European Commission

Education and Training Monitor 2013

Sweden

Education and Training

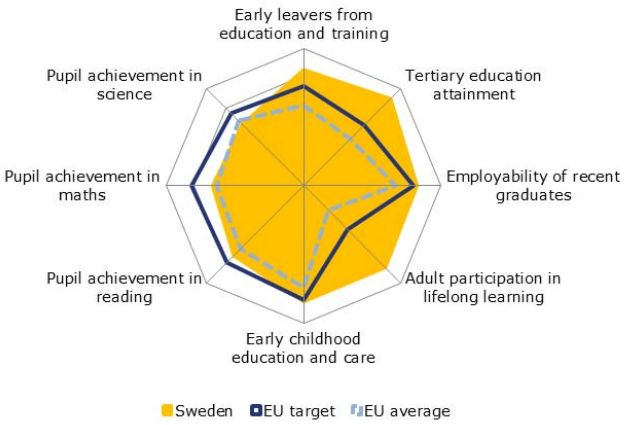
1. Key indicators and benchmarks

Europe 2020 headline targets			Sweden 2009	Sweden 2012	EU average 2009	EU average 2012	Europe 2020 target / Benchmark
1. Early leavers from education and training (age 18-24)			7.0%	7.5%	14.2% EU28	12.7% EU28	EU target: 10% National target: <10%
2. Tertiary educational attainment (age 30-34)			43.9%	47.9%	32.1% EU28	35.7% EU28	EU target: 40% National target: 40-45%
ET 2020 Benchmarks							
3. Early childhood education and care (4 years old - year before start of compulsory primary)			94.7%	95.3% 11	91.7%	93.2% 11	95%
4. Basic skills Low achievers (15 year-olds; Level 1 or lower in PISA study)	Reading		17.4%	:	19.6%	:	15%
	Mathematics		21.1%	:	22.2%	:	15%
	Science		19.1%	:	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	0.4%	0.6% 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		7.9% 11		7.0% 11	
6. Employment rate of graduates (age 20-34) having left education 1-3 years before reference year			81.6%	83.2%	78.3%	75.7%	82%
7. Adult participation in lifelong learning (age 25-64)			22.2%	26.7%	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]		:	82.3% 11	:	43.5% 11	
	b. ISCED 2 students learning two or more foreign languages		68.0%	76.4% 11	58.6%	60.8% 10	
Other ET 2020 Indicators							
9. Investment in education and training	**a.** General government expenditure on education (% of GDP)		7.2%	6.8% 11	5.5%	5.3% 11	
	b. Annual expenditure on public and private educational institutions per pupil/student in € PPS	ISCED 1-2	€ 7,314 08	€ 7,634 10	€ 5,732 08	€ 6,021 10	
		ISCED 3-4	€ 7,813 08	€ 7,945 10	€ 6,964 08	€ 7,123 10	
		ISCED 5-6	€ 15,702 08	€ 15,068 10	€ 9,309 08	€ 9,168 10	
10. Digital competences	**a.** Pupils in grade 4 (ISCED 1) using computers at school		58.5% 07	66.8% 11	60.7% 07	64.7% 11	
	b. Individuals aged 16-74 with high computer skills[2]		21.0%	35.0%	25.0%	26.0%	
11. Entrepreneurial competences	Individuals aged 18-64 who believe to have the required skills and knowledge to start a business		:	37.0%	42.3% a	42.0% a	
12. Vocational education and training	Share of vocational students at ISCED 3		56.4%	56.3% 11	49.6%	50.3% 11	
13. Skills for future labour markets Projected change in employment 2010-2020 in %	High qualification		:	8.6%	:	19.1% EU28	
	Medium qualification		:	3.1%	:	4.6% EU28	
	Low qualification		:	3.4%	:	-20.2% EU28	
14. Low-skilled adults	Literacy		:	13.3%	:	19.9% EU17	
	Numeracy		:	14.7%	:	23.6% EU17	
	Problem solving in technology rich environments[3]		:	19.5%	:	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

Youth unemployment constitutes one of the main challenges in Sweden. The unemployment rate for young people[1] has remained at high levels since 2008, with 23.7% unemployed in 2012 compared to the EU27 average of 22.8%. While this figure is somewhat overstated, as up to 50% of unemployed young people in Sweden are full-time students searching for jobs[2] and contrary to a large majority of Member States, Swedish youth tend to spend comparatively short periods unemployed[3], 'non-student' unemployment rate is still high compared to other EU Member States with a similarly good labour market performance of the working age population. This points to a particular challenge for those young unemployed, who are low-skilled and left school without having completed upper-secondary education.[4]

Hence lack of adequate education appears to be one of the main obstacles for young people to become established at the labour market. Consequently, the 2013 European Semester country-specific recommendation (CSR) on education continues to focus on improving the labour market integration of low-skilled young people, by stepping up efforts to facilitate their transition from school to work, including via a wider use of work-based learning, apprenticeships and other forms of contracts combining employment and education.

