



Republic of Serbia
MINISTRY OF EDUCATION AND SCIENCE
Belgrade
Nemanjina 22-26



TORINO PROCESS 2012

ANALYTICAL FRAMEWORK FOR VOCATIONAL EDUCATION AND TRAINING SYSTEM REVIEWS IN SERBIA

NATIONAL REPORT FOR 2012

Belgrade, October 2012

This report was prepared in the framework of the ETF Torino Process.

Its contents are the sole responsibility of the authors and do not necessarily reflect the views of the ETF or the EU institutions.

This Report is the result of a collaborative effort of the Ministry of Education, Science and Technological Development, the Council for Vocational Education and Adult Education and the European Training Foundation.

The Report was prepared by:

1. Iskra Maksimović, Report coordinator
2. Ljiljana Lutovac, Ministry of Labour, Employment and Social Policy
3. Kristina Đurić, Serbian Chamber of Commerce
4. Aleksandra Delečić, Faculty of Economy, Finance and Administration (FEFA)
5. Aleksandar Đorđević, Faculty of Economy, Finance and Administration (FEFA)
6. Mina Miletić, Faculty of Economy, Finance and Administration (FEFA)
7. Vanja Ilić, Faculty of Economy, Finance and Administration (FEFA)
8. Nadežda Bogdanović, Republic Statistical Office

Acronyms

ALMM – active labour market measures

ALMP – active labour market policy

CVEAE - Council for Vocational Education and Adult Education

ETF – European Training Foundation

IIE– Institute for Improvement of Education

IQAE- Institute for Quality Assessment of Education

LFS – Labour Force Survey

MoERD – Ministry of Economy and Regional Development

MoESTD – Ministry of Education, Science and Technological Development

MoLESP – Ministry of Labour, Employment and Social Policy

NEC – National Education Council

NES – National Employment Service

RTC - Regional Training Centres

SC - sector-level councils

SHS – Survey of Household Spending

SNQF – Serbia's National Qualifications Framework

SVET - secondary vocational education and training

VET – vocational education and training

Table of Contents

Introduction	7
A. Vision for VET System Development	9
1.1 VET System Development	9
1.2 Strategic Documents	12
B. External Efficiency: Addressing Demographic, Economic and Labour Market Needs	15
2.1 Demographic Development	15
2.2 Economic Development	16
2.3 Employment and Unemployment	18
C. External Efficiency: Addressing Social Demands for VET and Promoting Social Inclusion	23
3.1 Employment Policy	25
3.2 Adult Education	28
3.3 Social Inclusion	30
3.4 Informal Employment	32
3.5 VET drop-out Rates	33
D. Internal Quality and Efficiency of Initial and Continuing VET Delivery	35
4.1 VET Quality	36
4.2 Teachers' Skills Upgrade	39
4.3 Practical Learning	41
E. Governance and Financing of the Initial and Continuing VET System and Institutional Capacities for Change	43
5.1 Financing	43
Governance Matrix	47
Concluding Remarks	49
Recommendations	53
Annex 1: Tables	55
Annex 2	65
Bibliography and Sources	67

Introduction

In 2010 the European Training Foundation (ETF) launched the first round of the Torino Process, in which 22 of its 29 partner countries participated.¹ In May 2011 the ETF organised a conference entitled ‘The Torino Process – Learning from Evidence’, which brought together over 250 stakeholders from all ETF partner countries, EU institutions, EU member states and the international community. In the final Declaration², conference participants welcomed the Torino Process approach, endorsed the findings from the first exercise, including a number of common priority areas and short-term actions, and encouraged the ETF to work further to build capacity in evidence-based policy making. In addition, partner countries confirmed their interest in taking part in the next round of the Torino Process.

What is the Torino Process?

The Torino Process is a participatory process leading to an evidence-based analysis of vocational education and training (VET) policies in a given country.

The Torino Process is carried out in order to build consensus on the possible ways forward in VET policy and system development. This includes the determination of the state of the art and vision for VET in each country or, after a given period, an assessment of the progress that countries are making in achieving the desired results. More specifically, the Torino Process is a vehicle for:

- developing a common understanding of a medium-term vision, priorities and strategy for VET development, exploring possible options for implementing this vision and/or making further progress;
- designing and evaluating home-grown and affordable VET policies, based on evidence or knowledge and collaboration;
- updating the analyses and achievements at regular intervals;
- providing opportunities for capacity development and policy learning within and among partner countries and with the EU;
- empowering countries to better coordinate the contributions of donors to achieving agreed national priorities.

¹ In addition, EU candidate countries also took part in the Copenhagen Process review, while Albainia, Former Yugoslav Republic of Macedonia and Serbia took part in the comparable evidence-based policy and system review requested by the EC DG Employment. Only Algiers did not take part in the comparable overview.

² The final Declaration from the conference can be found in the section of the ETF website dedicated to the Torino Process.

The Torino Process is founded on the following principles:

- **Ownership** of both the process and the results (final report) by the partner country's policy leaders and stakeholders. This includes seeking complementarity between the Torino Process and the national policy agenda and/or other relevant processes;
- **Broad participation** in the process by relevant stakeholder groups, including parliamentary committees, policy leaders, social partner representatives, school managers, teachers, local authorities, company representatives, researchers and civil society representatives. This provides the basis for reflections and consensus building by local actors, thus making the connection between policy analysis and agreements about policy choices and implementation;
- A **holistic approach**, using a broad concept of VET for both young people and adults and adhering to a system approach, taking into account not only the system elements and how they communicate, but also how the VET system responds to the economic and social environment in which it operates. The Analytical Framework comprises the policy vision for VET, an analysis of the external and internal efficiency of the system, and governance and financing issues.
- An **evidence or knowledge-based assessment**, which is seen as essential for countries to make informed decisions about policy developments and to measure progress.

The Torino Process Report 2012 for Serbia is the result of this process in Serbia and it incorporates the responses of all stakeholders and actors to the analysis of development of secondary vocational education and training and adult education and training.

A. Vision for VET System Development

1.1 VET System Development

In the course of 2011 and 2012, an overall Education Strategy of Serbia was prepared, with a section dealing with secondary vocational education and training (SVET). The part dedicated to SVET was based on the previously adopted Vocational Education and Training Strategy of 2006 and on the findings and research carried out in 2010 and 2011. Analyses have shown that the vision of SVET development set out in the 2006 Strategy was still relevant and compatible with reform processes in Serbia. What the new/modified Strategy introduced was a clarification of the mission and stronger links with the development of economy and labour market tendencies.

Serbia's education development strategy includes: two common frameworks, development strategies for nine subsystems (levels, types) of education, an education funding strategy and an education strategy for the system as a whole, which is a synthesis of all individual strategies listed above. This is a total of 13 comprehensive texts (reports) that define the strategy. More than 50 experts and education specialists took part in the development of the Strategy. The process involved a number of roundtables, expert discussions and a special public debate.

According to the Strategy, SVET in 2020 should enable the obtaining of relevant qualifications within the comprehensive National Qualifications Framework of the Republic of Serbia, in an optimised network of vocational schools and education establishments which operate on the basis of social partnership, using different forms and methods of teaching and learning, i.e. different education and training curricula. This will, on the one hand, enable every person who obtained primary education to earn their initial qualifications and prepare for the process of lifelong learning, in accordance with their personal predispositions and abilities. On the other hand, SVET gives the opportunity to obtain further qualifications, thereby ensuring that labour market demand is met, in line with the economic, technological and overall social development of the country.

The Strategy focuses on the following tasks of SVET:

- To obtain initial and ongoing vocational training;
- To acquire knowledge necessary to continue with education;
- To obtain qualifications (i.e. relevant professional competences) which are recognisable and necessary for inclusion in the world of work and which enable employment or the pursuit of an independent profession;
- To equip individuals for the lifelong learning process;
- To develop creativity, innovation and entrepreneurship in individuals.

Challenges and limitations for the implementation of this mission include:

- Inadequate structure of professions and inadequate geographical distribution of the school network;
- Insufficient equipment in schools not included in the pilot;
- Inadequate structure of the enrolment plan and mismatch between the educational profiles and the structure and demands of the economy (schooling of profiles for which there is no demand or in which there are labour surpluses, while on the other hand there is no enrolment in certain crafts that are in high demand in the market);
- Obsolescence of the part of the system not included in the pilot (which includes 15% of the total number of pupils) (outdated curricula and syllabuses, teachers who do not undergo adequate continual skills upgrade programs, poorly equipped schools);
- Unresolved issue of ensuring the quality of practical out-of-school teaching (hereinafter referred to as “practical learning”). There are no accredited practical learning posts and trainers, nor are there any incentives for companies to offer proper practical learning to pupils; the number of companies interested in this form of cooperation with the education system is insufficient;
- Lack of quality assurance instruments (the National Qualifications Framework (NQF), qualifications standards, external final examinations, motivational system for professional advancement of teachers, etc.).

The expected outcome, i.e. the expected situation in 2020 according to the new VET Strategy, is as follows:

- *Coverage* – minimum 95% of primary school leavers (88% per generation) enrolled in secondary schools.
- *Quality* – All elements of the SVET quality assurance system are expected to be fully operational by 2020 (sector-level councils are set up and running their second term of office; National Qualifications Framework developed and regularly updated to reflect the needs of the economy and the society as a whole; all curricula and syllabuses are developed on the basis of qualification standards, or on the basis of achievement standards for general subjects; teacher and headmaster competence standards and institution performance standards are fully operational; partly or fully external school-leaving examinations or final examinations and examinations in other forms of SVET are applied; a SVET monitoring system is in place; SVET dropout rate is 50% lower).
- *Effectiveness* – Through the establishment and development of strategic and systemic measures, the government will attempt to promote and ensure such pass-through rates for secondary school pupils to higher education that will contribute to the attainment of the planned education objectives, with 40% highly-educated individuals.

- *Relevance* - In 2020, labour market demands are better reflected in the supply of VET qualifications on the basis of a continual review of demand for competences carried out by sector-level councils. The network of VET schools is downsized to reflect demographic tendencies and regional development levels.

The most significant further elaboration in the modified version of the Strategy was made in relation to qualifications, including in particular the focus on the need to develop a National Qualifications Framework and a Qualifications System, which was only stated as a general direction for future development in the 2006 Strategy. This can be attributed primarily to the formation of the Council for Vocational Education and Adult Education (CVEAE) as the key national body that includes all social partners in Serbia, to employers' pressure and to the formation of sector-level councils (SC) as operational mechanisms for ensuring direct agreement between education establishments, employers and the labour market on qualification standards, profiles and the required knowledge and skills, as well as to harmonisation with relevant EU documents.

One of those tasks is the preparation of the first draft National Qualifications Framework in SVET. In late 2010, the Republic-level Committee on NQF for SVET was set up, which initiated the preparation of the first draft of the Serbian NQF (SNQF). The drafting of the Serbian NQF is supported by the following international projects:

- IPA 07 – Modernisation of Vocational Education, <http://www.vetserbia.edu.rs/homesr.htm>
- IPA 08 – Support for Quality Assurance within the National Primary and Secondary Education Examination System, <http://www.okni.edu.rs/>
- ETF – Support to the Development of the National Qualifications Framework in Serbia <http://www.etf.europa.eu>

SNQF includes vocational education qualifications for levels 1 through 5, as the National Council for Higher Education adopted on 23 April 2010 the Draft National Qualifications Framework in Serbia for Higher Education, which defines the descriptors for levels 6 through 8 (<http://nsvo.etf.rs>). The legal basis for NQF in higher education was introduced only with the amendments to the Law on Higher Education of October 2012.

The Republic-level Committee on NQF for SVET recommended the establishment of a single, integrated qualifications framework in Serbia that would include all qualification levels and types, regardless whether they are obtained through formal or non-formal education or through informal learning – life experience or work experience, and regardless of the age at which such qualifications are obtained (youth or adults). Within the framework of international projects and in cooperation with the Republic-level Committee, a draft SNQF has been prepared which defines also the processes and institutions (bodies, organisations) responsible for the determination of qualifications and qualification standards, the methods and requirements for obtaining, comparison and recognition of qualifications and other quality assurance mechanisms.

Specific measures and priorities that should bring about to a change in the current situation in the field of SVET according to the new comprehensive Strategy for Education Development in Serbia include:

<i>Strategic objectives of SVET development in Serbia until 2020+</i>	<i>Strategic measures to be implemented by 2020 in Serbia</i>
<p>Ensure relevance and availability of SVET qualifications</p> <p>Improve SVET quality and efficiency</p>	<ul style="list-style-type: none"> • Establishment of the National Qualifications Framework for lifelong learning • Standardisation of examination for qualifications • Establishment of a system for prior learning certification / recognition of non-formal and informal learning • Introduction of craftsmen’s education • Improvement of the teachers’ skill development system • Motivational professional advancement of teachers • Development of education programmes based on standards of qualifications • Flexible organisation of teaching • Matching the network of vocational schools and the educational programmes (profiles) offered with the needs of the economy
<p>Ensure that SVET system is comprehensive and increase its contribution to the reduction of school drop-out rate</p>	<ul style="list-style-type: none"> • Reduction of the school drop-out rate
<p>Establish a sustainable system of social partnership in SVET in Serbia</p>	<ul style="list-style-type: none"> • Inclusion of employers in the process of SVET programming, development and implementation
<p>Establish an effective SVET management system at all levels</p>	<ul style="list-style-type: none"> • Establishment of SVET monitoring and evaluation system • Defining a clear division of responsibilities, roles and tasks of all stakeholders in SVET management

1.2. Strategic Documents

1. Strategy for Education Development in Serbia, draft for the Government, 2012
2. Strategy for the Development of Vocational Education and Training in the Republic of Serbia, Government of the Republic of Serbia, 2006
3. Draft Action Plan for Implementation of the Strategy for the Development of Vocational Education and Training in the Republic of Serbia for the period 2007-2015, Government of the Republic of Serbia, 2007
4. Strategy for Scientific and Technological Development of the Republic of Serbia for the period 2010 to 2015, Government of the Republic of Serbia, 2010
5. Strategy and Policy for Industrial Development of the Republic of Serbia 2011-2020, Government of the Republic of Serbia, 2011
6. National Employment Strategy for the Period 2011-2020, Government of the Republic of Serbia, 2011
7. First National Report on Social Inclusion and Poverty Reduction, Government of the Republic of Serbia, 2011
8. Strategy for Career Guidance and Counselling of the Republic of Serbia with an Action Plan, Government of the Republic of Serbia, 2010
9. Directions for The Development and Quality Improvement of Pre-school, Primary, General Secondary and Arts Education 2010-2020, National Education Council, 2010
10. Indicators for Monitoring the Situation in Education, National Education Council, 2011

11. Analyses and Documents of the Institute for Improvement of Education, the Institute for Quality Assessment of Education, the National Education Council, the Council for Vocational Education and Adult Education, of the Republic Statistical Office and the National Employment Service.

