factors:
- The privatization process has resulted in the loss of many jobs available before in the state owned and socially owned enterprises;
- The lack of adequate investments necessary to overcome technological obsolescence of production capacities and foster economic development;
- The lack of coordination among national stakeholders and the international community with the result of many sector policies that may not be adequate to address the overall problems.

### Employment policies and job creation

In this situation, it is crucial to establish the best possible conditions for creating more new jobs on market conditions. Employment policy was hardly given enough attention in the period 2000-2007, especially related to active labour market policy. Due to the unemployment benefit system and even more to the establishment of the Transition Fund in 2002, the overall labour market expenditure adds up to 1% of GDP. With only about 0.1% of GDP devoted to active labour market measures in 2008, implemented by the National Employment Service, employment policies need to be given a more prominent place and become fully integrated within the overall economic development and education and training policies.

The government of Serbia adopted the National Employment Strategy 2005-2010 that defined measures for tackling unemployment formulated in the National Employment Action Plan 2006-08. An active employment strategy is based on increasing activities aimed at job creation:

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43 The Transition Fund was established as part of the social program to stimulate severance of surplus workers with the aim to accelerate restructuring and privation and at the same time to facilitate re-employment through creating transition centres for counselling and re-training.
Private investments represent the basic source for creating new jobs and increasing employment. This heavily depends on the quality of human capital and on an increasing innovation, mainly within enterprises. Therefore, government policies should increase investments in human capital, in research-based technological renewal of products and processes, development of information technologies, and innovations.

Enhancing Greenfield investments that are necessary for the creation of new companies, instead of only of the Brownfield type for the purchase of state and socially-owned companies, through privatisation tenders and auctions.

Small and Medium Size Enterprises represent the backbone of Serbian economy representing 99.8% of the total share of enterprises and 65.5% employment: some 149,000 new jobs have been created between 2004 and 2007. SME contribute with 36% of GDP, 50.2% to export and 64% to import and 51.2% to investments in non-financial sector.

Local employment and economic development experience of other countries shows that development of partnership, especially on the local level, is a key to solve problems of economic and social development, including employment.

A new National Employment Action Plan has been recently prepared for 2009 concentrating more on measures for employment growth in the legal economy:

1. Maintaining the employment rate as in 2008 and finding solutions for redundant workers;
2. Increasing formal employment in private sector and reducing regional disparities;
3. Matching supply and demand at the labour market by implementing active labour market measures;
4. Enhancing social dialog and increasing the efficiency of NES.

The labour market and links with the education and training system

A competitive economy is the key to higher growth and employment rates. At the moment, the education and training system in Serbia does not sufficiently support employment and the labour market. Serbia’s VET system faces major challenges. The transition from a system where the employees were accustomed to having a secure, life-time employment with the same company, to a competitive and challenging labour market is still in process. The Serbian work force is slow to adjust to the changing economic situation. As a result, the demand for skilled employees is increasing faster than the supply. Specialists, such as financial analysts and controllers, internal auditors, IT and marketing specialists, are in short supply, increasing competition among companies. The VET system is the most important instrument for enhancing the employability, productivity, and income earning capacity of youth that will ease transition from school to work and for adults who will need re-conversion training. Studies show that employment outcomes are increasingly determined by the level and quality of education and training and by their relevance to the labour market needs and opportunities.

However, also the labour market is required to become able to signal more clearly the existing and future quantitative and qualitative competence needs to the VET system. There is a need in Serbia to establish a signal system between the labour market and the training system. New skills for new jobs have to be identified and a qualification analysis research function should be established with a view to monitoring trends in the emerging labour market and an early identification of patterns of job growth segments. The envisaged Sector Committees could play an important role in this. As fine-tuning of training needs identification requires decentralized analysis, this could be done through contracts with universities and research centres involving relevant public authorities, social partners and training providers.

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44 The new Law on Employment allows matching funds of local self-governments with those of the employment service.
A National Qualifications Framework has been considered in Serbia after a debate initiated by the CARDS VET programme, and also included in the Action Plan for VET (2009). It could become a tool bridging the labour market with education and training, but it should not be driven by the education sector only.