3. Investing in skills and qualifications

Investing in education and training in a context of economic crisis

Sweden funds its equitable education system by devoting a high share of its GDP to education. General government expenditure on education as a share of GDP was 6.8% in 2011 compared to the EU average of 5.3%, with one of the highest levels of public expenditure per student in the world. This funding goes to both public and private educational institutions. While Sweden has one of the most decentralised school systems in the world, with its 290 municipalities in charge of organising and operating both municipal and the increasing number of independent schools, all schools from pre-primary to post-secondary are publicly funded. In higher education, 91% of the total expenditure is public[5], which is very high in OECD comparison, and is partly due to the fact that Sweden's public and government-dependant private higher education institutions do not charge tuition fees for students who are Swedish nationals or come from the EU, EEA or Switzerland.

Skills

Despite high funding levels in EU comparison, there is evidence that learning outcomes in compulsory school as measured by international student assessments are worse than in the early 2000s. 15-year olds' performance in OECD's PISA tests worsened between 2006 and 2009 in all three areas, even if Sweden still performed better than the EU average in reading and in mathematics in 2009. There is however a significant gender gap in reading, with 24.2% of boys being low-achievers compared to 10.5% of girls. Moreover, the relationship between socio-economic background and performance has become stronger, and differences between schools have increased[6]. The 2011 TIMSS & PIRLS studies on fourth and eighth grade pupils, conducted by the

1 Youth is understood as the 15-24 age group.
2 Source: Statistics Sweden (2012)
3 For university students the spell of unemployment is short. Moreover, as students often have temporary, short-term jobs, there is a high probability that they are between jobs at the moment when statistics for Eurostat's LFS are gathered.
4 Employment rate (15-64) of people with maximum lower secondary education is 46.3%, while the employment rate of higher education graduates is 87% (Eurostat, LFS, 2012).
5 Source: OECD, *Education at a Glance* 2013, Sweden Country Note
6 Source: OECD Reviews of Evaluation and Assessment in Education, Sweden, 2011

International Association for the Evaluation of Educational Achievement (IEA), also show rather mixed results in international comparison, in particular in mathematics.

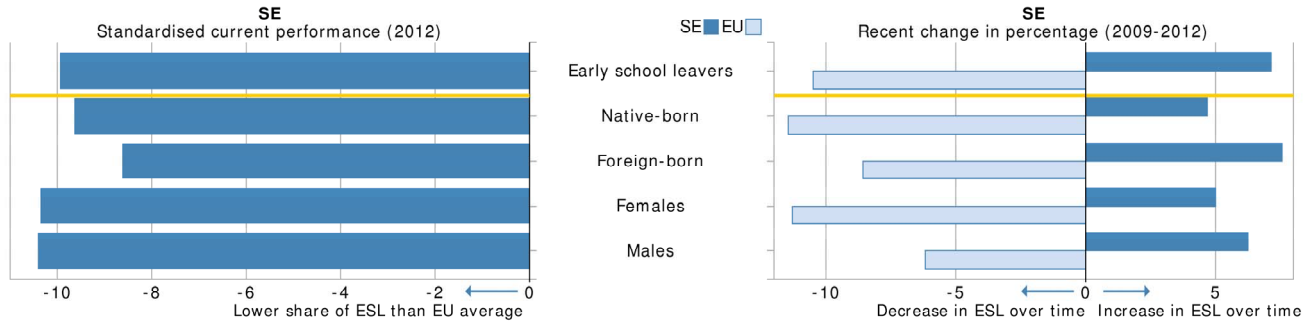
ICT skills of the adult population are far above the EU average. Although schools in Sweden are very well equipped with new technologies, this does not seem to translate into high level of use in the classrooms. Secondary school teachers' confidence in using ICT is close to the EU average while their participation in ICT professional development is lower than the EU average[7]. Entrepreneurship education has been built into the school curriculum and entrepreneurship skills are taught in teacher education. With regard to language skills, figures indicate excellent skills in the first foreign language, English.

