European Commission

Education and Training Monitor 2013

Czech Republic

Education and Training

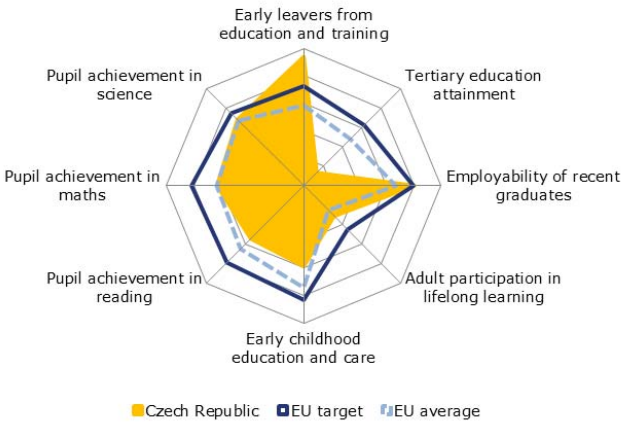
1. Key indicators and benchmarks

Europe 2020 headline targets			Czech Republic 2009	Czech Republic 2012	EU average 2009	EU average 2012	Europe 2020 target / Benchmark
1. Early leavers from education and training (age 18-24)			5.4%	5.5%	14.2% EU28	12.7% EU28	**EU target: 10%** National target: 5.5%
2. Tertiary educational attainment (age 30-34)			17.5%	25.6%	32.1% EU28	35.7% EU28	**EU target: 40%** National target: 32%
ET 2020 Benchmarks							
3. Early childhood education and care (4 years old - year before start of compulsory primary)			90.0%	87.8% 11	91.7%	93.2% 11	**95%**
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading		23.1%	:	19.6%	:	**15%**
	Mathematics		22.3%	:	22.2%	:	**15%**
	Science		17.3%	:	17.7%	:	**15%**
5. Learning mobility	Initial vocational training (IVET)	**a.** Students participating in Leonardo da Vinci programs as a share of vocational students at ISCED 3	0.7%	0.1% 11	0.6%	0.7% 11	
	Higher Education	**b.** Erasmus inbound students as % of student population in host country		1.2% 11		1.1% 11	
		c. Inbound degree mobile students as % of student population in the host country		8.5% 11		7.0% 11	
6. Employment rate of graduates (age 20-34) having left education 1-3 years before reference year			84.5%	82.3%	78.3%	75.7%	**82%**
7. Adult participation in lifelong learning (age 25-64)			6.8%	10.8%	9.3%	9.0%	**15%**
Proposed ET 2020 benchmark							
8. Foreign languages skills	**a.** ISCED 2 students at proficiency level B1 or higher in first foreign language[1]		:	:	:	43.5% 11	
	b. ISCED 2 students learning two or more foreign languages		22.7%	30.7% 11	58.6%	60.8% 10	
Other ET 2020 Indicators							
9. Investment in education and training	**a.** General government expenditure on education (% of GDP)		4.8%	4.9% 11	5.5%	5.3% 11	
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 3,762 08	€ 4,136 10	€ 5,732 08	€ 6,021 10	
		ISCED 3-4	€ 4,203 08	€ 4,464 10	€ 6,964 08	€ 7,123 10	
		ISCED 5-6	€ 6,240 08	€ 5,881 10	€ 9,309 08	€ 9,168 10	
10. Digital competences	**a.** Pupils in grade 4 (ISCED 1) using computers at school		51.1% 07	69.6% 11	60.7% 07	64.7% 11	
	b. Individuals aged 16-74 with high computer skills[2]		19.0%	26.0%	25.0%	26.0%	
11. Entrepreneurial competences	Individuals aged 18-64 who believe to have the required skills and knowledge to start a business		:	:	42.3% a	42.0% a	
12. Vocational education and training	Share of vocational students at ISCED 3		73.3%	73.0% 11	49.6%	50.3% 11	
13. Skills for future labour markets Projected change in employment 2010-2020 in %	High qualification		:	30.6%	:	19.1% EU28	
	Medium qualification		:	-2.7%	:	4.6% EU28	
	Low qualification		:	-16.2%	:	-20.2% EU28	
14. Low-skilled adults	Literacy		:	11.8%	:	19.9% EU17	
	Numeracy		:	12.9%	:	23.6% EU17	
	Problem solving in technology rich environments[3]		:	25.4%	:	26.9% EU13	

