

**Investment in Education and Training:
From national issues to European Perspectives**

A Report for the European Trade Union Confederation

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Foreword

This report constitutes a study lead by a team of the Center of Studies of Groupe Alpha (Paris) for the European Trade Union Confederation (ETUC) on the educational investment (education and training) in Europe. This study aims at presenting a comprehensive picture of the national issues and European perspectives in the background of the renewal of the priorities of the current European strategy in education, the *Education and Training 2020*, the 'education' declination of the main European strategy of policies coordination for growth and activity, *Europe 2020*.

The introduction defines the concept of investment in education and training and underlines the involvement and initiatives that characterize the main guidance of the policy of the European Union in favour of education. The report is then structured in three main parts:

- The part 1 presents the main European issues in Education in Training. It particularly presents the main stylized facts in three main topics: *(i)* levels of education and systems of education and training; *(ii)* acquisition and relevance of skills; *(iii)* insertion and transitions on the labour market.
- The part 2 summarizes the current situation and the challenges of education and training in ten European countries (Czech Republic, England, Finland, France, Germany, Italy, Poland, Portugal, Spain, and Sweden). For some of these countries, this second part underlines also the conception and perception of Trade Unions, by using their direct answers to a common questionnaire.
- The part 3 develops some issues that currently represent some important concern for the European population: the question of 'equity and social background', the NEETs issue, and the growing features of the skills mismatches. Then, it discusses the recent adaptation of European policies and the utilization of dedicated funds in perspective of education and training needs, as well as the issues of the recent *Juncker Investment Plan*. This part finally highlights some specific points that we consider as being of primary relevance regarding investment in education and training (major needs and main recommendations) in perspective of the renewal of current benchmarks and policies of the *Education and Training 2020* strategy.

Introduction: European perspective on education and training

What does investment in E&T mean?

Education and Training (E&T) corresponds to the whole range of components of the education system that proposes learning to individuals, from early childhood education to adult learning, through primary, secondary and tertiary (higher) education. It may correspond to *initial* (for students in their regular schooling) or *continuous* (for individuals after their entrance on the labour market) E&T. Learning activities provide acquisition of *skills* for the learner. The skills acquired are frequently well identified and certified (giving award to a *qualification*), but not always. Indeed, E&T may also correspond to the acquisition of skills in learning frameworks that are *formal* (typically through learning institutions) but also *non-formal* (where the learning is also acquired through a structured program but without certification of skills) or *informal* (in settings where there is no structured program of learning as “everyday” life). In the perspective where the whole range of activities of learning is considered (hence in its largest definition), E&T refers to the European concept of *Lifelong Learning* (LLL). This concept of LLL underlies the involvement of EU in many initiatives that sustain acquisition of Education and Training. At the European level, efforts of E&T may notably take the form of learning devices as *Erasmus* (for higher education) or *Leonardo da Vinci* (for vocational training and education programs), or other initiatives like recommendations by the European Commission. In particular, the Strategy of Lisbon considered one of its “golden goals” as making Europe “*the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion*”.

Efforts devoted to Education and Training correspond to an effective *investment* to the extent it is possible to measure education and training *expenditures* that are involved in the effort of E&T: these features notably appear in some yearly national accounts of education or in publication of international organizations (e.g. the yearly publication *Education at Glance* by the OECD). The investment in E&T, or *investment in human capital* (concept popularized by Schultz, 1961 or Becker, 1964) focuses on the enhancement of the effective skills and productivity of an individual: this investment, like other investments, can bring some returns. The most evident return takes the form of individual wage or income gains (*returns to education* or *training*). But the returns can also be considered at the whole society level, also taking account the involved costs (*social returns* to education). But investment in E&T can also yield non-monetary returns to investment for individuals, like better employability or confidence. If investment in E&T through policies and actions of E&T is primarily the role of national policy-makers, the long-run involvement of Europe in the field of E&T has taken many forms, which we develop hereafter.