The Swedish national qualifications framework (SEQF) is expected to be adopted in 2014, in the form of a decree (Förordning). The framework aims to include non-formal education and training as well as the extensive field of continuing and popular education and training run by the private sector and non-governmental organisations.[8] The overall success of the framework will depend on the extent to which the SEQF is seen as relevant to stakeholders outside formal, initial education and training.

4. Tackling early school leaving and raising the bar in school education

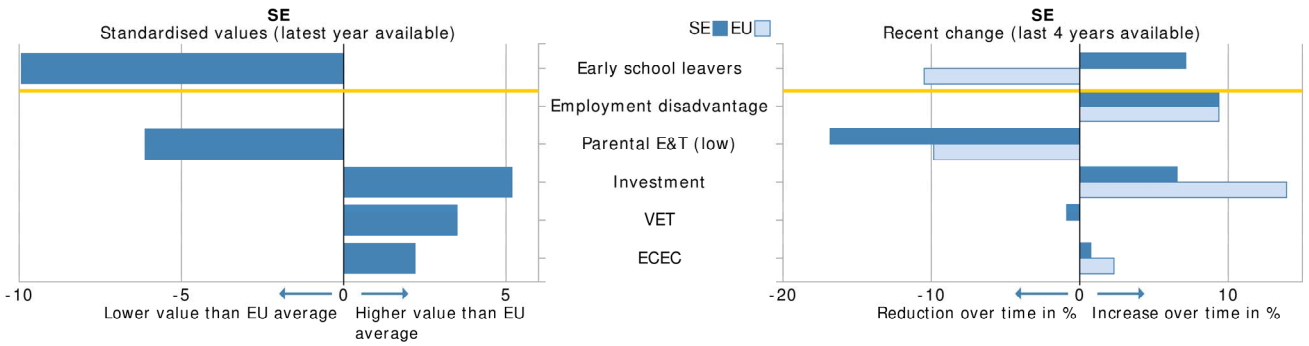
Since 2006 the early school leaving rate, as defined by Eurostat, has been below the national target and EU benchmark of 10% (7.5% in 2012, with 8.5% of boys and 6.3% of girls being early school leavers). The analysis of sub-indicators points to the following reasons behind the good performance: high investment in education, favourable family environments and good participation patterns in early childhood education. However, if early school leaving is assessed based on the national definition used in Sweden i.e. young people at the age of 20 who have not completed upper secondary education successfully, the rate remained constant at a level of 27% over the past 5 years[9] and at a higher level than in the 1990s.

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



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

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



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

Sweden has recently adopted a number of measures aimed at tackling early school leaving. Regulations have been put in place together with the reforms of compulsory and upper secondary education in the 2010 Education Act. Furthermore, a government-run inquiry has resulted in new bills addressing early school leaving. The overarching goal defined in the policy framework is that all students should be given the chance to reach the achievement targets and complete upper secondary school with improved skills both for the labour market and

7 Source: European Schoolnet & University of Liège (2013): Survey of Schools: ICT in Education, Benchmarking access, use and attitudes to technology in Europe's schools. EUN, Brussels

8 http://www.cedefop.europa.eu/EN/Files/NQF_developments_2012-SWEDEN.pdf

9 http://www.skolverket.se/statistik-och-analys/statistik/2.4391/efterfragade-matt-1.120818

further studies. Prevention measures start already in the early years of schooling by developing 'individual study plans' (utvecklingsplan) and granting special support to pupils who run the risk of dropping-out. Furthermore, those pupils who do not have the necessary grades to continue their studies at upper secondary level, can take part in 'introductory programmes', providing them the skills to move on to upper secondary education or an apprenticeship-type training.