Source: Cedefop: 13 / EAC: 10a,b / European Survey on Language Competences (ESLC): 8a / Eurostat (Government finance statistics): 9a / Eurostat (LFS): 1, 2, 6, 7 / Eurostat (ISS): 10b / Eurostat (UOE): 3, 8b, 9b, 10c, 12 / IEA TIMSS: 10a / Global Entrepreneurship Monitor: 11 / OECD (PIAAC): 14 / OECD (PISA): 4

Notes: 07 =2007, 08 =2008, 09 =2009, 10 =2010, 11 =2011, e= estimate, a= unweighted average b= break, p= provisional
Number of countries included in EU average: PISA=25, Entrepreneurship=18, Language skills=13, ICT/Computers at school=13, others: EU27
[1]= average of skills tested in reading, listening, writing, [2]= having carried out 5-6 specific computer related activities, [3]= Results cover people with scores below level 1 as well as people who have no computer experience or failed the ICT test

Figure 1. Position in relation to highest (outer ring) and lowest performers (centre)



Source: DG EAC calculations on the basis of data from Eurostat (LFS 2012 and UOE 2011) and OECD (PISA 2009). *Note:* all scores are set between a maximum (the highest performers visualised by the outer ring) and a minimum (the lowest performers visualised by the centre of the chart).

2. Main challenges

The quality of compulsory and tertiary education remains a challenge, as identified by the Commission and Council in the European Semester 2013. Reforms have been initiated at all education levels to tackle these challenges, including curricular reforms, a new testing of pupils in 5th and 9th grade in reading, mathematics and foreign language, the setting up a of a new career system for teachers notably aimed at encouraging in-service training; a reform of the higher education sector was put again on the table after several trials in the past. These measures need to be pursued and reinforced, also through an improved use of EU funding. There is a need for preserving expenditure in education and training, which is lower than EU average.
As the country-specific recommendation of 2012 was only partially implemented, its objectives were continued through a more operational 2013 CSR: "Establish a comprehensive evaluation framework in compulsory education and take targeted measures to support schools that rank low in educational outcomes. Adopt measures to enhance accreditation and funding of higher education. Increase the share of performance-based funding of research institutions."

3. Investing in skills and qualifications

Investing in education and training in a context of economic crisis

While the public education spending as a percentage of GDP increased from 4.8% to 4.9% between 2010 and 2011, it remains lower than the EU average (5.3% in 2011)[1]. Public expenditure slightly increased at school level with a raise in teachers' salaries, and decreased in higher education/adult education, by 14% between 2008 and 2012[2]. Municipalities lacked the funds needed to adapt pre-primary provision to meet the rise in the birth rate from 2001. The Czech Republic aims to strengthen the links between funding and the quality of education provided, particularly with respect to the employability of graduates, and to further improve teachers' salaries[3]. The funding system of compulsory education will be revised, adding elements linked to number of classes/programmes to the per capita funding, with the aim of ensuring that quality is not compromised in regions with fewer children.

Skills

The percentage of 16-74 years-old with high computer skills has increased from a level much lower than EU average in 2009 (19% versus EU average of 25%) to the EU average of 26% in 2012. Financial literacy, entrepreneurial, ICT topics are being added to the curricula and steps have been taken to promote further use of ICT in education (digitalization of text books, teacher education, modernization of equipment, e-learning). The "Strategy for development of ICT in education" 2009-2013 also entails dedicated funding for ICT equipment. As regards entrepreneurship, only 39.2% of Czechs believe that they have the required knowledge, skills and

1 COFOG data, Eurostat
2 European University Association Public Funding Observatory
3 Eurydice, "Funding of education in Europe – the impact of the economic crisis", 2012

competence to set up a business which is rather low compared to other EU countries[4]. Teaching of a second language was introduced at primary level from September 2013[5].

The Lifelong Learning Strategy 2007-2015 and the Act on Verification and Recognition of Qualifications are the basis for the system of validation and recognition of qualifications, including those acquired through non-formal and informal learning. While it is still to be confirmed if the country will develop an overarching National Qualifications Framework (NQF), partial frameworks for vocational education and training (VET) and school education are in force, which were referenced to the European Qualifications Framework in 2011. The NQF for higher education is being developed.