Investing in people is a watchword put forward by ETUC. It underlines rightly the double dimension, individual and social, of the investment in education and training. On the one hand, the objective of this investment is to raise the human capital (knowledge, skills, competences) of every person over his/her life, since the pre-school; on the other hand, education and training are social investments, as they embed key social externalities and complementarities with other material and immaterial investments. At the border between individual paths and collective trajectory, there is the weight of the familial background, which takes up again importance in a knowledge economy where the human capital is heritable within familial “dynasties”¹. Ideally, the determination and the orientation

¹ Cf. the leader of *The Economist*, 24th of January 2015, titled “America’s new aristocracy”: “as the importance of intellectual capital grows, privilege has become increasingly heritable”.

of the investment in education and training have to mix rightly the promotion of the individual aspirations and the attention to the collective needs. It supposes rules and resources appropriate to the prevention and to the correction of the distortions and discriminations, objective and subjective, which restrict the freedom of the individual choices and which degrade the collective welfare. For example, in the case of early school leavers, clearly the loss of future returns is jointly individual and social. The resources able to be allocated to the reduction of the number of early school leavers are to compare to this loss, in order to have a correct assessment of the opportunity cost of policies aiming to this reduction.

European Union involvement and initiatives on education

European policy in the education sector has first spread in the 80s through programs like *Erasmus* or *Comett* which were mainly focused on vocational training and higher education. Then, the Maastricht agreement acknowledged competencies for the European Union in the education, training and youth sectors. These competences were incorporated into the Nice and Lisbon treaties later on. As a matter of fact the latter reinforced the European role in the educational sector by giving a binding legal effect to the Charter of Fundamental Rights, which acknowledges a “right to education”. The Lisbon Treaty also establishes the horizontal “social clause”: it highlights the need to take into account social issues in all European policies, including employment issues. Specifically, “*the Union shall take into account requirements linked to the promotion of a high level of employment, (...) and a high level of education, training*”. Lastly, it created the European citizens’ initiative, which allows citizens to present to the European Commission some propositions of their interest, including in the educational sector².

Main principles of European initiatives in education and training

The European goals as set in the founding Treaty in the educational and vocational field are mainly to foster students and trainees’ mobility, to encourage the Member States to reform the education and training systems, to ease the integration on the labour market through education and vocational training, and to promote cooperation between countries, universities and training centers. The EU encourages Member States to take actions to improve the efficiency and quality of their educational and vocational systems and to ensure that the latter are readily available to the public. Eventually, they should open education and training to the outside world. The implementation of these common goals rests on the “Open Method of Coordination”, which is based the voluntary cooperation of Member States. It ensures the definition of common goals, assessable by comparable indicators, and allows Member States to exchange good practices.

Despite the importance of the European Union’s goals in this sector, Member States stay responsible of their educational system, according to the “subsidiarity principle”. The European Commission can take an action only when it is more effective than action taken at national, regional or local level. Thus, the European Union is not allowed to fix rules in the educational and vocational domain: according to the Articles 165 and 166 of the Treaty on the Functioning of the European Union, “*The Union shall contribute to the development of quality education by encouraging cooperation between Member States and, if necessary, by supporting their action, while fully respecting the responsibility of the Member States*”.

The EU deals with employment issues following the same pattern: the European Employment Strategy coordinates national actions in this area, relying on the Open Method of Coordination, but employment falls within the States’ capacity. According to the subsidiarity principle, the European

² The *Movement for a European Education Trust* called in 2013 the creation of a multi-stakeholder platform on Education to bring recommendations about a European education model. The same year the *Teach for Youth – Upgrade to Erasmus 2.0* project asked the Commission to be part of its Lifelong Learning Program. However none of these projects were examined by the Commission.

action among Member States to build educational policies is thus only indirect. First, the Commission and the Council address to each country specific recommendations through the European semester. The latter highlights the ways to ensure competitiveness, jobs creation, and thus includes guidelines dealing with education and training. Second, the European Council emits recommendations on a proposal from the Commission: for example one of them (2006) recommended including “*key competences*” in national educational and vocational strategies.