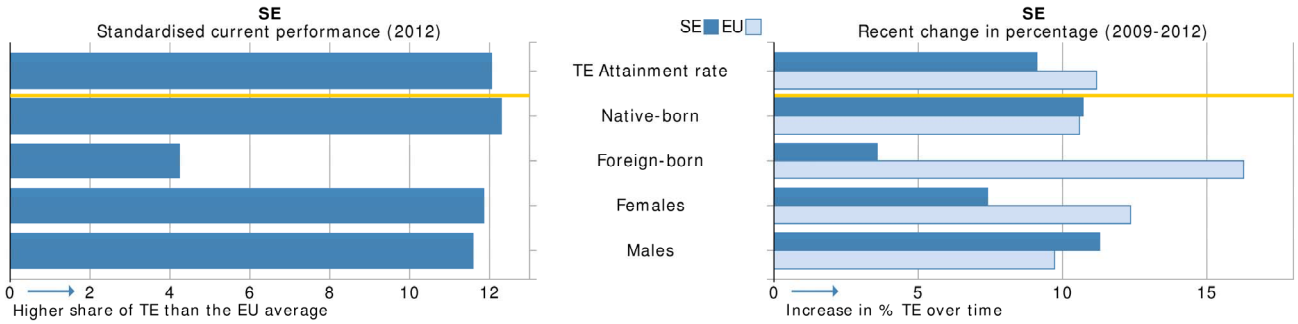
However, the increasing lack of attractiveness of the teaching profession is thought to be an important bottleneck to increasing the quality of education in Sweden. The declining image of the profession is paired with a relatively low pay and little salary progression over the career. While across all OECD countries teachers' salaries increased by an average of 22% between 2000 and 2010, in Sweden the increase was only 8%. Moreover, in Sweden the gap between starting salaries and salaries at the top end of the scale is narrow compared to other OECD countries[10]. Furthermore, private returns to tertiary educated teachers are low, even negative compared to upper secondary graduates employed in other sectors[11]. At the same time, the teaching workforce is ageing: 40.2% of school teachers[12] are aged 50 or older, while only 6.8% are younger than 30.

To meet this challenge, the government adopted a wide range of measures, including the reform of initial teacher education, proposing an 'induction' year for future teachers and providing specific funds for municipalities to support continuing professional development of teachers. For the latter, the 2013 Budget Bill[13] includes the 'Boost for Teachers II' (Lärarlyftet II) initiative, which focuses on teachers who are not qualified in all subjects or age groups they teach and on vocational teachers who are offered to take part in practical activities in workplaces within their subject area. In addition, in the autumn of 2013, the Government introduced a career development reform, providing central government support for salary increases for so-called 'lead teachers' and 'senior masters'. The government is also preparing a proposal for adoption by Riksdagen in the autumn, with the aim to reduce the administrative burden on teachers[14]. Another important measure however, the accreditation of teachers is still on-going, with numerous postponements of the implementation deadline.

5. Encouraging participation in tertiary education and modernising higher education

The tertiary attainment rate with 47.9%[15] in 2012 is at an all-time high and the upward trend is likely to accelerate given that a spike in the generation of 19-year-olds in 2009 led to more young people starting higher education studies. Moreover, the academic year 2010-2011 witnessed the highest number of students ever enrolled, due to the creation of 10,000 temporary student places. As part of the 'Youth Package' ('Ungdomspaket'), presented in connection with the 2013 Budget Bill, funding is being made available for an additional 4,200 places in higher education during 2013-2015. Nevertheless this measure still means a reduction in the overall number of places compared to the 2010-2011 levels.

Figure 4. Tertiary education attainment: sub-groups



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

10 Teachers are employed by the municipalities. Pay, including minimum salaries, and working conditions are governed by 5-year agreements between the employers' organisation (SALAR) and the teacher unions. The more specific salaries of individual teachers are however decided locally, as teacher recruitment and appointments are the responsibility of the school principals.

11 Source: Lönsamma studier? Livslönerapport 2011, Thomas Ljunglöf, Saco, http://www.saco.se/Forskning--kunskap/Publikationer-fran-Saco/rapporter/Lonsamma-studier-Livslonerapport-2011-/

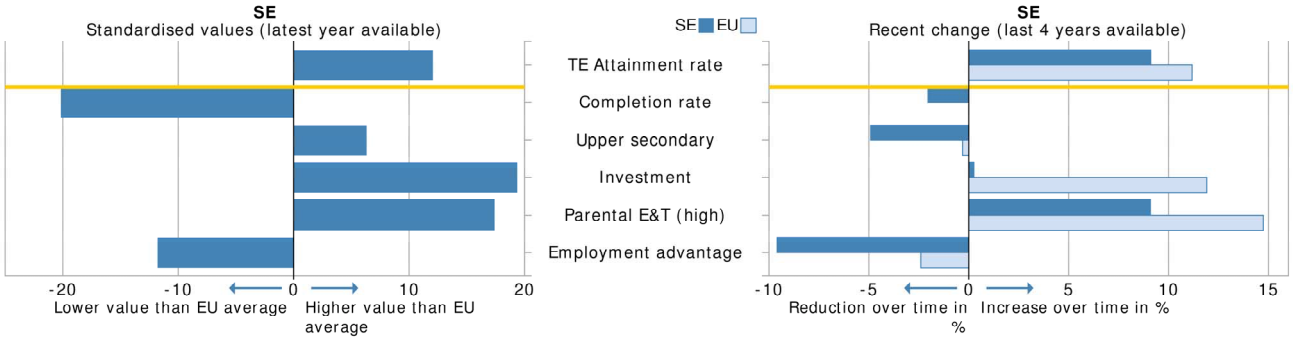
12 School teachers are understood as teachers teaching in public and private institutions at ISCED levels 2-3. Source: Eurostat

13 The 2013 Budget Bill was presented by the Government on 20 September 2012 (http://www.regeringen.se/sb/d/15677/a/199189) and adopted by the Riksdag on 19 December 2012.