4. Fighting against early school leaving and raising the bar in school education

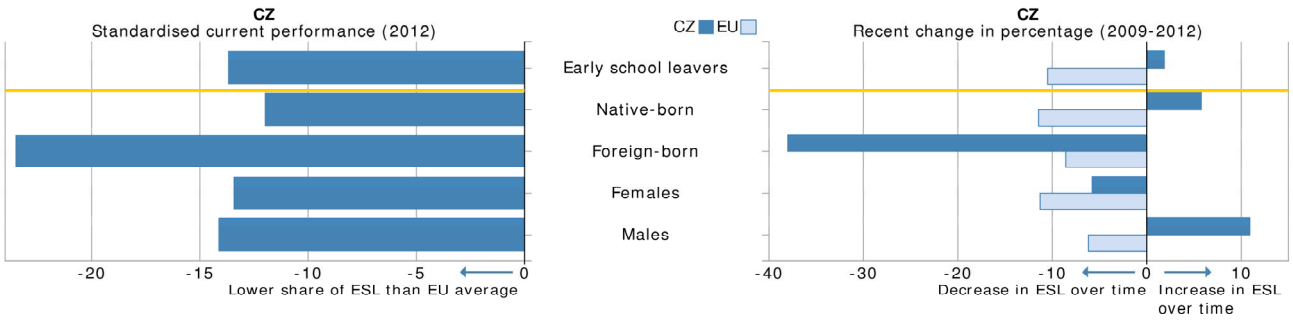
The Czech Republic is one of the best EU-performers as to the headline target on early school leaving (ESL), with a rate of 5.5% in 2012, which is the level set for the national target 2020. ESL is mainly prevented by a high degree of permeability between education paths. Still, the increase in ESL from 4.9% in 2011 will have to be monitored closely in order to be constrained. The "Equal Opportunities" Action Plan adopted by the Government end 2012, together with EU-funded projects, could contribute to reducing the very high ESL rate among Roma children[6]. Only 24% of Roma children attend pre-school education and the education system fosters segregation[7].

Participation in early childhood education and care declined between 2007 (92.6%) and 2011 (87.8%); facilities are insufficient, except for the last year of pre-school. Legal measures allowing employers to create company kindergartens (2012) and introducing new types of childcare services "children groups" (to be adopted in 2013) aim at increasing the offer, together with recent measures to increase quality[8].

PISA results in 2009 pointed to a decline in students' learning outcomes compared to 2006 in mathematics and science[9], with high disparities in performance between schools (selective grammar vs other schools). The country is developing minimal educational standards, together with a national computer-based testing of pupils in grades 5 and 9, in the Czech language, mathematics and foreign language. The Government submitted end 2012 a proposal to strengthen the role of mathematics and science in the state Framework Education Programmes.

Teachers are currently badly remunerated at all school levels compared to other countries[10] and the teaching workforce is ageing rapidly. A new career-system for pedagogical staff is being prepared, aimed at improving the quality and attractiveness of teaching through improved in-service training based on standards, increased teacher motivation through a widening of career possibilities and corresponding progression in salaries (change in legislation needed in 2014). The global envelope for teachers' salaries will need to be increased for the new system to give its full effects.

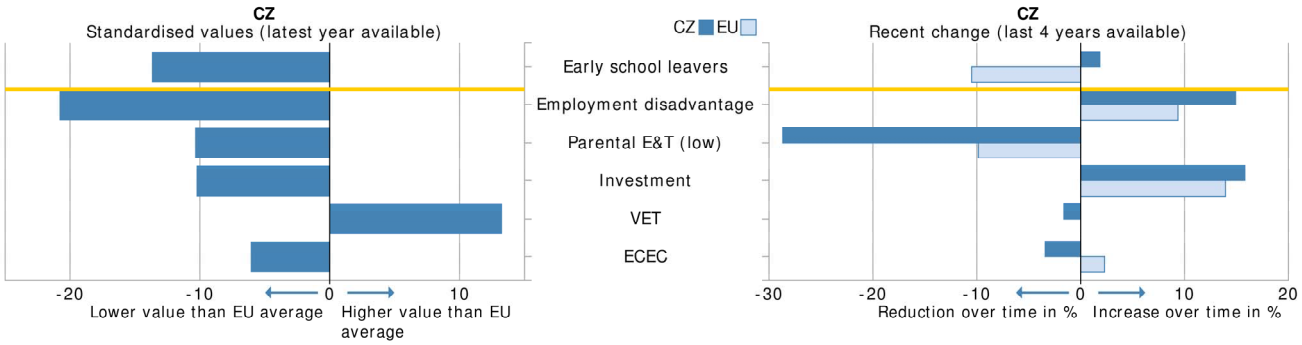
Figure 2. Early leavers from education and training: sub-groups



Source: JRC-CRELL. *Note:* ESL = early school leaving. See Annex 2 for further information.