B. External Efficiency: Addressing Demographic, Economic and Labour Market Needs³

2.1 Demographic Development

Serbia's demographic transition⁴ – particularly in the last two decades – has been characterised by a strong demographic regression: between 2002 and 2011, total population declined by 377,335, or more than 5%. A regional breakdown shows that population has declined in 146 municipalities, with an increase registered in only 22 municipalities. Natural population increase has been declining constantly since 1992, which is reflected in the absolute population decrease, regardless of the positive migration balance. Fertility rate has reportedly fallen from 1.6 to 1.4 per woman, which puts Serbia among countries unable to ensure even the simple reproduction of their population.

Serbia's aging index has doubled in the last 50 years. In the total structure of Serbian population in 2010, young persons under 14 years of age accounted for a mere 15%, which was lower than the share of persons over 65 (17%). Working age population accounted for only 67.6% of the total population in 2010 – lower than in most other transition countries.

The trend of regional demographic depletion of underdeveloped and border areas will result in their complete demographic closure. In spatial terms, the dominant types of settlements are those with low population count – up to 300 inhabitants (Map 1). Internal migrations continue along the usual routes – from underdeveloped and isolated areas to more economically developed ones, where living conditions are better and standard of life is higher (the leading destinations are Novi Sad, with a migration balance rate of 9.4‰, and Belgrade, with a migration balance rate of 7.8‰).

Demographic projections, based on current assumptions, indicate that Serbia's total projected population will decline by 2020 in all scenarios compared with 2011. Assuming the low-case scenario, Serbia's population in 2052 would be about two million lower than in 2002. From 2010 to 2050, the share of youth (aged 15–24) in the total population would drop from 12.1% to 11.2% (according to the middle scenario).

The largest share of workers in 2010 were in the 30–34 age group, while in 2020 the highest number of potentially unemployed persons can be expected in the 35–39 age group.

³ *External efficiency* in the context of this Analytical Framework denotes how well the VET system correlates with the external environment within which it operates and how well it responds to related signals or challenges. We have defined this in terms of three outcomes: (i) the economic and employment perspective – here the focus is on labour market outcomes, which is the primary rationale behind VET provision (Section C); (ii) the social inclusion perspective, or how well the VET system reaches out to the weakest segments of the population and ensures the provision of (targeted) training (Section D), and (iii) the individual learner perspective – here 'social demand for education' means providing attractive learning pathways for all groups through VET provision (Section D).

⁴ Data source – Strategy for Education Development in Serbia, Draft, April 2012

According to forecasts, in 20 years one half of employees in any organisation in the world would be hired under a part-time arrangement (which directly influences the manner of education)⁵. Such trends will portend immigration growth, while for Serbia this will create the danger of an even higher outflow of talents and experts, coupled with an inability to attract foreign experts, unless a shift occurs in the production system, the social environment and the culture. As shown above, fundamental changes in the labour market, including in particular lower participation of younger generations, will result in a new employment structure, which needs to attract and retain the older population in employment. The intensity of this change will directly depend on the level and quality of obtained education, as well as on the establishment of greater gender equality, greater social inclusion of all marginalised groups and more widespread adult education as mechanisms for structural adjustment of the workforce.

This places special importance on the development of lifelong learning and large-scale adult education as mechanisms for structural adjustment of the workforce to new labour market demands. These processes can be supported through knowledge innovation, retraining, further training etc. More specifically, in addition to the regular secondary vocational education system, which will need to address the issues of the VET school network and the distribution of profiles and/or qualifications, the demographic trend also urges and calls for a strategic definition of the development of lifelong learning and for more widespread adult education as mechanisms of structural workforce adjustment to new labour market demands. This, in turn, raises the issue of legislative regulation of the adult education system, recognition of prior learning and the accreditation system. These issues at present have no legal basis and systemic implementation is therefore not possible.

2.2 Economic Development

Serbia's transition since 2000 has brought along structural changes which altered the basic characteristics of Serbian economy, reducing the share of agriculture and industry and favouring the services sector both in the structure of the gross domestic product (GDP) and in value added. Serbia's competitiveness indicators do not seem to indicate that the economy is ready to evolve to a more advanced stage of development. Unemployment will remain a key issue in 2011 and in the following years, until new productive jobs are created through economic growth and investment.

The key economic sectors that achieved productivity growth in real terms between 2002 and 2009 are: manufacturing, with mild fluctuations ranging from 3% to 14%, closely followed by the processing industry, with similar fluctuations; transport; storage; communications; and agriculture. According to the figures showing value added per employee, the largest constant growth between 2006 and 2009 was recorded in the electricity generation and gas production sector.

At present, Serbia has no specific incentives for the development of creative industry. The country's competitiveness policy, as defined by the Action Plan to Increase Serbia's

⁵ Data source – Strategy for Education Development in Serbia, Draft, April 2012

Competitiveness drawn up in 2010, focuses primarily on improving the business environment, while investment in infrastructure and education is identified as a mid-term priority. Unfortunately, most of the measures envisaged, including even those that required no new investment, but only a willingness to amend legislation, have not been implemented. Perceived corruption remains high and effectively deters investors. Without a change in its economic structure, with a shift towards favouring new, knowledge-intensive industries, Serbia is at risk of falling into the so-called middle-income trap in the long term, without an opportunity to progress to a higher stage of development. Without modernization of its production facilities, coupled with continual investment in education and skills upgrade of its workers, Serbia will not be able to improve efficiency and progress to a higher level of development. From a long-term perspective, human resources and technology are two key determinants of sustainable economic growth and competitiveness of an open market economy. However, closely related to this issue is the inefficiency of Serbia's labour market, not least because the country has been facing a brain drain for years, which can be attributed not only to the fact that highly qualified workers are better paid abroad, but also to the fact that they are offered better conditions for research and development work in some foreign countries. This means that incentives will have to be offered to the best graduate students and researchers to remain in the country and a long-term plan will have to be made for attracting Serbian scientists back home from abroad. There are also other limiting factors that hamper efficient use of the country's talent pool: workers' productivity and creativity have very little bearing on their pay and managerial positions are rarely held by professional managers chosen for their qualifications and merit. Other major weaknesses in Serbia's competitive position include an inefficient anti-monopoly policy and lack of domestic competition, political cronyism in decision-making, the issue of property rights and issuing of building permits, bad management-labour relations etc. The population's educational structure is also a great concern. **Unemployment will remain a key issue in 2012 and in the following years, until new productive jobs are created through economic growth and investment.**

As the highest unemployment rate is among secondary school graduates (especially vocational secondary school graduates), there seems to be an issue regarding their competences and it would be well advised to re-examine whether some of those occupations are still necessary. At the same time, the number of profiles in which labour surpluses have existed for years is not reduced and this, paradoxically, ultimately contributes to the brain drain.

The issue of adequacy of competences acquired by vocational secondary school leavers is pivotal for further development of SVET. Of particular importance here is how to forecast which skills will be in demand and how to train pupils for them. This is supported by the already identified key challenge of SVET reform so far – modernisation of the educational profiles structure and introduction of an outcome-oriented learning model. However, the majority of the existing educational profiles that are not included in the pilot system are structured according to the traditional model of SVET, in which pupils do not acquire adequate competences. These are mostly profiles for which there is no demand in the labour market and in which pupils acquire obsolete skills and knowledge. This brings us back to the issue of the network of vocational secondary schools, the distribution and

development of educational profiles, flexibility of SVET and faster responding to labour market demands.

2.3 Employment and Unemployment

The adverse effects of economic crisis, in addition to their impact on Serbia's macroeconomic indicators, are also reflected at the microeconomic level through an economic slowdown and a slump in labour demand. This has resulted in a lower employment rate and a higher unemployment rate (Table 1). The unfavourable demographic trends explained in the previous sections of this Report contribute further to the worsening of key labour market indicators. The main change in population structure is reflected in the shifting of active population into the inactive one. The declining share of active population in the total population is the result of lower employment, coupled with the transition of unemployed persons into the inactive population. The high inactivity rate in Serbia can, on the one hand, be attributed to the difficult economic situation and the limited number of available job vacancies, which has a discouraging effect on all groups of inactive persons. On the other hand, inactivity is also determined by specific factors of labour supply, which differ according to the age and gender of inactive persons.

General characteristics of the labour market include: mismatch between labour supply and demand (a number of vacancies announced by employers remain vacant, while on the other hand many people have occupations for which there is no demand in the labour market); high share of long-term unemployment and high inflow of redundant employees from enterprises in restructuring and privatization (the process of privatization of enterprises and public institutions is still ongoing; the process of forced liquidation was introduced in 2009); unfavourable workforce structure in terms of age and qualifications; high youth unemployment; huge disparities between regional labour markets and low workforce mobility (the situation is worse in the South than in the North of the country and rural areas are worse off than urban ones); high numbers of employees with difficulties in finding employment (persons with disabilities, the Roma, women, youth etc.); and a large number of workers in the informal economy.

The number of employed persons and the employment rate have been on a constant decline in the period 2009-2011, while the number of unemployed persons and the unemployment rate have been increasing since 2008, due to the effects of the economic crisis on the labour market (Table 2). The total number of working-age employed persons (aged 15-64), according to the 2011 LFS, is about 302,000 lower than in 2009 (12.2% down). The employment rate fell by 5.0 percentage points in this period. According to the 2011 LFS, the total number of working-age unemployed persons (aged 15-64) is about 168,000 higher than in 2009 (33.5% up). The unemployment rate was increased by 6.7 percentage points in the same period.

Unemployment among women (Table 3) in Serbia is more prominent than unemployment among men. Women are more vulnerable to unemployment than men, in spite of their higher qualifications. Although the difference between unemployment rates of women and men (aged 15-64) has been diminishing gradually, from 3.1 percentage points in 2009 to 1.2 percentage points in 2011, differences between employment rates of women

and men (aged 15-64) remain very high. The employment rate of women in the observed period declined constantly (in 2011 it was 4.7 percentage points lower than in 2009), but this decline was lower than that of the employment rate of men (5.7 percentage points down in 2011 compared with 2009). This has resulted in a lower difference between the employment rates of women and men, which was reduced from 15.1 percentage points in 2009 to 14.1 percentage points in 2011.

Regional differences in terms of economic development are very prominent in Serbia (Tables 4 and 4a). The situation is worse in the South than in the North of the country and rural areas are worse off than urban ones. Insufficient economic activity and lack of jobs in certain regions result in labour migrations towards regions with better employment opportunities.

According to the 2011 Labour Force Survey, employment rates higher than the general rate (45.4%) were reported in the Belgrade Region (47.5%) and the Region of Šumadija and Western Serbia (46.6%), while the lowest employment rate was recorded in the Region of Southern and Eastern Serbia (43.2%).

Based on the same source, an unemployment rate lower than the general rate (23.6%) was registered only in the Belgrade Region (20.0%), while all other regions had higher unemployment rates; the highest unemployment rate was in the Region of Southern and Eastern Serbia (26.7%).

In terms of age (Table 5), more than half of all employees (about 57%) belong to two age groups: 35-44 years and 45-54 years. These two categories also have the highest employment rate (higher than the general rate), while the lowest employment rate was that of young persons (15-24 years) – only 14% in 2011, which can partly be attributed to their extended education in a situation where employment opportunities are scarce. During the observed period, employment rates went down across all age groups, with the highest decline recorded in the 25-34 age group – 7.1 percentage points – and the 35-44 age group – 4.9 percentage points.

In terms of qualification levels (Table 6), employment rate decline was the highest in the group with incomplete primary education (-8.2 percentage points) and the group of university and higher education graduates (-7.4 percentage points), while it was the lowest for the lowest qualification levels, i.e. those who did not finish primary education (-1.0 percentage point).

Looking at employment by sectors (Table 7) (Agriculture, Industry and Services), the highest percentage of employees (aged 15-64) is in the services sector – 53.8% of employees, followed by the industry sector with 27.8% and the agriculture sector with 18.5% (2011 LFS data).

LFS data show that total employment decreased between 2009 and 2011 as a result of the economic crisis, as well as the completion of privatization and restructuring of enterprises, which caused lower employment in nearly all sectors except industry (see table 7).

In terms of age (Table 8), slightly less than half of all unemployed persons (46.7%) belong to the two youngest age groups (15-24, 25-34), whose share in total unemployment (15-64) in 2011 was 18.2% and 28.5% respectively.

The unemployment rate falls considerably with age – it is at its highest in the youngest age group, i.e. the young (15–24). The youth unemployment rate has been growing since 2008 and in 2011 it reached 50.9%, which means that one in two young people in Serbia are unemployed. Such youth unemployment rate is many times higher than in EU Member States. The position of young persons in the Serbian labour market has worsened compared with adults, as the gap between the youth unemployment rate and the unemployment rate of the overall population has widened in the observed period.

The lowest unemployment rates in Serbia are those of primary school dropouts (15%) and highly educated persons (15.4%) (2011 LFS data). The unemployment rate of persons with secondary education is high and stands at 26.1% (Table 9).

Looking at the structure of unemployed persons by qualification levels, unemployment is highest among those with secondary education: just over two thirds of all unemployed persons completed secondary school (67.2% in 2011) (Table 10).