14 http://www.regeringen.se/sb/d/16843/a/208665

15 In 2012, the tertiary attainment rate was 53.7% for women and 42.4% for men. The number of women has risen more than the number of men over the past 30 years in higher education and as a result the share of women has grown gradually.

Figure 5. Tertiary education attainment: sub-indicators



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

The analysis of sub-indicators indicates high investment, favourable family environments and high participation in upper secondary education behind the good performance. On the other hand, lengthy study periods and high drop-out rates (47% in 2011[16]) have long been characteristics of the Swedish higher education system. At the same time, as many students postpone the start of tertiary education, the average age of university entrants is high, although has been decreasing in recent year.[17] This raises doubts about the system's efficiency: OECD calculations estimate that Sweden has one of the highest cumulative expenditure per student over the average duration of tertiary studies. Nevertheless, recent measures, including linking the level of study support to study results i.e. academic credits earned, are likely to reduce students' study periods. Furthermore, in line with the demand and the needs of the labour market, the government intends to increase the number of study places in the fields of engineering education, medical and dental studies and nursing, although the implementation will largely depend on individual institutions due to the principle of strong university autonomy.

Sweden continues to modernise its higher education system by implementing quality-based resource allocation from the 2013 budget for the first time. The aim is to achieve higher quality in study programmes by creating financial incentives for universities and higher education institutions. Quality-based resource allocation represents additional funding and at its initial stage will only comprise a small part of the total resources (1.5% of the total funding) for study programmes in first and second cycles. In addition, the new quality assurance system largely based on learning outcomes was introduced in 2011.

6. Facilitating the transition from education to work

While participation of upper secondary students in vocational education and training (VET) has been above the EU average (56.3%[18] as against 50.3% in 2011), the system has been characterised by a weak vocational content. Cooperation between schools and workplaces has been underdeveloped. Furthermore, the matching process has deteriorated which has led to increasing skills mismatches since the 2008-2009 economic crisis.[19]

Improving transition from school to work was already identified as the main objective of the 2011 school reform. As part of the reform, at upper secondary level the general education and the vocational education pathways have been further differentiated. Since autumn 2011 in the vocational path more time has been devoted to vocational subjects, and apprenticeships were introduced as an alternative route to attain a Vocational Diploma[20]. In addition, an institutionalised structure is being developed between schools and working life, with the introduction of national councils and local programme councils.[21] To this end, the 2013 Budget Bill contains increased financial support for apprenticeships and vocational training programmes. Funding will be largely devoted to creating additional study places[22] and to stimulating employers to provide apprenticeship positions.

16 Source: OECD, *Education at a Glance*, 2013. In 2011, 53% of students graduated from the programme they entered, in comparison to the OECD average of 68%. Data includes students entering single courses who may never have intended to study all the courses required for a degree but rather choose to study a few courses as part of lifelong learning and/or up-skilling (an estimated 40% of students enrolled).

17 Sweden is indeed below the EU average in participation of 20-24 year olds in higher education.

18 In 2011, 59.5% of male upper secondary students and 53.4% of female upper secondary students participated in vocational education and training (VET).

19 http://ec.europa.eu/economy_finance/publications/country_focus/2013/pdf/cf_vol10_issue1_en.pdf

20 In the 2011/2012 academic year, a large majority of pupils in vocational track studied in vocational schools, where at least 15 weeks (12.5%) of the curriculum is work-based learning and 5-6% in apprenticeship schemes, where 50% of the curriculum is work-based learning.

21 Guidance has been strengthened in the Education Act and a systematic tracking of vocational graduates is under preparation.