Another important transmission link between the world of education and the world of work could be a modernised career counselling and guidance system in Serbia. The existing system located in the National Employment Service needs updating.

There is still a lack of communication between industry and the VET providers mediated through the social partner organizations in Serbia. The social dialogue is the best way to enable qualification needs to be channelled into the VET system and also to ensure that the social and nation-wide recognition of vocational qualifications is guaranteed. Tripartite Councils have been established at both national and regional levels. However, trade unions and collective agreements have little impact outside the public sector and large companies. It seems necessary therefore to open up this dialogue to also include participants from small companies not yet well represented; they represent growing segments of the labour market.

Policy-making in Serbia tends to be too sector-based and would profit from a better coordination of strategies between economic, trade, employment, social and educational policies. A functional view on VET and adult learning as central instruments for achieving overall national development goals would be an important stimulus for the education sector.

However, the education and training sector could do more on its own to serve employment, employability, personal development, active citizenship, and social inclusion. The key policymakers and stakeholders in VET reform could try to foresee what the key employment challenges would look like in 2020. There is no doubt that facing demographic changes already foreseeable, prospering in global competition, education for innovation and addressing threats to social inclusion are among the challenges which will have to be faced.

In drafting new VET curricula it is necessary to strike a balance between what companies demand here and now in terms of possessing the skills needed to utilize present-day technologies in the workplace (concrete skills leading to employability) with broader key competences. An individual employer often prefers narrowly educated workers, especially from the VET sector. However, technological and organizational change will require workers that are more flexible and can react to unforeseen changes and shocks in labour market conditions. The typical competences required are problem solving, complex communication skills, adaptability and systems thinking. It is advisable now to try to define this trade-off in discussions between the labour market and the education and training system.

Policy recommendations:

- Develop strong social partnership structures to mediate between the demand for and supply of qualifications.
- The National Qualification Framework should be implemented as soon as possible and could create an important bridge between schools and companies.
- Serbia should develop a VET research institute to support national policy-making and governance in VET and Adult Learning.

5. Social inclusion in education and training

At present, the perspective of inclusive education is probably the best analysed aspect of Serbian education; that is why in this brief review we draw mainly from the recent comprehensive national report and from the new EC publication on social inclusion. The

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46 As of 2009, the Government starts the reform of the Central Policy Coordination (CPC) function.
ETF has also additional sources of information and experience thanks to our assistance in designing the two IPA 2008 projects in this domain, as well as the current ETF regional project on social inclusion through education and training, implemented with the EU accession candidate and potential candidate countries.

Serbian laws regulating education are increasingly based on the principles of non-discrimination and access to quality education for all, for instance the right to education for all, facilitating learning of people with disabilities, and other types of support to vulnerable groups. The equal opportunities approach is gaining ground when it comes to the inclusion of ethnic minorities in the education system, in particular through the entitlement to selecting the language of instruction at all levels. Key achievements from already implemented inclusive programs and projects include professional development of the teachers involved, successful promotion of inclusive practices, partnership between institutions and NGOs in inclusive practices, and piloting a program for functional primary education of adult Roma.

Children with developmental disabilities are in Serbia predominantly educated in special schools\textsuperscript{49} or special classes in regular schools. Special classes in regular elementary schools existed in 90 regular elementary schools in the school year 2007/2008. Primary education for adults\textsuperscript{50} is organized in schools for adult education. It can also be organized in every primary school which has adequate staff, space, curriculum, equipment and educational materials, as well as sufficient number of students.

The Roma population in Serbia has especially low education attainment indicators. According to 2002 Population Census data only 29% of the Roma population completed primary school, only 7.8% had secondary education and 0.3% had completed higher school or university. As found in the Living Standard Measurement Study 2002-2007, only 15% of children aged 3 – 7 attended kindergarten, while 73% of children aged 7 – 14 attended school in 2007 (56% in 2002). The table below shows the results of the UNDP vulnerability survey among refugees, IDP and Roma\textsuperscript{51}.