Among the long-term unemployed (according to the LFS and the NES standard, long-term unemployment is defined as a job-seeking period longer than 12 months), 73% are persons *with secondary education*. In this aggregate percentage, the largest share is that of persons who are out for work for 4-6 years (17.1%), followed by those who are out of work for 2-4 years (16.8%) and 7-10 years (11.1%). Persons who are out of work for periods longer than the duration of their education are in a state of deprofessionalisation or dequalification and thus become almost unemployable. From the social point of view, this can also be seen as economic loss – a wasted investment, requiring additional social and personal efforts and additional funding for the training and potential employment of such persons.

There is a mismatch between the supply of secondary vocational education and the demand in the labour market; thus, even though some occupations are in high demand, e.g. bricklayers, welders or founders, primary school leavers are not interested in education for these occupations.⁶ On the other hand, admission policies are not adjusted to take into account the number of unemployed persons (the highest enrolment rates are in the occupational field Economy, Law and Administration, where only four-year education is offered, even though a significant number of unemployed persons who trained in this occupational field are still first-time job-seekers). Although the scope and attractiveness of vocational education appears to be satisfactory, its structure is a generator of unemployment, because it produces skilled workforce whose work is not needed in the labour market. Only partial data are available on system efficiency, i.e. on the number of persons who went on to higher education after completing secondary vocational education, of those who went through further training or retraining and of those who found employment. Data thus systematised were collected by the Institute for Improvement of Education for vocational secondary school graduates who completed the pilot programmes.

⁶ For the results of new projects implemented by the National Employment Service in connection with labour market forecasts see Annex 2

Generally, data on adult trainings at the SVET level are lacking. In other words, from the aspect of rationality, there is no feedback mechanism for adjusting the admission policies that generate long-term unemployment.

C. External Efficiency: Addressing Social Demands for VET and Promoting Social Inclusion

The structure of secondary education in terms of duration shifted towards four-year education in the period 2001-2006; in the total number of secondary-school pupils, the share of three-year educational profile declined by about 4%, while the share of four-year profiles increased – also by 4%; the share of general secondary education remained at the same level. The largest difference is evident from the gender perspective: of the total number of pupils enrolled in three-year educational profiles, only 1/3 are female, while the share of female pupils in general secondary education is 3/5. In four-year educational profiles, both genders are distributed equally.

Statistical enrolment figures of the Ministry of Education⁷ reveal, among other things, a huge gap in attractiveness between four-year profiles, which give access to higher education, and three-year profiles. Similarly as in previous years, enrolment quota fulfilment figures have shown that the majority of pupils are interested in fields related to health care and economy, while the fields of mechanical engineering, civil engineering, wood processing and agriculture attracted the least candidates. It is evident that pilot profiles are far more attractive than vocations that are not included in the pilot programme. Fulfilment rates of 100% were reported for 68 of the 140 four-year educational profiles (approximately 50%) and for only 7 of the 92 three-year educational profiles (less than 10%). Greater employability and higher earning potential appear to be the decisive factors on which pupils base their decisions. It is rather telling that 31 three-year educational profiles (or 30% of the total number of three-year profiles) have fulfilment rates below 50%. It is evident that four-year secondary education is more popular than the three-year option because it enables pupils to progress into higher education.

These figures might indicate that pupils are increasingly receiving better education, as the duration of education increases, and given that new technologies require more sophisticated education, this trend would be seen as positive in any country. However, according to labour market data, there are educational profiles that are in demand by the economy and yet the enrolment quotas for them remain unfulfilled because the number of options on offer to pupils is high (the total enrolment quota available to pupils who enrol in secondary education is about 10% higher than the actual number of candidates, so that not all educational profiles are fulfilled).

In the course of 2009⁸, a survey of labour market entry by young persons was carried out for the first time, together with the Labour Force Survey. The survey was carried out by the Republic Statistical Office, with Eurostat's support. The survey has shown that about 40% of young persons waited for their first job for more than two years, while on the other hand about 30% of young persons managed to find work in the first 6 months after graduation.

⁷ Enrolment in Secondary Schools 2009/10, unpublished.

⁸ Labour Force Survey, 2009

This seems to indicate it will be necessary to provide more intensive support to youth employment exactly in the period immediately following their first 6 months in the labour market. Because of poor employment outlooks, young persons in Serbia tend to remain in education longer than their EU peers (the majority of young persons aged 20–24 were still in education). The survey has also revealed that the duration of school-to-work transition decreases as educational attainment increases. In addition to career guidance and counselling, other programmes have also been developed to address the current situation. For example:

- The Ministry of Education approves student loans to secondary school pupils who are in education for educational profiles of which there is a shortage in the labour market, based on the data of the National Employment Service.
- A student loan recipient who, within six months, takes up employment with an employer with which he/she previously signed an agreement on future employment and who remains in such employment for a period corresponding to at least half of the period in which he/she received the loan is exempted from the obligation to repay the loan. In the school year 2009/10 there were 398 student loans and in the school year 2010/11 there were 392 student loans approved for occupations in short supply.
- Internship and apprenticeship programmes. During their internship, young persons without experience receive financial support, while apprentices' salaries and all contributions are covered by apprenticeship subsidies for a period of up to 12 months. The transition usually takes place through the NES, within the framework of the project “First Chance”, which has been implemented since 2008.
- A survey of pilot educational profiles has found that employers prefer to hire young persons who completed their practical learning with them, so that internship, summer jobs and part-time work for employers who organise practical learning are increasingly used as measures to support faster employment. There have been notable examples of schools arranging summer jobs for their pupils in hotels, restaurant, tourist agencies, workshops, agricultural holdings etc. These activities usually take place within local labour markets, but increasingly there are examples of placements abroad through international cooperation between Serbian and foreign schools or through cooperation between different cities.

Paradoxically, on the one hand employers cannot satisfy their labour demand, while on the other hand there is hyper-production in some occupational fields, resulting in high unemployment. A recent research carried out by the Serbian Chamber of Commerce (2012) has revealed an evident shortage of labour:

- Visits to polymer and rubber processors in Central Serbia have identified a shortage of craftsmen and metal processing occupations (sheet metal workers, toolmakers, welders etc.). it is not uncommon for employees who have met the statutory

requirements for retirement to remain in employment to pass the practical machine work knowledge on to younger workers, because the education system does not provide sufficient training for manufacturing work,

- The situation is particularly difficult in the Kolubara-Mačva District, where the arrival of the Slovenian white goods maker Gorenje has attracted polymer processing companies as suppliers. Even though the Technical School in Valjevo has a long tradition in educating pupils for technical occupations, there is no level 3 or level 4 profile for polymer processing. Several manufacturers are interested in cooperation with the Technical School and, if the school introduced a new profile, they would be willing to participate in the practical learning and training of pupils. They are also willing to enable practical skills development of the teaching staff, as they also have practical works and manuals on polymer processing technologies that may serve as supplements to practical learning textbooks.
- There is a shortage of human resources equipped with modern skills in the textile industry⁹. Creators for mass textile production have to be educated in Belgrade, because there is no school of this profile in the Rasina District and in the city of Kruševac. Textile manufacturers in the area cooperate with the Technical School in Kruševac and third and fourth grade pupils attend practical learning in manufacturing facilities. After graduation, some of them remain to work as apprentices. Even with all the efforts to provide practical training for textile production workers, profiles for tailors and fabric preparation technicians are lacking. Reasons for this can be found in obsolete curricula and syllabuses and insufficient practical training of teaching staff. As a rule, teachers are highly educated and hold degrees from their respective university schools, but are not trained to provide practical learning, because they have never worked in the industry. Their knowledge is academic rather than practical, and the latter is required for practical learning.

3.1 Employment Policy

Since 2005, active labour market policy (ALMP) has been defined as an explicit policy within the National Employment Strategy 2005-2010. The budget allocated by the NES for active labour market measures (ALMM) was less than 0.12 % of GNP in 2008. This is well below the EU average (0.47% of GDP in 2007), but is nevertheless higher than in most other IPP countries. The budget was increased to approximately € 35 million for ALMM in 2009, to buffer the effects of the crisis. According to a NES report, 40000 unemployed persons found employment after taking part in ALMM (handicraft programmes, employment subsidies and public works) in 2009.

The ALMM implemented by the NES are divided in four groups: career guidance and counselling (measures including active job-seeking training, work clubs, provision of information on job fairs, counselling, employability assessment, individual employment plans, selection and classification); additional education and training (including the “First Chance” programme); employment subsidies (including self-employment schemes); and public works.

⁹ 2012 research by the Serbian Chamber of Commerce

As regards active employment policy, the Law on Employment and Unemployment Insurance provides for the following active employment policy measures (Article 43):

- Intermediation in the employment of job-seekers
- Career guidance and counselling
- Employment subsidies
- Support to self-employment
- Additional education and training
- Incentives for benefit claimants
- Public works
- Other measures aimed at the employment of job-seekers
- Additional education and training is an active employment policy measure that implies the implementation of programs to improve the competitiveness and qualifications of unemployed persons through the acquisition of additional knowledge and skills geared towards labour market needs, in order to match supply and demand and thus create employment and self-employment opportunities (Article 52 of the Law).

According to the figures for 2011, these programs include 191,604 persons, of which 106,641 persons are secondary school graduates (43,131 persons with level 3 education, 61,615 persons with level 4 education and 1,895 persons with level 5 education).

- CAREER GUIDANCE AND COUNSELLING

Individual employment plans have been concluded by 536,254 persons, including 310,760 persons with secondary education, of which 140,070 persons with level 3 education (26.12%), 165,542 persons with level 4 education (30.87%) and 5,148 persons with level 5 education (0.96%). Active job-seeking training – ATP1 – was completed by a total of 35,439 persons, including 24,405 persons with secondary education, of which 9,864 persons (27.90%) with level 3 education, 14,401 persons (40.64%) with level 4 education and 140 (0.40%) persons with level 5 education.

The self-efficiency training program – ATP2 – was successfully completed by 2,166 persons and the majority of trainees held secondary education degrees, including 22.48% with level 3 education, 44.27% with level 4 education and 0.69% with level 5 education.

The job-seeking club includes a total of 3,530 persons, of which 2,129 persons with secondary education, more specifically: 832 persons (23.60%) with level 3 education, 1,287 persons (36.43%) with level 4 education; and 10 persons (0.28%) with level 5 education.

Self-efficiency trainings were attended by a total of 2,166 persons, including 1,461 persons with secondary education, of which 487 persons (22.48%) with level 3 education, 959 persons (44.27%) with level 4 education and 15 persons (0.69%) with level 5 education.

Career guidance and counselling covered 13,185 persons, including 5,614 persons with secondary education, of which 1,763 persons (13.37%) with level 3 education, 3,805 persons (28.86%) with level 4 education and 46 persons (0.35%) with level 5 education. Employment fairs were visited by a total of 45,687 persons, including 26,661 persons with secondary education, of which 11,788 persons (25.80%) with level 3 education, 14,565 persons (31.88%) with level 4 education and 308 persons (0.67%) with level 5 education.

- ENTREPRENEURSHIP AND EMPLOYMENT PROGRAMS

Information and counselling services were used by 20,452 persons, most of whom were persons with secondary education, in particular those with level 4 education (35%).

Self-employment subsidies: financial support for self-employment was provided to 3,725 persons; of that number, 2,460 persons with secondary education became self-employed, including 1,093 persons (29.35%) with level 3 education, 1,308 persons (35.12%) with level 4 education and 59 persons (1.57%) with level 5 education.

Subsidies to employers for new employment: financial support was provided for the employment of 6,978 persons, including 4,670 persons with secondary education, of which 2,319 persons (33.24%) with level 3 education, 2,281 persons (32.69%) with level 4 education and 70 persons (1.01%) with level 5 education.

Public works: coverage was 6,557 persons, including 2,559 persons with secondary education, of which 1,018 persons (19.25%) with level 3 education, 1,510 persons (28.61%) with level 4 education and 31 persons (0.58%) with level 5 education.

- ADDITIONAL EDUCATION AND TRAINING

Programs included 23,012 persons, of which 10,171 persons (44.63%) with secondary education.

Apprenticeship programs included 10,852 persons, of which 54.66% with secondary education. Internship programs included 6,690 persons and 22.10% of them had secondary education.

Training programs included 5,470 persons. Trainings for the needs of the labour market included 3,865 persons, some 63.05% of whom had secondary education, with the majority enrolled in training in the following occupational fields: Economy, Law and Administration 28.00%, Health, Pharmacy and Social Care 22.70%, Agriculture, Food Production and Processing 8.60%, Mechanical Engineering and Metal Processing 7.60%, Geodesy and Civil Engineering 5.30%. Trainings for known employers were provided to 1,605 persons, including 75.12% with secondary education. Most of the trainees opted for one of the following occupational fields: Textile and Leather Industry 32.17%, Electrical Engineering 29.97%, Agriculture, Food Production and Processing 11.49%,

Mechanical Engineering and Metal Processing 9.67%, Chemicals and Non-metals and Graphic Industry 6.51%.

The share of employed and unemployed population in the population aged 15-64 has increased compared with earlier years. The indicators shown in Table 12 show the total supply of labour in the society in the period of interest and thus reveal the size and structure of human resources in the labour market. Table 13 gives an overview of one of the basic labour market indicators. According to the Labour Force Survey, the overall unemployment rate in April 2012 was 9.8 percentage points lower than in April 2008. The unemployment rate (Table 14) is the share of unemployed persons in the total working-age population. It has been increasing every year, as has the long-term unemployment rate (Table 15), which is the share of persons who are unemployed for 12 months or more in the total population aged 15-64. The unemployment rate in 2012 is slightly more than 12 percentage points higher than in the same period in 2008. A secondary indicator is the long-term unemployment rate, which shows the share of persons who are unemployed for 12 or more months in the total number of unemployed persons. This rate has seen a constant increase since April 2008, reaching 20.4 in April 2012 (Table 16).

Table 18 shows the share of persons who are unemployed, but are not registered with the National Employment Service and are excluded from its calculation of the total number of unemployed persons. According to the Labour Force Survey, exclusion from the mediation services offered by the national institution in charge of employment has remained virtually unchanged between April 2008 and April 2012.