The Education and Training 2020 strategy

Currently, the European goals are set in “Education and Training” 2020. This strategic framework identifies 5 main objectives: increasing adult participation in lifelong learning up to 15%, improving tertiary educational attainment up to 40% of adults between 30 and 34 years old, reducing the early school leaving rate to 10% and the share of low-achieving 15-years olds in basic skills down to 15%. Eventually Member States should ensure that 95% of children between 4 years old and the age for starting compulsory primary education do participate in early childhood education. Closely linked to these issues, the European Employment Strategy aims at creating more jobs and of better quality in the EU. The 2020 Education and Training strategy includes former programs, such as the Copenhagen and Bologna processes. The former mainly concerns education and vocational training, while the latter deals with higher education. The strategy also brings together the *Comenius*, *Erasmus*, *Leonardo da Vinci*, *Grundtvig* and *Jean Monnet* programs under the name of *Action program in the field of lifelong learning*, which allows centralizing actions from early childhood education to vocational training and higher education. Then, *Erasmus +* constitutes an important mean of action in this area: in 2013, it was granted €14.7 billion between 2014 and 2020 in order to promote students’ and teachers’ mobility and cooperation between the educational field and the world of work. It should also support dialog process and data collection to reform educational and training systems. Eventually, current means of action rely on the *European Qualifications Framework*, which allows comparing international qualifications. The European curriculum vitae *Europass* is also supposed to make easier this comparison.

The implementation of the actions is funded by the 2014-2020 multiannual financial framework, which is voted by the European Parliament and Council. Funds amounted to € 126 billion are devoted to “competitiveness for growth and employment”, on a total budget of € 960 billion. It includes expenditures linked to education and training, but also to research and innovation, or to the economic development of firms. This budget part is recorded among one of the five main European fields of activity. Structural Funds such as the European Regional Development Fund and the European Social Fund grant to each State Member a certain amount in order to implement actions in the light of common objectives, notably educational ones.

This legal and financial framework allows the EU to invest in education and training, either indirectly in one of the 28 Member States, or directly at the European one. As the Union does not hold any mandatory power in this domain, its main role is to “*support Member States in further developing their educational and training systems*” and to allocate European funding according to a set of objectives in this area. The whole system of education and training is considered in order to consider early childhood education, initial and higher education, vocational and continuous training, including formal and non-formal learning. The *Education and Training 2020* strategy proposed quantitative indicators, however the diversity of national situations may put into question the relevance of such homogenous figures. Another issue is whether the aims set by the UE sufficiently deal with current challenges faced by countries in a crisis time.

The Juncker Plan of February 2015

The impact of the *Juncker Plan* on educational investment proposed in February 2015 remains uncertain: out of € 315 billion which would be raised by the European Fund for Strategic Investment (EFSI) education was included in one of the main targets of the European investment plan. Governments were then asked to send to Brussels a list of projects which could be funded by the Juncker Plan. Transports or innovation seem to have received more interest in national projects, but

some propositions have emerged in the educational field, such as the Italian wish to create “industrial PhDs” or the French ambition to digitize European educational contents. Boosting investment in education might also be limited as it has become clear that Horizon 2020, the European program on Research and Innovation for 2014 to 2020, will make up a third of the 8 billion euros “provisioning buffer” channeled for the EFSI from current EU budget and programmes. As a matter of fact, 2.7 billion Euros would be taken from the existing budget lines of the Horizon 2020 program, out of a total budget of 70.2 billion Euros. The rest of the Juncker Plan is supposed to be funded either by the European Investment Bank, or by other reallocations of EU funds (structural funds, Common Agricultural Policy, etc.).