<table>
<thead>
<tr>
<th>Enrolment rate primary</th>
<th>Non-Roma population*</th>
<th>Refugees and IDPs</th>
<th>Roma population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolment rate primary</td>
<td>92%</td>
<td>85%</td>
<td>74%</td>
</tr>
<tr>
<td>Enrolment rate secondary</td>
<td>71%</td>
<td>58%</td>
<td>19%</td>
</tr>
<tr>
<td>Enrolment rate tertiary</td>
<td>10%</td>
<td>6%</td>
<td>1%</td>
</tr>
</tbody>
</table>

* Domicile non-Roma communities residing close to Roma.

In the framework of the Decade of Roma Inclusion (2005-2015) numerous activities have been implemented, such as affirmative action measures for enrolment to secondary school and faculties, functional basic education of Roma, protection of Roma children against discrimination in education etc. Up to now, the main achieved results are:
- 16 educational advisors appointed as responsible for Roma education improvement;
- Implemented local action plans on Roma education improvement;
- Increased enrolment of Roma children into preschool education;
- A model on introducing Roma Assistants into instructional activities;
- 28 Roma Assistants have been engaged in 26 schools.

The main challenges for further development of inclusive education include:
- Low coverage of children with pre-school education due to the lack of capacities in pre-school institutions, in particular for the rural children, children

\textsuperscript{49} These schools are specialized for educating pupils with mental, physical and/or sensory disabilities, and children are referred to the school based on medical commissions’ referral.

\textsuperscript{50} As found in the 2002 census, around 235,000 people are illiterate, while 24% of the population has only completed the primary school. According to the data of the Statistical Office, the largest numbers of illiterate people reside in undeveloped municipalities.

from families with low education level, Roma children, children with developmental disabilities;
- Dominant special/separate education of students with developmental disabilities preventing their increased inclusion (de-segregation) in regular schools;
- Low level of the inclusion of Roma children in the education system;
- Insufficient attention to the needs of children and young people from poor families with regard to education;
- Underdeveloped adult education programmes for acquiring elementary education, functional literacy and basic qualification (Second Chance);
- Insufficiently developed and inadequate formal education system for adults with disabilities;
- Lack of data on the enrolment and school completion, in particular for the abovementioned groups of learners.

The new Law on the Fundamentals of the Education System provides a much improved legal base by stressing improved access to education, principles of antidiscrimination and anti-segregation, individualised approach to education, and by defining the role of pedagogical assistants and other functions in support of inclusive education.

Policy recommendations:

- Promote inclusion measures not prescribed as mandatory (for example, engagement of assistants for working with children/students with disabilities in regular education system).
- Professional development of teaching staff on inclusive education and training of staff to involve all children/students into mainstream education (changes in the initial education of teachers).
- Develop models, standards and encouragement of education of adults and adults with disabilities.

6. Major recent and oncoming donors’ interventions in HRD in Serbia

IPA 2008 Systemic Development of Elementary, Practice Based Adult Education in Serbia (Second Chance) (2010-2012) 4.5 M€
Establishing a system of functional elementary adult education in Serbia, which is accessible and adaptable to the needs of adult learners, focused on life skills and competencies and based upon lifelong learning.

IPA 2008 Support for quality assurance within the national primary and secondary education examination system (2010-2012) 2.0 M€
Supporting the development and implementation of quality assurance system for general education and VET, giving priority to development of national examination system and increasing capacity of the MoE and other relevant institutions to implement this system.

IPA 2008 Education for All - Increasing the availability and quality of education for children from marginalised groups (2010-2012) 1.8 M€
Increasing the inclusion of children from marginalised and special needs groups in the system of preschool and elementary education by enhancing the policy making and implementation capacities, empowering relevant pedagogical groups, and increasing public awareness.

IPA 2008 Enhancing the data management, forecasting and monitoring and evaluation capacity of the National Employment Service (2010-2012) 1.0 M€
Improving the performance of NES in the areas of labour market trends forecasting and monitoring and evaluation of active labour market programmes, capacity building measures for relevant stakeholders, implementation of software solutions covering the above areas.
IPA 2007 Modernisation of the VET system in Serbia (2009-2011) 2.5 M€
Improving governance of VET through establishment of VET Council and Agency for VET, and by strengthening social partnership at all levels; improving the national qualification system and support introduction of modernised VET programmes; supporting implementation of quality assurance system for VET; developing continuing vocational education and training.