3.2 Adult Education

Formal adult education and training is carried out within the school system – from elementary schools to postgraduate studies at universities, on the basis of approved programmes of education leading to diplomas (i.e. national certificates) on acquired qualification and educational level.

Elementary education for persons over 15 years of age, who do not attend the school regularly, is realised according to lighter curricula lasting for four years, in accordance with the Law on Elementary School. At present, there are 15 schools for adult elementary education operating in Serbia, with around 2,500 attendees per year.

The Ministry of Education established five Regional Training Centres (RTCs) for adult education to become leading institutions for vocational training, capacity building and training for adults in their regions.

The RTCs are located in five VET schools:

- Chemical, Food-production and Textile School “Uroš Predić” (Zrenjanin), covering the district of middle Banat;
- Technical School in Novi Beograd (Belgrade), covering the city of Belgrade;
- Second Technical School (Kragujevac), covering the district of Šumadija;
- Civil Engineering and Technical School “Neimar” (Niš), covering the district of Nišava;
- School of Mining and Metallurgy (Bor), covering the district of Bor.

RTCs provide:

- Training courses, based on regular curricula of vocational education;
- Short-term vocational training programmes;
- Programmes for continuous professional advancement for the employed;
- Post-secondary education programmes; ,
- Special programmes of non-formal education contributing to the development of key competences;
- Career information and counselling on adult education and lifelong learning.

One of the active employment policy measures in this field is **additional education and training** – a measure that implies the implementation of programmes to improve the competitiveness and qualifications of unemployed persons through the acquisition of additional knowledge and skills geared towards labour market needs, in order to match supply and demand and thus create employment and self-employment opportunities (Article 52 of the Law). These programmes are mostly attended by unemployed persons with secondary school qualifications.

- **Programmes preparing individuals for independent pursuit of a profession** – trainees and internship – preparation for independent pursuit of a profession with or without entering into employment, as a means of acquiring the experience needed to take a trainee’s examination or a professional competence examination in accordance with the law or a general instrument adopted by an employer. This programme is targeted at young persons with secondary, advanced secondary or higher education who have no professional experience.
- **Short trainings** – acquisition of additional knowledge and skills for the purpose of improving the competences, competitiveness and employability of unemployed persons. These trainings are targeted at unemployed persons with low employability.
- ✓ Labour market trainings
 - a) Acquisition of additional knowledge and skills in addition to a person’s original profession
 - b) Acquisition of additional knowledge and skills to perform duties within the same profession or in a different profession
- ✓ Training on employer’s request – acquisition of additional knowledge and skills required for a specific job, on employer’s request, if there are no persons with the required knowledge and skills on NES records. An employer in this case has an obligation to hire a person who completes such training (there is also a possibility to hire such person even during training, on the basis of a reasoned request filed with the NES).
- **Retraining and further training programmes** – Acquisition of new qualifications or qualifications of a higher level. The programme is targeted at unemployed persons with low employability and unemployed persons who dropped out of education.
- **Functional primary education of adults** – Acquisition of primary education and first qualifications for simple tasks.

3.3 Social Inclusion¹⁰

One of the key tasks in Serbia's EU accession process¹¹ is active participation in the European social inclusion process. This implies the development and enhancement of policies, the institutional framework and methodologies for monitoring the social inclusion of individuals and social groups in Serbia. One of Serbia's obligations within the EU accession process in the forthcoming period will be to draft a document that will serve as the blueprint for improving social inclusion and reducing poverty in the country in the accession process. This document will also serve as the basis for negotiations with the European Commission on the relevant chapters. To prepare for this task, and taking into account the indicators and objectives adopted by EU Member States, the Government has prepared and adopted the *First National Report on Social Inclusion and Poverty Reduction*¹².

The development of a creative entrepreneurial and innovative market economy should go hand in hand with caring for the social aspect. The fight against poverty and social exclusion is a key component of social policies both in EU Member States and in Serbia. The aim of the social inclusion policy is to eradicate the root causes of poverty, to ensure an adequate standard of living and to facilitate the active involvement of the population in economic, social and cultural developments. In the European social model, social cohesion is a means of achieving economic development.

According to the data of the Republic Statistical Office, in 2009 there were 13.6% poor persons in Serbia, while the poverty line was RSD 9,583 per month per consumer basket. Based on Survey of Household Spending (SHS) figures¹³, the at-risk-of-poverty rate¹⁴ in 2010 was 18.3%, which was 2% lower than in 2006 (20.9%) (Table 18).

¹⁰ Data also based on: Vlada Republike Srbije: Praćenje socijalne uključenosti u Srbiji (Government of the Republic of Serbia, Monitoring Social Inclusion in Serbia), August 2012

¹¹ Vlada RS: Praćenje socijalne uključenosti u Srbiji, pregled i trenutno stanje socijalne uključenosti u Srbiji na osnovu praćenja evropskih i nacionalnih pokazatelja, (Government of the Republic of Serbia, **Monitoring Social Inclusion in Serbia**, overview and current status of social inclusion in Serbia based on European and national indicators)2006-2012. Београд, 2012

¹² <http://www.inkluzija.gov.rs/wp-content/uploads/2011/03/Prvi-nacionalni-izvestaj-o-socijalnom-ukljucivanju-i-smanjenju-siromastva1.pdf>

¹³ In line with the process of harmonization with European statistical practices, in November 2012 Serbia will conduct a pilot survey of living standards using the Survey of Income and Living Conditions (SILC). According to plans, from 2012 SILC will become part of regular statistical research. This survey would provide comparable data on poverty and social exclusion in 2012. In years to come, SILC will become the main source of data on poverty and social exclusion and thus replace the Survey of Household Spending (SHS) which has hitherto been used for these purposes. For this reason, the data provided by SHS for 2011 will not be used in the determination of poverty and social exclusion in 2011; instead, this year will be a transitional year for which no data on poverty and social exclusion will be available.

¹⁴ The share of people with an equivalised disposable income below 60% of the national median equivalised disposable income. Equivalised disposable income is calculated by dividing household income by the number of members using the modified OECD scale (the first adult is assigned the weight of 1, other adults aged 14 and over are assigned the weight of 0.5 and every child aged under 14 is assigned the weight of 0.3). Thus, each person in a household has at his/her disposal the same income within the household, regardless whether he/she is a child or an adult.

In line with World Bank recommendations, the predetermined line¹⁵ was adjusted for annual price increases on the basis of the Consumer Price Index (CPI). Consequently, based on these results, 6.9% of the population was below the absolute poverty line in 2009. According to SHS, poor households were those whose equivalised disposable income was less than RSD 8,544, which is an improvement on 2006, when the line was drawn at RSD 6,221.

Table 19 shows that the overall at-risk-of-poverty rate in 2010 was 2.6 percentage points lower than in 2006. The at-risk-of-poverty rate by most frequent labour market status and gender (Table 20) was also lower in 2010 compared with 2006, especially for employed women (8% down), male pensioners (4.8% down) and the total number of other inactive persons (8.8% down). Table 21 and Table 22 present the status of household members aged 16 and above by economic activity that lasted six months or more.

Inequality in Serbia is measured by the Gini index¹⁶, which has fallen by nearly four percentage points in recent years. According to the figures for 2010, Gini index was 33.00%, as opposed to 32.9% in 2006 according to SHS. Inequality is also measured by the quintile ratio S80/S20¹⁷, which stood at 5.7% in 2010, as opposed to 5.8% in 2006.

There is a strong correlation between poverty on the one hand and labour market status and education level on the other. The economic dependency ratio has been increasing steadily: there are now two persons belonging to one of the social categories (the unemployed, pensioners and young persons under 15 years of age) per every employee and this ratio has been increasing every year:

- 670,000 poor persons (9.2%);
- 670,000 unemployed persons (according to the Labour Force Survey);
- 120,000 children lack the bare necessities for a decent life;
- 1.7% of highly educated persons are poor;
- The rural population is twice as likely to be poor compared with the urban population;
- The Roma population is the most vulnerable social group.

Unemployed persons with disabilities face a greater risk of long-term unemployment and labour market exclusion than any other group of the unemployed. The current situation of people with disabilities in Serbia is characterised by an exceedingly low employment rate and high unemployment and inactivity rates. The educational achievement of people with disabilities is lower than the national average. Prejudice of employers, their unwillingness to adapt the working environment to the special needs of people with disabilities, and their general lack of practice and experience prevents many people with disabilities from getting a

¹⁵ The line is calculated as the food threshold multiplied with the cost of a calorie and increased by the consumption of other goods needed for subsistence

¹⁶ The Gini coefficient is a measure of inequality in income distribution of a population. It ranges from 0 to 1

¹⁷ It is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that received by the 20 % of the population with the lowest income (the bottom quintile). It measures only changes in the top and bottom quintiles of equivalent income.

job and often leads to job search discouragement. As a result, people with disabilities are highly dependent on benefits and are particularly at risk of poverty. To address this situation, the new Law provides specified measures, which will require considerable resources if they are to be fully implemented. The aim of legislation in this field is not only to ensure the employment of persons with disabilities in the “enterprises for vocational rehabilitation”, but also to make them directly employable in the labour market by introducing quotas and by promoting a positive image of persons with disabilities as equal workers. The employment of these persons in enterprises is funded from penalties imposed on companies, which are payable only if companies that are required under the law to employ persons with disabilities avoid this obligation.

Social inclusion of the population, particularly in the education sector, became fully-fledged when the Law on the Foundations of the Education System came into force. The Law promotes inclusive education, adhering to the principles of equal opportunities and accessibility, based on non-discrimination and freedom of choice as to the language of teaching.

3.4 Informal Employment

Over the past few years, the Government of Serbia has started to tackle the informal economy, which accounted for almost a fifth of total employment in April 2010.

According to a recent World Bank study¹⁸, the main reasons why employers are reluctant to register their employees include:

- Too stringent regulations in the labour market (licensing, employment protection legislation and minimum wages);
- Cumbersome administrative procedures related to taxes, accounting, statistics;
- Unwillingness of employers and employees to pay taxes on revenues, income, profit and property and social security contributions;
- Loss of social benefits (social security or unemployment benefits); and
- Weak enforcement of legislation against informal employment and taxation regulations.

The share of informally employed persons in total employment (15+) (Table 11) is 18.8% - 2.6 percentage points lower than in 2009 (21.4%). Informal employment is decreasing because total employment has also decreased in the period under observation, according to the Labour Force Survey.

Informal economy rates are highest among the young (28.3%) and tend to decrease as workers age and acquire work experience. It is also related to the qualifications acquired: those with lower qualifications are more willing to accept informal employment (79% of persons without formal education are informally employed), while informal employment of highly educated persons is very low (1.1% of those who finished a university school, academy or college are informally employed).

¹⁸ “Does formal work pay in Serbia?”, World Bank (2010)

Also, working in the informal economy is associated with low wages and low productivity, high tax wedge (approximately 65% of net earnings), low level of protection at work, poor working conditions, without paid health and pension systems, weak enforcement of the work against informal employment and the non-application of tax legislation with a small number of inspection officers (1 municipal inspector to 3-4) and poor law provision that defines illegal acts without penalty provisions.

The fight against the informal economy requires a whole range of coordinated social and economic policies and joint actions from different state bodies. A proposal has been made to develop a national Action Plan to promote work in the formal economy, which will connect and coordinate the various actions and measures (fiscal, economic and social) implemented by different government agencies and labour market institutions, as well as by employers and trade union representatives (Table 23).

3.5 VET Drop-out Rates

According to the information for school year 2009/2010, there were 211,618 pupils enrolled in secondary vocational schools. The share of pupils attending secondary vocational schools was 74 % (general secondary schools 24%, art schools 2%). The most commonly chosen occupational field is Economy, Law and Administration – 13.24%, followed by Mechanical Engineering – 10.46%, Electrical Engineering – 9.88%, Trade, Hospitality and Tourism – 9.35% and Medicine – 8.20% (more than half of the primary school graduates who opt for SVET choose one of these 5 occupational fields). Vocational secondary schools are attractive and their key advantage is the fact that they give pupils the choice of either continuing with their education or finding employment. The introduction of pilot classes (58% of vocational schools have at least one pilot class, with the coverage of about 15% of pupils in the system) has additionally contributed to the attractiveness of vocational schools (the required number of points to enrol in pilot classes is often higher than that required for general secondary schools, MoESTD - Results of Secondary School Admission Examinations 2005-2010). Unfortunately, there is no information about the coverage of adults included in the training, retraining and further training system.

Even with these results, Serbia is facing the problem of early leaving of young persons aged 15-18 from education; as a result, about 15.8% of this population group are not in secondary education, i.e. have no formally recognised qualifications. The most recent data on pass rates, failure rates and drop-out rates available to the Ministry of Education are for the school year 2008/09 (Table 24 and Table 25). Youth drop-out rates are much higher in three-year than in four-year education. To reduce drop-out rates, especially in three-year education, the government has implemented a number of systemic measures through new legislative provisions (Table 26), including:

- Free extraordinary education of persons older than 17 years for the purpose of acquiring first qualifications. The enrolment of these persons is supported by a public campaign and a call for all those who dropped out of secondary education at any time to continue their education in secondary schools

nearest to their place of residence. This process is under development and response rates and enrolment are increasing every year.

- Increasing the educational programme offers and development of programmes of varying duration within the formal system. The new Law enables secondary schools to offer, in addition to general, vocational and art education, also any of the following:
 - Two-year work training programmes offering lower vocational education qualifications
 - Vocational training programmes of up to one year
 - Labour market training programmes of up to one year, after which the trainees receive a certificate of training for specific jobs in the labour market
 - Specialist and craftsmen's education programme.