The European Parliament is working on an alternative project where the other EU programs would make a bigger contribution to the Juncker’s investment fund, such that less Horizon 2020’s funds would be spent on the plan. On the one hand, the European Commission expects the leverage effect of the EFSI will result in more funds *“being channeled into research and innovation through large-scale projects financed by the new scheme”*. On the other hand, the most important organization representing universities in Europe, the European University Association (EUA), considers that this cut entails a *“real loss for Europe’s universities as key actors contributing to Europe’s competitiveness, growth and employment. Indeed, it remains to be seen how much universities will be able to join selected projects and benefit from the corresponding funds and project outcomes”*. Important budget cuts are planned in research organizations: the European Research Council (ERC) funds could be reduced by 221.2 million Euros, and the European Institute for Innovation and Technology (EIT) might contribute 350 million Euros, which represents 13% of the EIT budget.

So, it would be a paradox that the initial grant to the *Juncker plan* deprives educational programmes of expected resources. The third part of this report goes deeper in this issue.

Part 1. Issues of investment in Education and Training in Europe

This part presents a panorama of E&T in the European Union through a large set of national (country-member level) and European indicators. This gathers together large regularities, or “stylized facts” distinguished in three main topics (not necessary exclusive one from another): *levels of education and systems of education and training, acquisition and relevance of skills, insertion and transition on the labour market.*

1.1. Preliminary: for a good use of OECD surveys

A very large number of works has been written by economists, sociologists or researchers in education, that criticize, judge, evaluate the ‘philosophy’, the goals, the normative aspects, etc. incorporated in the OECD skills surveys PISA and PIAAC: the difference waves of PISA (*Program for International Student Assessment*, the last one being from 2012), but also the recent 2012 PIAAC (*Programme for the International Assessment of Adult Competencies*). These international survey programmes provide some scores for students or adults worldwide regarding different skills, for OECD members and country partners. The skills evaluated in the OECD skills survey are aimed to be “everyday life” (PISA) or used “in work and other contexts” (PIAAC). The care in the building, the quality and the representativeness of the national samples, on which the PISA and PIAAC surveys are based, are recognized by experts (Grenet, 2008; le Donné, 2013).

The comparison between countries and the country ranking in the PISA results are abundantly commented and largely covered by the media. But the possibilities of comparison between national results are recognized by many economists and statisticians as, at best, indicative, not necessarily very reliable for a large number of reasons, including (see for example Grenet, 2008; Duru-Bellat, 2012; Jonas et al., 2013):

- The error margins associated to the average country score (in general +/- 5 points) invalidate a possible objective ranking.
- The inter-countries comparisons are difficult or maybe meaningless because the OECD skills surveys bring together countries that are very heterogeneous (in terms of E&T system, in the family degree of involvement in education, etc.). The differences in national contexts have to be largely taken into account.
- The correspondence between evaluated skills and school programs³ largely varies according to the country.
- The enrollment rates in education⁴ vary quite much between countries.
- Some students are more used (and some are trained for that) than others to the surveys under the form of multiple-choice questions⁵ that represents for instance one third of the PISA questions.

³ For instance, 25% of the questions in PISA don’t correspond to what students learn in the *collèges* (establishments providing the first part of secondary education) in France (le Donné, 2013).

⁴ But also the occurrence in some countries (like in France) and not in others of possibility to repeat a grade in the education system, which is of importance as PISA surveys are made on *15 years-old*.

- The difficulty of the questions in the surveys is not necessarily the same among the countries (the surveys are not the same).
- The skills of a given student (or adult) are evaluated through a unique score that identifies a specific level of skills (one dimension).

Moreover, PISA or PIAAC test the skills of students or of adults, but through them, this is also the E&T systems that are evaluated in the eyes of the OECD. Indeed, since the 1990s, the goal of the international evaluation in education has evolved, being perceived as a global source of information to evaluate policies (le Donné, 2013). The countries with the best results are often presented like models by OECD. Interpreting results in the way of distinguishing the most performant education system is quite problematic, as for instance underlined by the South Korea case. This country is always 'first' or 'second' in the PISA surveys regarding the main disciplines evaluated and often praised by OECD. But the reality of the school system is an intense training for the tests aside the public school, in some private *hagwons* that are often criticized and are largely questioned, even in Korea⁶.