Three phases of technical assistance and equipment supplies in support of capacity building to policy development of VET reform, development and implementation of new curricula in 146 pilot schools in 8 sectors of economy, training teachers and instructors, transformation of 5 VET schools into regional training centres, establishment of Innovation Fund for schools, upgrading of the school infrastructure (equipment and other teaching aids plus rehabilitation of buildings).

CARDS 2006 Support development of national employment policy and Modernisation of the national employment service (2007-2009) 3.0 M€
Twinning project to build capacity of NES, and TA project developing active labour market measures through training of unemployed.

World Bank: Delivery of Improved Local Services (DILS) (2009-2012) 46.4 M€52
Assist the Government to increase the capacity of institutional actors in order to improve education and social protection services, in a decentralizing environment. This will be achieved by helping to develop an efficient public financing framework which will compensate for inequalities across municipalities; improving outreach and access through innovation in social service delivery; providing support for new roles for state level ministries; and capacity building amongst local self governments and other local service providers.

World Bank: Education Improvement Programme (2006-2008) 7.1 M€
Modernising the education system including the development education management information system.

7. Bibliography


52 For all the sectors involved.


European Training Foundation, *The Reform of Vocational Curricula, Outcomes of the 2005 ETF Peer Reviews in Bulgaria, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, and Serbia*.


http://www.prsp.gov.rs/


Statistical annex

Table 1: Demographic developments and trends, including migrations

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (in millions)</td>
<td>7.44</td>
<td>7.41</td>
<td>7.38</td>
<td>7.52</td>
</tr>
<tr>
<td>Population growth</td>
<td>-0.30</td>
<td>-0.40</td>
<td>-0.40</td>
<td>-0.46</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>73</td>
<td>73</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td>Net migration/1000 Population</td>
<td></td>
<td></td>
<td>-1.9</td>
<td></td>
</tr>
</tbody>
</table>


Table 2: Economic developments and trends

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP growth rate</td>
<td>6.1</td>
<td>5.7</td>
<td>7.1</td>
<td>6.0</td>
</tr>
<tr>
<td>GDP per capita (PPP) US$</td>
<td>8.841</td>
<td>9.632</td>
<td>10.248</td>
<td></td>
</tr>
</tbody>
</table>

Source: UNESCO, Republic Development Bureau in Serbia

Table 3: Employment rates by gender

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>59.2</td>
<td>60.0</td>
<td>62.3</td>
<td>49.8</td>
</tr>
<tr>
<td>Female</td>
<td>40.6</td>
<td>43.0</td>
<td>45.3</td>
<td>34.3</td>
</tr>
<tr>
<td>Total</td>
<td>49.9</td>
<td>51.5</td>
<td>53.7</td>
<td>41.6</td>
</tr>
</tbody>
</table>


Table 4: Employment rates by age, April 2009

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 24 years old</td>
<td>16.8</td>
</tr>
<tr>
<td>25 - 34</td>
<td>62.7</td>
</tr>
<tr>
<td>35 - 44</td>
<td>74.3</td>
</tr>
<tr>
<td>45 - 54</td>
<td>63.7</td>
</tr>
<tr>
<td>55 - 64</td>
<td>35.9</td>
</tr>
<tr>
<td>65 +</td>
<td>10.7</td>
</tr>
<tr>
<td>15 - 64</td>
<td>50.8</td>
</tr>
</tbody>
</table>


Table 5: Expenditure on ALMP as % of GDP

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure as % of GDP</td>
<td>0.06</td>
<td>0.08</td>
<td>0.11</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Source: National Employment Service
### Table 6: Public expenditure on education

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public expenditure on education, total (% of GDP)</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Public expenditure on education, total (% of government expenditure)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