As indicated above, there are no accurate data on early leaving from education in vocational schools. According to the Living Standards Measurement Survey included in the document *Human Resources Development in Serbia, 2010* (hereinafter referred to as LSMS), the drop-out rate in secondary education was 2.3% (2005). However, some other sources state a much higher rate, even as high as 30% for secondary education; this is in stark contrast with the official figures, which are not broken down by age groups of pupils (Government of Serbia, 2003). According to the data available to the Ministry of Education and Science, a survey covering generations 2000 – 2008 has found a drop-out rate of 7.3%. However, other measurements indicate that 10.0% of Serbia's population did not receive initial SVET (EUROSTAT, 2010). Unlike these figures, LSMS seems to point to the conclusion that one fifth of Serbian children still do not go to secondary education, especially boys and young persons from socially vulnerable areas (Table 27, Table 28 and Table 29).

As there is no unified information system in education, there is no systemic monitoring of individuals within this system, so these figures need to be taken with caution, or alternatively additional surveys could be carried out to determine the actual situation.

D. Internal Quality and Efficiency of Initial and Continuing VET Delivery

Some of the elements required for VET system quality assurance and monitoring are already in place or their adoption is underway (school development planning, internal evaluation, performance standards for teachers and education establishments, involvement of employers in the development of qualification standards, development of curricula, syllabuses and examinations, partially external final examination and school-leaving examination in pilot classes etc).

PISA results reveal serious shortcomings in the primary and secondary education system in equipping children with the foundations for learning and the core competences and skills they need to succeed in life. Although the notion of “learning outcomes and competences” is widely used and accepted by policymakers, experts and training providers, in reality traditional approaches still prevail. Analyses and surveys, both in education and in the labour market, have revealed that the VET system does not prepare pupils for employment and for meeting the demands of the labour market. The lack of involvement of employers and the mismatch between educational outcomes and demands of the economy result in the acquisition of inadequate skills or unnecessary and obsolete knowledge, with low workforce employability, which translates into high unemployment and inactivity rates. In this context, policies to increase the competitiveness of the economy and attract foreign direct investment are difficult to achieve.

Nevertheless, vocational secondary schools in Serbia are attractive, their key advantage being the ability of pupils to choose whether to progress to higher education or to seek employment. Occupational fields that together make up more than half of all enrolments in SVET include:

- Economy, Law and Administration with 13.24%,
- Mechanical Engineering with 10.46%,
- Electrical Engineering with 9.88%,
- Trade, Hospitality and Tourism with 9.35%
- Health Care with 8.20%

Secondary vocational education also gives the opportunity to progress to higher education. Proof this is the fact that about 63% of pupils who complete VET schools go on to attend university. More precisely, those who completed four-year education usually wish to continue with education, while those who completed three-year schools are focused on the world of work and seek employment. The difficult economic climate, the need to become financially independent as early as possible and high university tuition fees are all factors that can also deter graduates from three-year secondary schools from continuing their education.

In 2010, higher education institutions enrolled 36,127 students who completed four-year SVET, which accounted for about 63% of the school-leaving population. The remaining share of SVET school-leavers did not remain in the education system.

According to NES statistics (data as at April 2011), the number of first-time job-seekers who completed *three-year* SVET is 61,901. Of that number, the top five occupational fields account for 49,983 persons (80.7%), as follows:

(1) Mechanical Engineering and Metal Processing	17,760 persons
(2) Trade, Hospitality and Tourism	12,541 persons
(3) Textile and Leather Industry	8,027 persons
(4) Electrical Engineering	6,146 persons
(5) Agriculture, Food Production and Processing	5,509 persons

There are 68,208 first-time job-seekers who completed *four-year* VET. Of that number, the top five occupational fields account for 37,149 persons (54.5%), as follows:

(1) Economy, Law and Administration	10,953 persons
(2) Mechanical Engineering and Metal Processing	8,499 persons
(3) Agriculture, Food Production and Processing	7,247 persons
(4) Trade, Hospitality and Tourism	4,342 persons
(5) Electrical Engineering	6,108 persons.

This significant disparity between the respective shares of job-seekers who finished three-year and four-year secondary vocational education can be attributed to the fact that more young persons chose to go to university and there was consequently less job-seeking activity among those who remained in education longer.

There are no accurate data concerning the number of persons currently in employment who are changing their qualifications or acquiring new ones in extraordinary education in vocational schools, or on the number of persons who forfeited the status of ordinary pupils or dropped out of education and continued as extraordinary pupils, which makes assessment of this key feature impossible. There is an essential mismatch between the supply of SVET and the demand in the labour market; thus, even though some occupations are in high demand, e.g. bricklayers, welders or founders, primary school leavers are not interested in education for these occupations. On the other hand, persons who acquire these qualifications through formal training have no competences that would satisfy the requirements of employers or the respective jobs, which means they need additional training to acquire the necessary knowledge and skills or necessary certificates required for those jobs.

4.1 VET Quality

Analyses have shown that obsolescence of the part of the system not included in the pilot (outdated curricula, teachers who do not undergo continual skills development, inadequate equipment) undermines efforts to attain qualities, which has a number of effects. The unresolved issue of quality of out-of-school practical training (there are no

accredited practical learning posts and trainers, nor are there any incentives for companies to offer proper practical learning to pupils; the number of companies interested in this form of cooperation with the education system is insufficient) directly contributes to inadequate preparation of pupils for work. It was therefore proposed in strategic documents to place greater emphasis on the development of informal forms of VET (with the possibility for vocational secondary schools and other providers of education services to be actively involved in these processes), introduction of proper practical learning (*provision of incentives to employers, e.g. through tax relief, to foster social partnership through their participation in the development of standards of qualifications, practical learning, examinations etc.*), optimisation of the existing network of schools and development of the secondary school admission system.

An obstacle to bridging the gap between SVET and labour market demands is the lack of coherence in the strategic management of vocational education, resulting in numerous issues and consequences for the development of vocational education, which dilutes the effects of those strategic innovations and reform activities that have already been implemented or initiated. So far, the VET system reform, which began in 2002, has included the introduction of outcome-oriented learning and its implementation in modular curricula. Early evaluations of the pilot show an increased attendance and higher average marks for students, with efficiency improved overall. More specifically, 86.1% of school representatives think that the pilot profile is much better than classical one, 13.4% think that the pilot profile and the classical profile are more or less the same, and only 0.5% think that the classical profile is better than the pilot one.

In September 2010, nine pilot profiles were introduced in the regular VET system to replace classical profiles: Agriculture, Food Processing and Production (7 profiles), Geodetics and Civil Engineering (1 profile) and Electrotechnics (1 profile). The mainstreaming of piloted profiles in the VET system will continue in 2012 with the support of IPA project. The process is underway to define a methodology for introducing the pilot profiles in the regular system and defining a specific procedure for the introduction, development, monitoring and evaluation of pilot profiles.

Experience from past CARDS and IPA projects shows that extensive support is required to help VET schools manage the transition to new profiles, ranging from training of teachers and management staff, to introducing new teaching methods and techniques, to supplying equipment and materials. However, the reform of educational profiles and curricula cannot be implemented satisfactorily without rationalising the network of schools. Certain activities in this regard are already underway: the Centre for VET and Adult Education, which operates within the Institute for Improvement of Education, has been tasked with drafting a proposal for the new network. This complex and demanding task will be carried out through labour market research and development forecasts in a consultative process involving all relevant stakeholders (Ministry of Education, Science and Technological Development, Serbian Chamber of Commerce with its regional branches, National Employment Service, representatives of the industry, local self-government, trade unions, and employers at national and regional/local levels).

One of the key tasks provided for also in the new Strategy for Education Development (adopted by the Government of Serbia in November 2012) is to define a National Qualifications Framework.

The establishment of a National Qualifications Framework (NQF) for lifelong learning in Serbia will facilitate the development of a modern, relevant and flexible education system aimed at:

- Ensuring the relevance of qualifications (strengthening the links between the world of work and the world of education);
- Improving accessibility, flexibility and pass-through rates in the formal and informal education systems;
- Ensuring the recognition and acceptance of non-formal and informal learning;
- Supporting outcome-oriented learning and implementing the concept of lifelong learning;
- Providing benchmarks for quality assurance;
- Ensuring comparability of Serbian qualifications with the European Qualifications Framework (EQF), to enable their international recognition.

The NQF is a system that specifies the number and descriptions of specification levels, relations between qualifications and progression and advancement in relation to the labour market and the civil society. It includes the National Qualifications System, which specifies all qualification levels and types, regardless whether they are obtained through formal or non-formal education or through informal learning – life experience or work experience, and regardless of the age at which such qualifications are obtained (youth or adults). This enables the integration and coordination of the existing qualifications systems in Serbia (e.g. the higher education qualifications system, the VET qualifications system and other systems).

The NQF defines processes, bodies/organisations in charge of establishing qualifications, the ways of obtaining qualifications and arrangements for comparison, recognition, quality assurance and learning standards.

The demand for qualifications in the labour market, i.e. the demand for necessary competences needed to keep pace with the technological and social development, must be continually monitored, and this is the task of sector-level councils. This will ensure a better supply of secondary vocational education, both formal and informal.

At present, Serbia lacks a qualifications structure to meet the current demands of the labour market and there is no doubt that the existing system will not be able to meet labour market demands in ten or more years. The expected changes in the structure of labour market demand require thorough changes in Serbia's education system. The point of those changes should be to adapt the education system to the needs of employers and to considerably reduce the number of persons who are unemployable because of the qualifications and competences they obtained. This is why the key to Serbia's development in the coming decades is to implement the triangle of knowledge: **education, research and innovation**.

The main parameters for education system improvements in Serbia are as follows:

- Continual *education system quality improvements and higher investment in education*, but with systemic changes that will not result in frequent modifications of the reform concept, as has been the case from 2001 to date, and with an improved, outcome-based financing system;
- Establishing an education system that ensures higher flexibility and safety in the labour market, based on thorough general education with multiple choices for additional specialisation, and
- Fostering the ties between education institutions, research centres and the business community by supporting cooperation programmes, which will require modifications in the regulatory framework; matching the education profiles with employers' needs; adoption of a National Qualifications Framework in line with labour market demands in Serbia; development of public-private clusters that would group together companies, suppliers, service providers and associated institutions (education and research institutions, institutes, universities, schools).

To ensure a better response to the needs for specific vocational profiles, universities and secondary schools will have to start monitoring parameters such as the percentage of employed person, the percentage of students who progress to other types of studies, the time needed for their employment and where they are employed (in the country or abroad; sectors in which they are employed); it will also be necessary to commission regular third-party surveys of the relevant industry to measure the competences of the workforce produced by a given school or university. To this end, it is necessary to provide institutional support to the cooperation between education institutions and the economy, which will require:

- Supporting *career development centres* within education institutions (and forming such centres where they do not exist);
- Forming *curriculum reform councils* at education institutions (universities in particular) which would include representatives of the business community;
- Improve the operations of the National Employment Service to equip it for forecasting labour market demands, in a role similar to that of EU's CEDEFOP.

4.2 Teachers' Skills Upgrade

As relevant legislative arrangements are inadequate and as there are no standards for the teacher profession, the existing teacher education system does not provide a proper solution, because, on the one hand, university schools for teachers place emphasis on the pedagogical competencies of future teachers and their graduates are significantly lacking in vocational competencies, while the university schools where teachers of vocational subjects are educated tend to focus primarily on vocational competencies, neglecting the pedagogical, psychological and methodological competencies.

The **teachers' skills upgrade** system, at all levels, lacks a system that would ensure the advancement of pre-university teachers and there is no professional evaluation system that would apply to teachers (expert pedagogical supervision, teacher grading). There are skills upgrading programmes, but most of them are not selective enough and many are not even serving the purpose of enhancing the quality of teaching and implementing the education policy. The existing secondary legislation (bylaws) does not provide for indicators that would measure the practical implementation of knowledge acquired in the skills upgrade process. Hence the quality of teaching (and teachers) can be measured only indirectly, on the basis of the educational attainment of primary school pupils in national and international pupil tests (PISA, TIMMS).

Certain provisions of the umbrella law on education have created scope for improvements in the quality of education. Thus, examples of sporadic measures aimed at improving the quality of education have been observed, including: Performance Quality Standards for Education Institutions for External Grading of Schools (which are being piloted), Standards of Professional Competences and Professional Development of Teachers, Textbook Quality Standards. Practical implementation of these recently adopted standards is in its infancy and it will therefore take time before their implementation and relevance can be evaluated.

- The Law on Foundations of the Education System set a minimum requirement of 30 ECTS in pedagogical, psychological and methodological (PPM) subjects and 6 ECTS in school practice and introduced four advancement levels as a form of professional advancement for teachers.
- Professional advancement of teachers and associates in their work is based on accredited, high-quality skills upgrading programmes aimed at acquitting professional competencies required for effective teaching at the given education institution and for teachers' professional advancement.

The system of advancement and choice of skills upgrading programmes has been improved and is based on the needs of the education system, as determined by an expert analysis. Among other things, the aim of these accredited programmes is to eliminate any identified shortcomings and they will be used as corrective measures to ensure a high-quality education process in schools.

It is crucial to upgrade the skills of those teachers who are currently in employment, many of whom will be working for decades to come. Such upgrading must introduce those innovations in the teaching/learning process that can improve educational attainment levels of pupils. The choice of prioritised skills upgrading programmes made by the Ministry of Education and Science must fully serve the purpose of developing the national education system and ensuring the professional development of teachers. The accredited programmes (which require special analysis) should be used to move the currently employed teaching staff towards interdisciplinarity.

Professional advancement of teachers in pre-university education is based on relevant legislative provisions pertaining to the levels and types of advancement, with

corresponding salary raises. Professional promotion of evaluation of all teachers and their career advancement will require the establishment of comprehensive systemic performance supervision and the defining of criteria for teachers' advancement. Competencies for professional advancement are evaluated according to a set of objective criteria (participation in skills upgrading programmes, indicators of practical use of knowledge and competencies acquired in such programmes, innovation in the teaching practice, implementation of a teacher evaluation system, published papers etc.).

It is essential to put in place the system for secondary school teachers' professional advancement provided for by the law as early as in the next budget year. advancement should be based primarily on the introduction of innovations and improvements in the teaching/learning process that result in improved performance of the pupils (introduction of innovations in the education system, working out new solutions for those parts of the curriculum that cause difficulties, creating a meaningful learning process, grading of pupils by attainment standards, finding solutions that improve the success rates of pupils coming from disadvantaged social and cultural backgrounds, actual implementation of inclusive education etc.).