22 The 'Youth Package' ('Ungdomspaket'), presented in connection with the 2013 Budget Bill, has a total budget of SEK 1.8 billion for 2013 to create in total 18,300 temporary study places in secondary and adult vocational education, post-secondary vocational education, municipal adult education and higher education. The majority of places, close to 13,000 will be created in vocational education. In the period 2013-2016, a total of SEK 5.17 billion will be devoted to finance additional study places. http://www.regeringen.se/content/1/c6/19/82/65/4e285b8b.pdf

Funding is also meant to strengthen and raise the quality and attractiveness of VET through more adequate training for VET teachers and nationally organised training for trainers.

However, as first data shows and employer organisations point out[23], the attractiveness of the vocational path has dropped since the reform and there is a decreasing interest in apprenticeship programmes both from the part of students and employers.[24] In any case, since reforming the vocational training system requires time, it will take several years before the true effects of the reform have an impact on the labour market.

At post-secondary level, higher vocational education programmes of 2 years have been developed since 2009 to meet the needs of the labour market for qualified labour. The main innovative feature of the system is the close collaboration between labour market actors and education providers. Education programmes are financed by the Swedish National Agency for Higher Vocational Education, based on short-term skills forecasting, labour market needs analysis as well as graduate tracking. First results have shown that the newly established programmes have high demand and high insertion rates on the labour market for graduates[25]. However, the programmes' impact will need to be assessed also in the long run to decide if they can be viewed as a viable alternative to university higher education.

7. Upgrading skills through lifelong learning

The Survey of Adult Skills (PIAAC[26]) shows that adults (aged 16-65) in Sweden perform above the EU average in all three domains: literacy, numeracy and problem solving in technology-rich (ICT) environments. In fact, Sweden has the largest share of adults scoring at the highest level in problem solving in technology-rich environments in the EU. The share of low-skilled adults (scoring at level 1 or below) is about 13% in literacy and 15% in numeracy, far below the EU average (19% and 24%, respectively).

Young adults (aged 16-24) score significantly above the EU average in both literacy and numeracy. Furthermore, they have higher proficiency in literacy and problem solving but slightly lower proficiency in numeracy compared to the overall population. While employed people have on average higher skills than unemployed people at EU level, this gap is even more pronounced in Sweden, for both literacy and numeracy. The gap in literacy proficiency between the foreign- and native-born is also rather large compared to the EU average.

Participation of adults in lifelong learning has been traditionally high. The participation rate has been further increasing in the past 5 years and remains one of the highest in the EU (26.7% vs. 9% in 2012[27]). Nevertheless, high participation rates mask great gender differences; while participation rate for women is 31.9%, it is only 18.4% for men. Whereas foreign-born participation is at the same level as for natives (25.5%), participation of low-educated, who would benefit the most from further education, is lagging behind (16.9%). In 2010, 87% of Swedish enterprises provided vocational training to some of their staff, as against an EU average of 66%. Nevertheless, enterprises provided just about a quarter (26.6%) of all non-formal learning activities to adults in 2011.

Adult learning is deeply rooted in the Swedish society and is characterised by effective structures, flexible pathways and adequate financial means to implement targeted policies. A high quality adult learning and opportunities for further education and training in different occupational fields are both government priorities. While taking part in basic education is a legal right of all adults, municipalities also have the obligation to offer upper secondary education that meets the needs of both the adults and the labour market. Moreover, since 2012 individuals who complete vocational upper secondary programmes have been given the right to attend complementary courses offered by municipality adult education to qualify for higher education[28].

To improve skills matching in the labour market, in 2010 the Government tasked actors responsible for regional development in each county with setting up skills platforms for coordinating skills provision and short- and long-term education and training planning. Skills platforms have now been all set up and are proving to be important tools in securing skills supply to business and the public sector. Regional skills platforms are to be strengthened and further developed during 2013-2016, contributing to enhanced competiveness and sustainable national and regional development.

---

23 http://www.svd.se/opinion/brannpunkt/stoppa-yrkesprogrammens-forfall_7766908.svd

24 There are fewer apprentices today than in the pilot scheme in 2008. This is largely explained by the fact that an 'educational contract' was introduced in 2011, putting more responsibility on the organisers of apprenticeship training.

25 9 out of 10 students who graduated in 2011 had found employment by autumn 2012, with approximately 6 out of 10 graduates having employment that fully or mostly corresponded to their education programme.
Source:https://www.myh.se/Publikationer/Employment-of-graduates-from-Higher-Vocational-Education-and-Advanced-Vocational-Education-and-Training-in-2012/

26 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).

27 Source: Eurostat: LFS 2012

28 Following the 2011 reform (Education Act 2010), completion of vocational upper secondary programmes no longer gives direct access to higher education studies.