*Source: The World Bank Group*

### Table 7: Pupil - Teacher ratio

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupil – teacher ratio (primary)</td>
<td>14.5</td>
<td>13.9</td>
<td>13.2</td>
<td></td>
</tr>
<tr>
<td>Pupil – teacher ratio (lower secondary)</td>
<td>14.5</td>
<td>13.9</td>
<td>13.2</td>
<td></td>
</tr>
<tr>
<td>Pupil – teacher ratio (upper secondary)</td>
<td>11.1</td>
<td>10.9</td>
<td>10.6</td>
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</tbody>
</table>

*Source: ETF Data Library*

### Table 8: Gross enrolment ratio

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross enrolment ratio, primary</td>
<td>100.1</td>
<td>98.8</td>
<td>96.9</td>
<td></td>
</tr>
<tr>
<td>Gross enrolment ratio, secondary</td>
<td>87.0</td>
<td>87.3</td>
<td>87.9</td>
<td></td>
</tr>
<tr>
<td>Gross enrolment ratio, lower secondary</td>
<td>97.4</td>
<td>96.7</td>
<td>96.9</td>
<td></td>
</tr>
<tr>
<td>Gross enrolment ratio, upper secondary</td>
<td>77.8</td>
<td>78.7</td>
<td>79.7</td>
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*Source: ETF Data Library*

### Table 9: Population projection for 10 – 14 age group in Serbia (in thousands)

<table>
<thead>
<tr>
<th></th>
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<td></td>
<td>742</td>
<td>647</td>
<td>679</td>
<td>591</td>
<td>564</td>
<td>554</td>
<td>541</td>
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### Table 10: Teaching staff in secondary education in Serbia

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td></td>
<td>46368</td>
<td>47095</td>
<td>47904</td>
<td>48268</td>
<td>49946</td>
<td>50756</td>
<td>51914</td>
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</table>

*Source: UNESCO Institute for Statistics*

### Table 11: Unemployment rates

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009 April</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth unemployment rate</td>
<td>43.7</td>
<td>35.1</td>
<td>40.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Unemployment rates by age, April 2009

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 – 24 years old</td>
<td>40.7</td>
</tr>
<tr>
<td>25 - 34</td>
<td>20.4</td>
</tr>
<tr>
<td>35 - 44</td>
<td>13.1</td>
</tr>
<tr>
<td>45 - 54</td>
<td>12.4</td>
</tr>
<tr>
<td>55 - 64</td>
<td>9.9</td>
</tr>
<tr>
<td>65 +</td>
<td>1.1</td>
</tr>
<tr>
<td>15 - 64</td>
<td>16.4</td>
</tr>
</tbody>
</table>

**Source:** Statistical Office of the Republic of Serbia, 2009 Labour Force Survey

### Informal Employment in Serbia

<table>
<thead>
<tr>
<th></th>
<th>Formal</th>
<th>Informal</th>
<th>Total</th>
<th>Informal %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Agricultural Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>1,675,280</td>
<td>97,811</td>
<td>1,773,091</td>
<td>5.5</td>
</tr>
<tr>
<td>Own-account</td>
<td>111,241</td>
<td>87,692</td>
<td>198,933</td>
<td>44.1</td>
</tr>
<tr>
<td>Employer</td>
<td>113,772</td>
<td>2,885</td>
<td>116,657</td>
<td>2.5</td>
</tr>
<tr>
<td>Contributing Family Worker</td>
<td>17,582</td>
<td>17,582</td>
<td>100.0</td>
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</tr>
<tr>
<td><strong>Agricultural Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>44,936</td>
<td>12,728</td>
<td>57,664</td>
<td>22.1</td>
</tr>
<tr>
<td>Own-account</td>
<td>217,202</td>
<td>193,253</td>
<td>410,455</td>
<td>47.1</td>
</tr>
<tr>
<td>Employer</td>
<td>5,138</td>
<td>8,609</td>
<td>13,747</td>
<td>62.6</td>
</tr>
<tr>
<td>Contributing Family Worker</td>
<td>250,009</td>
<td>250,009</td>
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<tr>
<td><strong>Total</strong></td>
<td>2,167,569</td>
<td>670,569</td>
<td>2,838,138</td>
<td><strong>23.6</strong></td>
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</tbody>
</table>

**Source:** Statistical Office of the Republic of Serbia, October 2008