Teachers of vocational subjects and modules in VET do not have initial teacher training and the majority of them have no prior experience in their original vocation, because the teaching post is usually the first job they ever held. What is needed is continual skills development of teachers, both in disciplines of pedagogy and psychology and in their original vocations, based on assessed educational needs of teachers and expert associates, to avoid attendance of training for purely formal reasons. It is also necessary to develop a methodology to measure the effects of skills upgrade and to develop a system of career guidance and counselling in SVET, which would also imply training of expert associates and teachers for these tasks. Accordingly, the following development measures have been planned:

- To develop various models of skills development, including practical work by teachers in their original vocations, organised in companies or institutions;
- To develop teacher skills development programmes to increase their competences for inspiring creativity, innovation and entrepreneurship in pupils;
- To train all teachers to use ICTs in their teaching or in their preparation for teaching;
- To establish a system of measurement of effects of skills development based on a previously agreed methodology;
- To establish a system of training for teachers to enable them to use the system of career guidance and counselling in secondary vocational education.

4.3 Practical Learning

Practical learning is an integral part of the curricula and syllabuses for all educational profiles across all occupational fields. The volume of practical learning varies depending on the actual circumstances, but, in general, it has been increasing during the reform process in the past decade or so. At this point it has reached an optimum point based on standards of

specific qualifications adopted in line with occupational standards. Thus, in handicrafts (bakers, butchers, car mechanics, car electricians, hairdressers, chefs, waiters etc.), practical training takes up a significant portion of the total learning time, as much as 70% combined with the teaching of vocational subjects, while occupations with four-year education tend to have slightly less practical learning, but never below 40% of vocational teaching, against 45% of general education, which is set by the Law as the statutory ratio of general and vocational subjects in the curricula and syllabuses.

According to MoESTD data, practical learning takes place in school workshops and on employers' premises. At the end of three-year educational programmes, pupils take a final examination, while at the end of four-year educational programmes pupils take a school-leaving examination. Starting from school year 2014/2015, pupils will be taking school-leaving examinations in vocational subjects after the completion of four-year vocational education. Upon the completion of specialist or craftsmen's education, pupils will take a specialist or craftsman's examination, for which they will receive an official document. Employers' representatives are members of final examination committees and/or vocational school-leaving examination committees in the pilot programmes. All these curricula and syllabuses are modular and outcome-oriented.

E. Governance and Financing of the Initial and Continuing VET System and Institutional Capacities for Change

The governance system in VET involves three key institutions – MoESTD, CVEAE i NEC. The duties of MoESTD are governed by Article 12 of the Law on Ministries (Official Gazette of the republic of Serbia No. 16/11), which states that MoESTD shall be in charge of public administration duties relating to: research, planning and development of pre-school education, primary, secondary and higher education and the living standards of pupils and students; supplementary education of children of Serbian citizens living abroad; administrative inspection in pre-school, primary, secondary and higher education and living standards of pupils and students; participation in the development, equipping and maintenance of facilities used for pre-school, primary, secondary and higher education and for living standards of pupils and students, insofar as these are of interest for the Republic of Serbia; practical implementation; and inspection in pre-school, primary, secondary and higher education and living standards of pupils and students. Furthermore, the duties of MoESTD include also professional evaluation and inspection of skills upgrade of staff at education establishments; recognition and equivalence of public certificates acquired abroad; improvement of social security for talented pupils and students; improvement of social security for pupils and students with special needs; and other duties provided for by the Law.

CVEAE was set up pursuant to a decision of the Government of Serbia of 5 May 2010. It has 21 members, including: representatives of the Chamber of Commerce, craftsmen, employers' association, vocational education experts, representatives of labour, employment and social policy institutions, VET school teachers and members of representative trade unions. The Council should contribute to the development of human resources needed to create a knowledge-based economy and society built around the principles of lifelong learning. The Council ensures the involvement of all stakeholders in the development of vocational education and adult education; in line with the needs and expectations of the labour market, it connects the world of work and the world of employment and participates in the development and management of the vocational education and adult education system.

The key institution in the drafting of technical documents for the implementation of VET is the Institute for Improvement of Education (IIE), which is in charge of technical duties in the field of education. Other key actors in vocational education are the Serbian Chamber of Commerce, the Social and Economic Council, trade unions, the Employers' Association and Sector-level Councils.

5.1 Financing

The system of **primary and secondary** education financing is based on multiple input variables, the most important one being the number of classes. As the demographic trend is

negative, headmasters have been struggling to obtain approval to keep the existing number of classes or at least to keep any reductions at a minimum. And as the number of classes has not been reduced to reflect the actual number of pupils, fundamental inefficiency arises in primary education. Between school year 1990–91 and school year 2008–09, the number of primary school pupils fell by about 215,000 (Republic Bureau of Statistics). Over the same period, the total number of classes was reduced by only 2300 and the number of school buildings (central schools and outposts) by 86. From these figures it follows that investment per pupil has increased considerably in real terms, but the money did not go to education development; instead, it was used to keep the existing number of employees. The reduction in the number of pupils was not reflected in an appropriate optimization of the network of primary schools. Secondary education is dominated by vocational education, which tends to be much more costly than general secondary education. Given that the majority of pupils choose to progress to higher education once they complete SVET, inefficiency of the system is further compounded, because the pupils enrolled in SVET had more expensive curricula and syllabuses and were being prepared for the labour market rather than for higher education.

Furthermore, the existing financing system has failed to satisfactorily address the issue of teachers' skills development, the funding of which is the responsibility of local self-governments. In practice there are huge differences in implementation, which largely correlate with the economic development of local self-governments, because those that were poorer lacked the necessary funds to comply with the requirements set by the law.

The above shortcomings of the existing system are the main motives underlying the ideas for a new pre-university education financing model, which should bring about to a shift in focus from the existing static dimension (as reflected in the need to maintain the same network of institutions and to keep the existing staffing levels) towards a new, dynamic dimension, focused on planning measures for education development and for improving the quality and efficiency of education. These objectives can be achieved only if the financing system is based on the actual number of pupils, with the level of financing required for each pupil determined by his or her educational needs and the socio-economic specificities of the environment where the teaching takes place.

The main instrument of pre-university education financing is the introduction of a financing system based on the actual number of children/pupils. In this context, the system of pre-university education is taken as a whole (rather than as the sum of three separate systems – pre-school, primary and secondary education) and relevant principles, key features and central- and local-level competences are defined accordingly. A precondition for the introduction of this new financing system is the existence of an information system from which data could be retrieved both at the local government level and at the level of each individual school.

The new pre-university financing model features three key elements:

- o **Central formula** – the cost per child/pupil is differentiated on the basis of differences in the curricula and syllabuses;

- **Cost distribution system** – determination of relevant shares to be contributed central and local government in the financing of a child's/pupil's education;
- **Local formulae** – rules for determining the level of funding that has to be provided by the local government.

The role of the **central formula** is primarily to calculate the cost of the education process for a typical child/pupil, while the purpose of the cost distribution system and the local formula is to provide an adequate level of funding to meet the specific educational needs of children/pupils in a local environment. **The cost distribution system** must ensure equity and provide for different (or equal) shares of central and local co-financing. The entire system must take into account the differences in economic power between local self-governments and thus ensure higher involvement of the central level in the financing of those pupils who attend schools in local self-governments with lower economic power. Once the cost distribution model is put in place in order to provide for an equitable distribution of costs, local self-governments will have to develop models of their **local formulae** to quantify all specificities of the education process, taking due account of any specific local circumstances (network of schools, number of outpost classes, various forms of additional educational needs). The objectives of education strategies can only be achieved if all three elements of the new financing models are properly coordinated.

A new system of education financing according to the capitation formula per pupil, with specific coefficients for different types of pupils and different types of institutions, is currently being developed. It is scheduled to be piloted in 2011/12 and to be implemented in the entire system by 2015. In parallel with this, MoESTD has been making efforts to improve the efficiency of the education system and by rationalizing classes and schools, and durable solution to the redundant employees through internal exchanges before the start of each school year.

Governance Matrix

Elements or functions within a VET system	Authority	Competences	Resources	Accountability
	Who are the actors legally in charge of this function? Have <u>roles</u> ¹⁹ and <u>responsibilities</u> been adequately defined?	Do actors have the <u>technical competences</u> that are needed to fulfil this function?	Do actors have <u>adequate financial and human resources</u> to fulfil this function?	In what way are the actors in charge made <u>accountable</u> for the work done?
Policies and legislation				
Defining national VET and employment policies	MoESTD, MoLESP, CVEAE	Yes	No/Yes	Under legislative documents
Monitoring national VET and employment policies	Serbian Government	Yes	Yes	Under the Constitution
Legislation for VET (both initial and continuing)	MoESTD, National Assembly of Serbia			
Qualifications and curricula				
National, sectoral and regional skill and training needs analyses	MoLESP, NES, CVEAE	Yes	No/Yes	Under laws and regulations
Designing a list of occupations	CVEAE; NES; IIE	Yes	No/Yes	
Definition or revision of standards/qualifications	CVEAE, IIE			
Development or revision of curricula (all types)	CVEAE, NEC; IIE	Yes	No/Yes	Under the law
Teachers and trainers				
Pre-service training and induction of VET teachers	schools	Yes/No	Yes/No	Under the law
Recruitment of teachers	schools			
In-service training of VET teachers	schools	Yes/No	Yes/No	Under the law
Teacher appraisal and career development	Schools MoESTD	Yes/No	Yes/No	Under the law
VET providers				
Network of providers of - initial VET - continuing VET	MoESTD, CVEAE, IIE			
Planning VET programmes and student numbers	MoESTD			
Planning budgets for vocational schools	MoESTD			
Dealing with school expenses (managing school budgets)	schools			

¹⁹ Actors could have decision-making, advisory or executive roles.

Serbia – National Torino Process Report for 2012

Learning materials and equipment				
Learning materials	Schools, MoESTD	Yes	No	
Workshop equipment	schools	Yes	No	
Practical learning sites				
Liaison with employers	schools	Yes and no	No	
Practical training places within companies	schools	No	No	
Apprenticeships	Schools, MoESTD	Yes and no	No	
Assessment and certification				
Assessment of students' skills	Schools, IIE			
Issuing certificates				
Monitoring and impact				
Monitoring the quality of VET provision	MoESTD, IQAE			
School-to-work transition surveys or tracer studies for graduates				
Research and innovation				
Research and innovation, including the transfer of innovations from pilot to system level				
Donor coordination				
Efficient coordination of donors in VET	MoESTD	No	No	

Concluding Remarks

1. The issue of adequacy of competences acquired by vocational secondary school leavers is pivotal for further development of secondary vocational education. Of particular importance here is how to forecast which skills will be in demand and how to train pupils for them. This is supported by the already identified key challenge of secondary vocational education reform so far – modernisation of the educational profiles structure and introduction of an outcome-oriented learning model. However, the majority of the existing educational profiles that are not included in the pilot system are structured according to the traditional model of secondary vocational education, in which pupils do not acquire adequate competences. These are mostly models for which there is no demand in the labour market and in which pupils acquire obsolete skills and knowledge. The key issue here – one that should be addressed by systemic measures – is how to modernize other educational profiles and also how to decide which profiles should remain in the system.

2. Pupils lack motivation and desire to acquire new knowledge, because the development of these capacities was not encouraged at lower education levels, because the curricula and syllabuses are rigid and because they lack practical learning at schools and in enterprises. On the other hand, with regard to VET in general, Serbia has not defined the overall aim of VET and this fact has influenced the share of general and vocational subjects in teaching. **The key dilemma – whether VET is expected primarily to provide skills and competences needed by the labour market or to enable progression to higher education – has not been addressed.** This is particularly true of traditional secondary vocational education outside of the pilot profiles and curricula. An exception from this rule are the pilot profiles, especially those that have already become part of the system, as well as those that are yet to be included in the system after evaluation. The concept of pilot profiles in general has brought about to a significant shift in the overall philosophy and concept of secondary vocational education and has produced a far clearer definition of the objective and mission of educational programmes and VET in general. Pilot profiles and curricula were structured to enable individuals to move flexibly through the labour market and progress to higher education. The introduction of the concept of outcome-based education – which is enabled by the pilots – has been a step forward to accommodate the demands of the world of work and the needs of employers, while at the same time providing knowledge required for further education. The results of pilot profiles, especially those that have been integrated with the system, point to a number of key improvements:

- In the school year 2010/2011, the number of pupils enrolled in pilot profiles increased to 17% of the total number of pupils in vocational secondary schools. Pilot profiles that have become part of the system include 7 educational profiles in the field of agriculture, food production and processing, one in electrical engineering and one in civil engineering.
- Strong partnerships have been forged with employers in all segments of profile and curriculum development, implementation and evaluation of pupils' attainment (examinations);
- Pupils acquire a set of work competences that enable them swift and easy inclusion in the world of work;

- The structure of theoretical and practical knowledge and the skills acquired enable the pupils in four-year pilot profiles to successfully continue with their education;
- Improved practical knowledge and acquisition of practical skills through increased practical learning have given pupils faster and better access to employment. Analyses of pupils' employment after the completion of pilot, profiles, particularly in the sectors of agriculture, food production and processing, tourism, economy etc. show that pupils have a sound practical background and are readily involved in the work process. This is one of the reasons why employers are highly satisfied with certain pilot profiles;
- The attractiveness of secondary vocational education has been increased with the introduction of pilots (which resulted in technical equipping of schools, teacher training, fewer pupils per class, introduction of standards of qualifications, modular teaching and introduction of entrepreneurship as a subject);
- The procedures and methodology for translating the pilot profiles into the regular system are the largest issue faced in the implementation of pilot profiles;
- Progress has been made towards acceptance and understanding of outcome-based education by the general public.