4 2011 Global Entrepreneurship Monitor
5 2013 National Reform Programme (NRP)
6 The share of Roma and non-Roma living in close proximity to Roma households, aged 18-22, not attending school and not having completed higher than lower secondary or short-term upper-secondary education in 2011 was 97%, "Roma education in comparative perspective", UNDP/World Bank/EC regional survey
7 According to the Czech School Inspectorate, 26.4% of children educated in substandard schools designed to cater for the mentally challenged such schools were Roma in 2012. To be noted the positive trend from 35% in 2010.
8 2013 NRP
9 However, 2011 data from "Trends in International Mathematics and Science Study" (TIMMS) and "Progress in International Reading Literacy Study" (PIRLS) are on the rise compared to the previous editions.
10 Key data on teachers and school leaders in Europe 2013, Eurydice

Figure 3. Early leavers from education and training: sub-indicators



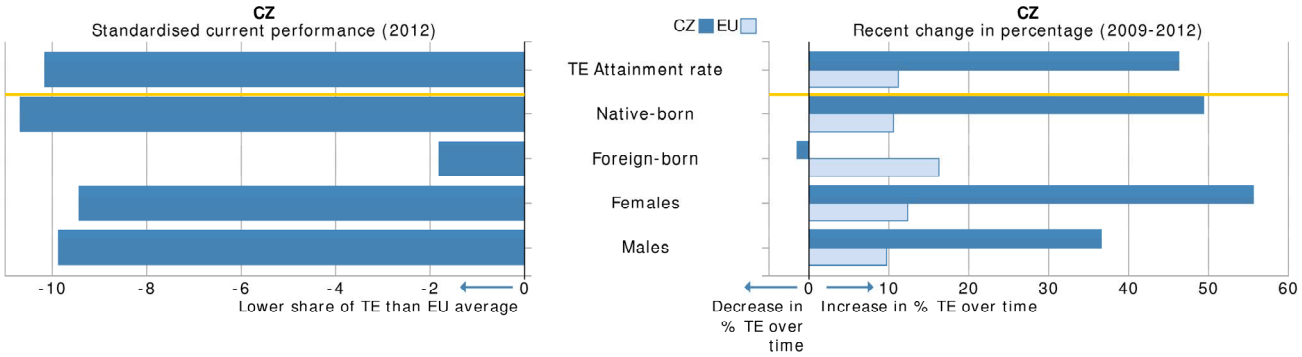
Source: JRC-CRELL. *Note:* see Annex 2 for an explanation of the sub-indicators.

5. Encouraging participation in tertiary education and modernising higher education

The Czech Republic's tertiary attainment rate (25.6% in 2012) is significantly lower than the EU average of 34.6%, but has nearly doubled since 2006. This increase, higher for females than for males, has shifted the focus of policy makers from quantity to quality and labour market relevance, also with the aim to reduce the drop-out rate. 2011 OECD data indicate that just above 70% of students who enter tertiary education do graduate with at least a first degree at this level[11]. The 32% national target for tertiary attainment is likely to be met. Employment rate of people aged 20-34 having achieved tertiary education was 87.1% in 2012, while it was 77.8% for those having achieved only upper-secondary education.

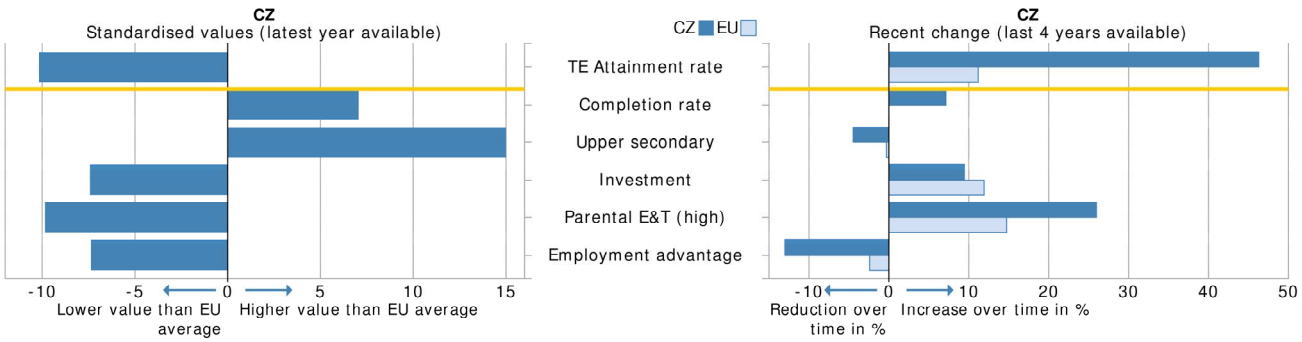
The share of performance-based funding of higher education institutions (HEIs) introduced in 2010, for which indicators cover i.a. research, teaching, internationalization, employability, was increased to 22.5% in 2013. A reform on accreditation, profiling and funding of HEIs should be adopted in the near future[12]. International student mobility is low. The government has submitted end 2012 a proposal for practical training in companies for students of upper secondary and HE. Previously envisaged introduction of generalised tuition fees and loans for students has been postponed due to strong resistance.