3. The formation of the Council for Vocational Education and Adult Education has increased institutional support to secondary vocational education development. It is the national body that unites all social partners. The Council is also the formal systemic place where all social partners participate in the creation, development and promotion of vocational education and adult education. The Council plays a vital role in VET development.

The formation of the Council for Vocational Education and Adult Education made a direct contribution towards one of the key advancements in the development of VET in the last two years: exceptional mobilisation of social partners and their direct involvement both in the development and planning of SVET and in the direct provision of vocational education.

4. Adaptation of the new network of vocational secondary schools to the needs of the economy and demographic trends across regions and local communities must be done on the basis of a research that would cover the entire nation, in cooperation with regional chambers of commerce, associations of manufacturers that are not included in the chamber system and local self-governments. A change in secondary vocational education admission policy will be essential for the development of not only education, but also of the economy and other social activities. Experience from recent past suggests it will be necessary to match supply and demand – the number of primary school leavers and the number of places at vocational schools. A huge disproportion has resulted in a serious imbalance between three-year and four-year vocational education: in most of the three-year profiles, classes are either left without any pupils or with a number that is so low that teaching a class is not possible. It is therefore necessary to identify further rationalisation of the VET school network as a priority of VET development.

5. Good-quality vocational education is expensive – especially practical learning – and very few schools are able to provide proper conditions for practical learning on school premises. To ensure that all pupils acquire equal levels of competence, some vocational schools will need to be promoted into regional technological centres for specific fields, with

boarding facilities. Such technological centres would also serve as resource centres for teachers who provide practical training.

6. The teacher profession should be defined in the National Qualifications Framework as soon as possible for all levels (such as nursery school teacher, pre-school teacher, primary school teacher, subject teacher in primary and secondary school and various teaching posts in higher education). Those documents will define different qualification levels for the teaching profession and the relevant professional competencies.

7. In the process of accreditation system review (which will in particular concern the accreditation standards), competencies that students have to obtain in order to qualify for the teacher profession will be specified in detail for each study course in teacher education. In addition to the five science and education fields provided for in the Law on Higher Education, an education field with special standards for accreditation of teacher education study courses will also be defined. A relevant subcommittee will be formed within the Accreditation Committee or the Ministry of Education and Science which will be in charge of implementing the new standards.

8. The National Education Council has adopted the standards of professional competencies and professional development of pre-university teachers; once their initial implementation has been analysed, they will be reviewed and improved. Professional competencies of teachers include the following components: vocational competences in the subject (discipline) taught; pedagogical competencies (knowledge of teaching/learning methods, knowledge of pupil performance evaluation methods, support to personality development, communication and cooperation, knowledge of educational resources and their use, mastery of information technologies and their use in education, awareness of the educational and cultural context of teaching).

Recommendations

- Establish a NQF for lifelong learning in Serbia
- Develop mechanisms for the identification of required qualifications at regional and local levels for a period of 1 to 5 years at regional chambers of commerce;
- Establish a new network of vocational secondary schools, adapted to the needs of the economy and the demographic trends at regional and local levels;
- Establish minimum five regional technology centres for specific sectors using commercial facilities, existing school property and boarding facilities;
- Adopt laws and secondary legislation to govern the work of regional technology centres, the manner of their funding, the work of teachers/trainers at those centres and the work of “visiting” teachers;
- Perform verification of all vocational secondary schools;
- Introduce a knowledge threshold (the sum of points earned in final examination and points awarded for primary school grades) for enrolment in different VET educational programmes;
- Match the offering of educational programmes with unemployment figures from the labour market and with the economic and technological needs of the country and the region concerned;
- Introduce admission examinations for certain educational programmes which require the testing of specific mental and physical abilities have to be tested.

- Establish a system for certification of prior learning / recognition of non-formal and informal learning in Serbia
- Develop a system of craftsmen’s education developed for minimum 30 occupations and minimum three generations of craftsmen obtained master craftsman’s certificates;
- Ensure that the organisation of teaching at schools is in line with optimum learning methods (e.g. subject-based and modular teaching is organised during one semester or in blocks);
- Apply the methodology of drop-out rate monitoring and measurement and monitor the number of pupils in every enrolled generation through a unified information system
- Reduce the current drop-out rate by 50%;
- Improve the system of teacher development implementation of the planned measures of development;
- To promote the interest of the teachers in the system to develop an attractive and motivational promotion of teachers to work in the new conditions;
- To train the teachers and staff for the implementation of career guidance and counselling;
- Develop, trial on a test sample and apply in practice different assistance programmes targeted at vulnerable groups;

- Ensure that pupils who dropped out of secondary education receive some form of vocational education and training and obtain their first qualifications;
- In sectors where certain qualifications are in high demand, but there is not enough interest in enrolment among pupils and drop-out rates are low, develop special VET programs at required qualification levels.
- Develop a system of VET monitoring and evaluation (indicators, instruments, procedures, responsible bodies/institutions, laws and secondary legislation);
- Based on the actual situation, establish a system of VET management at all levels which will include clearly defined roles and responsibilities of stakeholders;
- Prepare a special document to outline the duties and responsibilities of VET stakeholders and translate those into laws and secondary legislation;
- Provide legally defined financial and technical resources for the operation and Development operators and carriers responsible for SVET especially CVEAE.

ANNEX 1: TABLES

Table 1: Key labour market indicators, 15-64 age group

15-64 age group	2009	2010	2011
Activity rate	60.6%	59.0%	59.4%
<i>Men</i>	68.7%	67.3%	68.1%
<i>Women</i>	52.8%	50.8%	50.7%
Employment rate	50.4%	47.2%	45.4%
<i>Men</i>	58.1%	54.4%	52.4%
<i>Women</i>	43.0%	40.1%	38.3%
Unemployment rate	16.9%	20.0%	23.6%
<i>Men</i>	15.5%	19.2%	23.1%
<i>Women</i>	18.6%	21.0%	24.3%
Inactivity rate	39.4%	41.0%	40.6%
<i>Men</i>	31.3%	32.7%	31.9%
<i>Women</i>	47.2%	49.2%	49.3%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 2. Employment and unemployment – total numbers and rates

15-64 age group	2009	2010	2011
Number of employed persons	2,468,688	2,273,473	2,166,656
Employment rate	50.4%	47.2%	45.4%
Number of unemployed persons	501,924	567,883	669,968
Unemployment rate	16.9%	20.0%	23.6%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 3. Key labour market indicators by gender, 15-64 age group

Rates - 15-64 age group	2009	2010	2011
Women			
Activity rate	52.8%	50.8%	50.7%
Employment rate	43.0%	40.1%	38.3%
Unemployment rate	18.6%	21.0%	24.3%
Men			
Activity rate	68.7%	67.3%	68.1%
Employment rate	58.1%	54.4%	52.4%
Unemployment rate	15.5%	19.2%	23.1%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 4: Trends in key labour market indicators by regions, 15-64 age group, 2009

15-64 age group	Central Serbia excluding the City of Belgrade	City of Belgrade	Vojvodina	Kosovo and Metohia
2009				
Employment rate	50.7%	52.8%	47.9%	...
Unemployment rate	18.2%	13.5%	17.3%	...

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 4a: Trends in key labour market indicators by regions, 15-64 age group, 2010-2011

15-64 age group	Belgrade region	Region of Vojvodina	Region of Šumadija and Western Serbia	Region of Southern and Eastern Serbia	Region of Kosovo and Metohia
2010					
Employment rate	50.8%	44.0%	49.1%	45.0%	...
Unemployment rate	15.1%	20.9%	20.5%	23.3%	...
2011.					
Employment rate	47.5%	44.2%	46.6%	43.2%	...
Unemployment rate	20.0%	23.9%	23.8%	26.7%	...

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 5. Employment rates by age groups, 15-64 age group

Age group	2009	2010	2011
15-24	16.9%	15.2%	14.0%
25-34	61.7%	56.9%	54.6%
35-44	74.0%	71.1%	69.1%
45-54	64.0%	62.2%	61.1%
55-64	35.4%	32.8%	31.4%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 6. Employment rates by qualification levels, 15-64 age group

Qualification levels	2009	2010	2011
No education	17.6%	13.2%	16.6%
Incomplete primary education	43.5%	38.0%	35.3%
Primary education	34.4%	31.1%	29.8%
Secondary education	52.9%	49.6%	47.3%
Advanced secondary education	58.7%	60.8%	59.7%
University, academy or higher education school	79.1%	74.1%	71.7%

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 7. Employment by sectors, 15-64 age group

15-64 age group	2009	2010	2011
Total employees	100.0%	100.0%	100.0%
<i>Agriculture</i>	<i>19.8%</i>	<i>18.5%</i>	<i>18.5%</i>
<i>Industry</i>	<i>26.7%</i>	<i>27.3%</i>	<i>27.7%</i>
<i>Services</i>	<i>53.5%</i>	<i>54.2%</i>	<i>53.8%</i>

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 8. Unemployment rates by age groups, 15-64 age group

Age group	2009	2010	2011
15-24	41.6%	46.2%	50.9%
25-34	21.1%	27.1%	31.2%
35-44	13.8%	15.8%	19.1%
45-54	12.8%	14.7%	18.8%
55-64	10.0%	11.9%	14.9%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 9. Unemployment rates by qualification levels, 15-64 age group

Qualification level	2009	2010	2011
No education	15.2%	18.1%	41.1%
Incomplete primary education	10.3%	9.0%	15.0%
Primary education	18.2%	20.3%	24.7%
Secondary education	19.2%	22.7%	26.1%
Advanced secondary education	14.5%	16.1%	17.6%
University, academy or higher education school	7.4%	11.9%	15.4%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 10. Qualifications structure of unemployed persons, 15-64

Qualification level	2009.	2010.	2011.
No education	0.3%	0.2%	0.8%
Incomplete primary education	2.5%	1.4%	1.9%
Primary education	17.8%	16.1%	16.4%
Secondary education	68.6%	69.2%	67.2%
Advanced secondary education	5.3%	5.2%	4.9%
University, academy or higher education school	5.5%	7.9%	8.8%

Source: Labour Force Survey - Bulletin (annual data),
Republic Statistical Office

Table 11. Share of informally employed persons in total employment, population aged 15+

15+ age group	2009	2010	2011
Share of informally employed persons	21.4%	19.6%	18.8%
Men	19.9%	18.9%	18.4%
Women	23.2%	20.6%	19.4%

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 12: Activity rate

Activity rate									
	2008		2009		2010		2011		2012
	April	October	April	October	April	October	April	October	April
Men	71.1	71.3	69.0	68.4	67.4	67.2	67.5	68.7	68.7
Women	54.8	54.1	52.8	52.8	50.9	50.6	50.4	50.9	50.7
Total	62.8	62.6	60.8	60.5	59.1	58.8	58.9	59.9	59.7

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 13: Employment rate

Employment rate									
	2008		2009		2010		2011		2012.
	April	October	April	October	April	October	April	October	April
Men	62.3	62.2	58.7	57.4	54.3	54.5	52.2	52.5	51.1
Women	46.0	44.7	43.3	42.7	40.3	39.9	38.8	37.9	37.1
Total	54.0	53.4	50.8	50.0	47.2	47.1	45.5	45.3	44.2

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 14. Unemployment rate

Unemployment rate									
	2008		2009		2010		2011		2012
	April	October	April	October	April	October	April	October	April
Men	11.7	12.1	14.3	15.3	18.6	18.3	21.9	22.8	25.0
Women	15.2	16.5	17.3	18.4	20.1	20.4	22.5	24.9	26.1
Total	13.3	14.0	15.6	16.7	19.2	19.2	22.2	23.7	25.5

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 15: Long-term unemployment rate

Long-term unemployment rate									
	2008		2009		2010		2011		2012.
	April	October	April	October	April	October	April	October	April
Men	8.2	8.5	8.8	10.2	11.8	13.8	16.5	17.2	19.8
Women	11.1	11.7	11.7	11.8	14.1	14.9	17.1	19.2	21.2
Total	9.5	9.9	10.1	10.9	12.8	14.3	16.8	18.1	20.4

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 16: Share of long-term unemployment in the total number of unemployed persons

Share of long-term unemployment in the total number of unemployed persons									
	2008		2009		2010		2011		2012.
	April	October	April	October	April	October	April	October	April
Men	69,89	70,34	61,91	66,53	63.8	72.6	72.7	73.2	77.2
Women	73,21	71,03	67,37	64,41	70.3	70.6	74.1	75.0	79.4
Total	71,58	70,70	64,58	65,50	66.7	71.7	73.3	74.0	78.1

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 17: Share of unemployed persons not registered with NES

Share of unemployed persons not registered with NES									
	2008		2009		2010		2011		2012.
	April	October	April	October	April	October	April	October	April
Men	19.4	19.2	24.6	23.6	20.6	23.7	23.3	18.2	18.1
Women	14.7	12.6	13.8	15.4	16.0	18.3	18.5	12.3	15.3
Total	17.0	15.8	19.3	19.6	18.6	21.3	21.2	15.6	16.9

Source: Labour Force Survey - Bulletin (annual data), Republic Statistical Office

Table 18: Absolute poverty line

Absolute poverty line					
	2006	2007	2008	2009	2010
Poverty line, RSD/month equivalised disposable income	6,221	6,625	7,401	8,022	8,544
% of poor persons in Serbia	8.8	8.3	6.1	6.9	9.2
Percentage of poor persons by regions					
Belgrade	4.3	2.4	2.9	3.8	5.3
Central Serbia	10.7	9.0	7.0	9.3	12.0
Vojvodina	8.6	11.9	6.8	4.9	6.8
Percentage of poor persons by settlement types					
Urban areas	9.5	10.1	5.0	4.9	5.7
Other areas	20.6	17.6	7.5	9.6	13.6
Percentage of poor persons by household types					
Single member	8.6	8.8	6.6	5.7	5.6
Two members	8.7	9.2	5.5	5.6	5.9
Three members	5.2	4.9	5.1	5.0	7.0
Four members	5.7	5.3	4.7	4.7	7.1
Five members	8.3	8.1	5.2	5.7	11.7
Six or more members	17.3	14.4	10.0	14.2	16.4
Percentage of poor persons by age					
Children up to 13 years	11.6	11.2	7.3	9.8	13.7
Children aged 14–18 years	11.7	8.8	6.9	8.4	9.1
Adults aged 19–24 years	7.2	6.6	5.9	7.5	11.5
Adults aged 25–45 years	8.4	7.4	5.0	6.4	8.9
Adults aged 46–64 years	7.0	6.6	5.4	5.3	8.0
Elderly persons, aged 65 and above	10.0	10.3	7.5	7.5	7.9

Source: SHS

Note: Absolute poverty line is defined on the basis of the food threshold, increased by other expenses (clothes, footwear, housing, health care, education, transport, recreation, culture, other goods and services) calculated in 2006 and indexed for inflation (measured by CPI) for each year

Table 19: At-risk-of-poverty rate²⁰

At-risk-of-poverty rate ²¹ by gender and age, % ²²					
	2006	2007	2008	2009	2010
Gender					
Total	20.9	21.0	17.9	17.7	18.3
Male	20.1	20.7	17.7	17.7	18.1
Female	21.6	21.3	18.1	17.8	18.4
Age groups					
0–17 years					
Total	26.0	25.2	20.8	22.1	24.0
Male	24.6	24.8	20.8	22.2	23.8
Female	27.6	25.7	20.8	22.0	24.3
18–24 years					
Total	21.0	19.1	17.0	16.7	21.1
Male	20.3	19.5	16.4	17.6	22.1
Female	21.9	18.7	17.7	15.9	19.7
25–54 years					
Total	19.4	19.5	16.5	16.6	17.7
Male	19.4	19.7	16.9	16.9	18.0
Female	19.3	19.3	16.0	16.2	17.5
55–64 years					
Total	17.3	17.2	15.8	16.0	17.1
Male	17.7	17.0	17.2	16.3	19.1
Female	16.9	17.4	14.5	15.7	15.3
65 years and older					
Total	21.8	23.9	20.2	18.2	14.8
Male	18.6	22.1	17.4	16.4	11.0
Female	24.3	25.2	22.2	19.5	17.7

Source: Survey of Household Spending (SHS), Republic Statistical Office (2010)

²⁰ In line with the process of harmonization with European statistical practices, in November 2012 Serbia will conduct a pilot survey of living standards using the Survey of Income and Living Conditions (SILC). According to plans, from 2012 SILC will become part of regular statistical research. This survey would provide comparable data on poverty and social exclusion in 2012. In years to come, SILC will become the main source of data on poverty and social exclusion and thus replace the Survey of Household Spending (SHS) which has hitherto been used for these purposes. For this reason, the data provided by SHS for 2011 will not be used in the determination of poverty and social exclusion in 2011; instead, this year will be a transitional year for which no data on poverty and social exclusion will be available.

²¹ All indicators of financial poverty based on income are calculated according to the definition of income which include also income in kind.

²² The table shows the share of people with an equivalised disposable income below 60% of the national median equivalised disposable income. Equivalised disposable income is calculated by dividing household income by the number of members using the modified OECD scale (the first adult is assigned the weight of 1, other adults aged 14 and over are assigned the weight of 0.5 and every child aged under 14 is assigned the weight of 0.3). Thus, each person in a household has at his/her disposal the same income within the household, regardless whether he/she is a child or an adult.

Table 20: At-risk-of-poverty rate by most frequent labour market status and gender, %

At-risk-of-poverty rate by most frequent labour market status and gender, %					
Economic activity of household members	2006	2007	2008	2009	2010
Employed					
Total	15.3	16.5	13.5	13.6	12.8
Male	16.6	17.8	15.5	15.5	15.7
Female	13.4	14.5	10.9	11.0	8.4
Unemployed					
Total	36.6	33.4	31.1	30.5	33.9
Male	38.0	38.3	31.5	33.4	35.5
Female	35.5	29.5	30.7	28.0	32.4
Pensioners					
Total	15.6	15.4	14.1	12.9	11.5
Male	14.5	15.9	14.1	12.6	9.7
Female	16.6	15.1	14.1	13.2	13.0
Other inactive persons					
Total	50.8	48.3	46.0	47.4	42.0
Male	47.4	44.1	45.0	44.3	40.6
Female	53.8	51.2	46.7	50.2	43.2

Source: SHS

Table 21: Income inequality ratio, Gini coefficient

Income inequality ratio, Gini coefficient					
	2006	2007	2008	2009	2010
Gini coefficient	32.9	32.0	30.2	29.5	33.0

Source: SHS

Table 22: Income inequality ratio, S80/20 quintile ratio

Income inequality ratio, S80/C20 quintile ratio					
	2006	2007	2008	2009	2010
Quintile ratio C80/C20	5.8	5.6	4.8	4.7	5.7

Source: SHS

Table 23: Share of informally employed persons

Share of informally employed persons									
	2008		2009		2010		2011		2012
	April	October	April	October	April	October	April	October	April
Men	21.2	24.3	20.7	19.2	19.1	19.8	19.1	17.7	16.3
Women	26.8	25.4	24.1	22.3	20.7	21.7	20.8	17.9	18.1
Total	23.6	23.0	22.2	20.6	19.8	20.6	19.8	17.8	17.0

Source: LFS

Table 24: School drop-out rates, secondary education, beginning and end of school years 2006/07, 2007/08 and 2008/09, by duration of education

School drop-out rate, %	2006/07	2007/08	2008/09
Four-year education	2.6%	2.5%	2.3%
Three-year education	8.0 %	8.2%	7.8 %

Source: Republic Statistical Office, data calculated by MoES

Table 25 Pupil coverage

Source	Drop-out rate/	Children not in secondary education
LSMS ²³ (Republic Statistical Office, World Bank and DFIF, 2008)	/	20%
Ministry of Education and Science, survey of generations 2000 – 2008	7.3%	/
EUROSTAT, 2010	10%	/

Table 26 Secondary school pass rates, failure rates and drop-out rates in school year 2008/09

	4-year schools	3-year schools
Passed, %	90.9%	77.4%
Failed, %	3.9%	9.2%
Drop-outs, %	9.1%	22.6%

Source: Ministry of Education and Science, based on data of the Republic Statistical Office

Table 27: Early school leavers aged 18-24 years who are not in training

Early school leavers aged 18-24 years who are not in training									
	2008		2009		2010		2011.		2012.
	April	October	April	October	April	October	April	October	April
Men	11.9	12.6	9.3	10.1	9.1	8.9	9.7	9.6	8.9
Women	9.6	12.3	9.7	8.2	8.4	6.3	8.1	6.2	7.6
Total	10.8	12.4	9.5	9.2	8.8	7.7	8.9	8.1	8.3

Source: LFS

Table 28: Persons with primary school or lower education aged 25 years and above

Persons with primary school or lower education aged 25 years and above									
	2008		2009		2010		2011		2012
	April	October	April	October	April	October	April	October	April
Men	28.9	29.3	29.1	29.2	28.3	27.9	26.8	27.4	26.4
Women	45.3	44.4	44.4	43.5	43.8	43.9	42.9	43.4	42.0
Total	37.6	37.3	37.2	36.8	36.5	36.6	35.3	35.8	34.6

Source: LFS

²³ *Living Standards Measurement Study in: Serbia Human Resources Development, Overview, ETF, 2010*

Table 29: Secondary education coverage of children aged 15

Secondary education coverage of children aged 15			
Number of pupils enrolled in the first grade of secondary school, public and private schools, excluding figures for Kosovo and Metohia*		Estimated number of inhabitants aged 15 years	Net rate of enrolment in the first grade of secondary school (%)
School year 2008/2009	81,527	83,764	97.3
School year 2009/2010	80,620	82,915	97.2
School year 2010/2011	79,840	82,483	96.8

Source: Republic Statistical Office

Note: Enrolment rate is calculated as the ratio of children enrolled in the first grade at the age of 15. As the age of children enrolled in the first primary school grade is unknown, this indicator is not sufficiently reliable.

ANNEX 2: Labour Market Forecasting Projects (NES)

In 2009, the project **“Forecasting Labour Market Trends”** was implemented by the Economic and Social Research Institute in cooperation with the Ministry of Economy and Regional Development and the NES, with the aim to develop and carry out a survey of labour market demands in three Serbian regions – the City of Belgrade, the South Bačka District and the Nišava District – and to identify, on the basis of survey results, the short-term trends of demand in terms of jobs, qualifications structure and occupations (vocations, qualifications), as well as to initiate the implementation of a labour market information and forecast system at the NES. Employers were surveyed in March and April 2009 and included 1,339 employers in Belgrade and in the South Bačka and Nišava Districts (795 companies responded, giving a response rate of 59.37% of the sample). The survey was carried out by NES staff (employment counsellors and other officers), with a total of 151 interviewers deployed in the cities of Belgrade, Nis and Novi Sad. All of them had previously undergone three one-day training sessions for interviewers. An analysis of employment by employers in recent years has helped to determine the scale of disparities between actual jobs and occupations (vocations, qualifications) in demand, which can be an indicator of tendencies in the employment of (or demand for) certain occupations, but may equally reflect problems arising from e.g. a shortage of qualified workforce in certain occupations which was not available to corporations at the time when they had vacancies. The survey has produced short-term forecasts that include a list of occupations in high demand, i.e. anticipated jobs, required skills and distribution of demand, broken down by the size of corporations, type of ownership and economic sector. The Employer Survey Analysis Report presents key findings, including the conclusion that, while the lack of knowledge and skills is one of the problems faced by employers in the labour market, they are nevertheless unable to adequately identify in particular the professional and transferable specific knowledge and skills they actually need. Only a small number of companies stated they needed staff training, and those that did were mostly small, privately-owned businesses. Trainings and skills upgrades are mostly needed for employees with level 3 and level 4 qualifications, as well as for employees with higher education (level 7-1). Employees of surveyed companies – most of them with level 3 and level 4 qualifications – usually lack broader competences and personal characteristics, as well as transferable knowledge and skills. Professional knowledge is the least frequently cited among the skills that employees lack, but those with level 3 qualifications appear to be the most deficient in this area.

In 2010 and 2011, the Ministry of Economy and Regional Development and the NES implemented the project **“NES Forecasts and Data Management” (EUNES) - IPA08**, with the aim to match supply and demand, to establish a system for forecasting labour market trends and needs and to reduce unemployment through improved performance of labour market forecasts and monitoring and evaluation of active employment policy measures. The project developed a methodology, a survey questionnaire and data entry and processing software; also, the NES carried out the first comprehensive research aimed at developing short-term forecast of employers’ needs and obtained results at national, regional and district levels. A representative sample of 5,488 employers, chosen by the Republic Statistical Office, was surveyed by more than 500 trained interviewers – NES counsellors, while some 40 employees were trained to produce analytical reports at district/branch, regional/RES and national/NES levels. The project will be extended in the forthcoming period in order to

establish a survey and forecast system for the purposes of education and employment. In April 2012, the National Employment Service began a new cycle of employer surveys using the same methodology and made an independent survey of the demand for specific skills and knowledge by employers in order to implement and develop a systemic solution for labour market forecasts and surveys.

BIBLIOGRAPHY AND SOURCES

1. Ministarstvo prosvete i nauke: STRATEGIJA RAZVOJA OBRAZOVANJA U SRBIJI DO 2020. GODINE, Nacrt za diskusiju, (Ministry of Education and Science: STRATEGY OF EDUCATION DEVELOPMENT IN SERBIA BY 2020, Discussion Draft), Belgrade, 2012
2. Ministarstvo finansija: Jesenja analiza privrednih kretanja, (Ministry of Finance: Autumn Analysis of Economic Trends), September 2011
3. USAID, Ekonomski fakultet, Ekonomski institut Univerziteta u Beogradu: POSTKRIZNI MODEL EKONOMSKOG RASTA I RAZVOJA SRBIJE 2011-2020 (USAID, Faculty of Economy, Economics Institute of the University of Belgrade: SERBIAN POST-CRISIS ECONOMIC GROWTH AND DEVELOPMENT MODEL 2011-2020), Belgrade, 2010
4. Privredna komora Srbije: PRILOG ZA STRATEGIJU i POLITIKU RAZVOJA INDUSTRIJE REPUBLIKE SRBIJE 2011-2020 (Serbian Chamber of Commerce: A CONTRIBUTION TO SERBIA'S INDUSTRIAL DEVELOPMENT STRATEGY AND POLICY 2011-2020), Belgrade, 2011
5. World Bank: SOUTHEAST EUROPE, REGULAR ECONOMIC REPORT, November 2011
6. European Commission Directorate-General for Economic and Financial Affairs: 2011 ECONOMIC AND FISCAL PROGRAMMES OF POTENTIAL CANDIDATE COUNTRIES: EU COMMISSION'S ASSESSMENTS, July 2011
7. FIC, Foreign Investors Council: BELA KNJIGA, Predlozi za poboljšanje poslovnog okruženja u Srbiji, (WHITE PAPER, Proposal for Improvements in Serbia's Business Environment), Belgrade, 2011
8. RZS (Republic Statistical Office): announcements; Labour Force Surveys 2010, 2011
9. Serbia's National Program for EU Integration by 2012, 2010
10. Nebojša Savić, Marija Džunić, KONKURENTNOST SRBIJE U REGIONU (SERBIA'S COMPETITIVENESS IN THE REGION), FEFA, 2011
11. Programiranje donatorske pomoći u HR za 2011-13 (Programming Donor Assistance in HR for 2011-13), Belgrade, 2010
12. Ministarstvo finansija RS: RAZVOJ PREDZTENIŠTVA U SRBIJI (Serbian Ministry of Finance: DEVELOPMENT OF ENTREPRENEURSHIP IN SERBIA), 2010
13. RZS: Srednjoškolsko obrazovanje u Republici Srbiji (Republic Statistical Office: Secondary School Education in the Republic of Serbia), 2011
14. Analytical materials and surveys of the Serbian Chamber of Commerce, MoESTD, MoERD and the Republic Statistical Office
15. ETF: SERBIA HUMAN RESOURCES DEVELOPMENT, 2010