Figure 4. Tertiary education attainment: sub-groups



Source: JRC-CRELL. *Note:* TE = tertiary education. See Annex 2 for further information.

Figure 5. Tertiary education attainment: sub-indicators



Source: JRC-CRELL. *Note:* see Annex 2 for an explanation of the sub-indicators.

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12 2013 NRP announced 2013 but due to the fall of the Government and anticipated general elections, the process might be delayed.

6. Facilitating the transition from school to work

The large VET sector (73% of students in upper secondary education were enrolled in VET in 2010 – EU average was 50%) is school-based[13]. Provision of training in VET is still variable and participation of companies in work place training provision is low. Social partners' involvement in VET is fragmented, not all sectors being covered at this stage. The government adopted in January 2013 an action plan so support VET, focusing on the need to further enhance cooperation between schools and businesses; cooperation was extended through the newly introduced final examination, involving employers[14]. End 2012, the Government submitted a proposal to improve the not-well developed career-guidance. Other on-going measures in the field of VET concern curricula, schools self-evaluation, development of qualification standards, tax deductions for businesses in view of supporting corporate investment in education[15].

While youth unemployment (15-24) has doubled since 2008, it still remains below EU average. The employment rate of graduates was among the highest in the EU in 2012 (82.3% vs 75.7%) and increased between 2011 and 2012[16]. Unemployment rate of the population having not attained upper-secondary level (25.5%) was much higher than the rate of those with higher levels of education[17].

Skills mismatches impact especially on disadvantaged groups - such as low-skilled or Roma - and regions and on young people and current initiatives to develop systematic anticipation of labour market needs and to involve employers more in VET are aimed at reducing the mismatches.

7. Upgrading skills through lifelong learning

The Survey of Adult Skills (PIAAC[18]) shows that adults (aged 16-65) in the Czech Republic perform significantly above the EU average in the proficiency tests on literacy and numeracy. The skills of the younger age groups are generally higher than those of the overall population. However, young people (aged up to 29) with tertiary educational attainment have a slightly lower performance in the literacy and numeracy proficiency tests compared to older cohorts (30-65) with the same level of education. The performance of young people (aged 16-29) with upper secondary education is close to that of people with at most lower secondary education.

The Czech Republic results however show a high share of highly-skilled individuals who are inactive (24%). In contrast to the good results on literacy and numeracy, the share of Czech adults with high digital problem-solving skills is only at the EU average.

Participation of adults in lifelong learning grew significantly in the last years and has reached 10.8% in 2012 vs 9% in the EU, showing that the Czech Republic would be well on track to reaching the EU benchmark by 2020 if efforts are sustained. The share of enterprises offering continuing training is higher than the EU average and the share of employees participating is the EU highest (72% of employees working in companies offering training participated in 2010)[19]. Although PIAAC states that participation in lifelong learning is relatively equally distributed among highly or poorly skilled people, the Labour Force Survey indicates that participation is still low for those with low qualifications (2.8% in 2011), who would benefit most of further education.

One of the projects aiming at increasing the opportunities for Czech citizens to improve their skills is carried out with EU funds in line with the 2007 Strategy for Lifelong Learning and related action plan adopted in 2009 consisted in transforming 325 secondary schools into centres for lifelong learning offering – besides IVET – various forms of continuing education.

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13 European Commmission Staff Working Document SWD(2012)375 final "Vocational education and training for better skills, growth and jobs" accompanying the Commission Communication "Rethinking Education: Investing in skills for better socio-economic outcomes"

14 2013 NRP

15 2013 NRP

16 Rate of people aged 20-34, upper-secondary and tertiary, having left education and training no more than 3 years before reference year, CRELL calculations based on Eurostat LFS data

17 Eurostat, LFS

18 Volume I of the Education and Training Monitor (chapter 6) provides an overview of the results of the survey. Skills levels are presented either in terms of average score points or proportion of adults at a given proficiency level in literacy or numeracy (level 1 to 5) or problem solving in technology-rich (ICT) environments (level 1 to 3 or no ICT experience).

19 Eurostat, CVTS 2011