Another significant problem of the OECD skills survey reports is that many relationships presented are subject to caution for causality problems, which weakens the relationships between items that are supposed to represent a performance of one feature of the education system (see in box 1 the explanations by Duru-Bellat, 2012). This feature weakens and challenges the policy recommendations, especially since the nature of OECD skills surveys is cross-section data (Duru-Bellat, 2012; Le Donné, 2013): *"as PISA surveys provide cross-section data, they don't allow to analyze causal effects of educative policies (...) they only allow assessing trends by using performance, measured at different moment of time, of students at the end of compulsory schooling"* (Le Donné, 2013).

Box 1. Critics of Duru-Bellat (2012) on the causality problems in the PISA surveys

In a LIEPP *Policybrief* (2012) Marie Duru-Bellat discusses the use made with the PISA surveys. She recognized the merit of existence of this survey and, for instance, underlines the utility of the surveys to inquire on inequalities in education or shake up conventional thinking (*"classes [sizes] are very large in the most performant Asian countries"*). But Duru-Bellat states that *"comparisons between countries may serve as guidance for public action only if they allow identifying causal relationships, which is far from being immediate in the PISA surveys"*. In particular, she underlines that the published results present two main problems:

- They take the form of correlations between two data, one often representing a characteristic of the system (with absence of other variables).
- The cross-country comparative evidence hardly represents the specific impact of the national education systems (all country correlations are patched together and embed different kinds of causality). For Duru-Bellat, some interpretations of these correlations are very problematic and may lead ideological preferences to produce very diverse interpretation. The author takes the example of the *education production functions* (where "educational" and other factors explain educational performances) which are normally estimated by using country surveys and that are sometimes estimated by using cross-country PISA data: the estimation of such education production functions is problematic notably because it is estimated at 15 years old and supposed identical whatever the country. It has in this case a very different meaning in that approach and cannot be interpreted as a usual production function.

A whole consistent set of factors influence the educational performances, hence an isolated feature can hardly necessarily be identified as causal factor if other features of the education system are not taken into account in the same time. The fragility of policy recommendations is clear-cut if they are only based on correlations.

⁵ Furthermore, the classic form taken by exercises in some education system doesn't appeal to or train for the same skills of cognitive capabilities.

⁶ See for example this tribune in the *New York Times* (August 2014): http://www.nytimes.com/2014/08/02/opinion/sunday/south-koreas-education-system-hurts-students.html?_r=0.

Another point developed by Duru-Bellat is the issue of an “ecological analysis”, i.e. the difficulty to analyse a complex system with many actors (individuals or institutions) in itself, with interdependences and having different levels of ‘action’ (a system for instance mixing individual- and society-level features). It comes particularly from the fact the correlations are computed by using indicators representing country features and/or ‘country’ indicators built from the aggregation of individual-level indicators. The fact that there are no temporal dynamics (there is only cross-country evidence) weakens even more the causality in the apparent relationships.

In conclusion, Marie Duru-Bellat underlines the necessity for policy makers to take into account other types of data to build their education policies, as student panel data: this type of data allows longitudinal studies (like the *Panel de l’Education Nationale* in France that follows a whole generation all along its education in the scholar system) and a sharper analysis. Finally, the author also asks for a real interrogation of the chosen indicators, as the choice of some specific indicators means to emphasize some specific goals that are assigned to the public policies.

Conclusion

Results of PISA and PIAAC surveys must be taken carefully. The data obtained in the surveys represent an interesting source of data (among others), and comparison between countries should be made with caution. Many authors advice a cautious use and reading of the skills survey results, for instance:

- Take into account the national institutional contexts to have a well-informed reading of the PISA surveys and mobilize the wealth of the data on social of familial background, characteristics of schools... (Grenet, 2008).
- Give strong attention to educative and sociocultural national contexts and combine analysis using different spatial scales that might present some “large regularities”⁷, and also take into account the standard errors associated to the computed statistical parameters (le Donné, 2013).

Overall, the complexity of the E&T systems and the large amount of educational and environmental features explaining human capital accumulation are not necessary well described or explained though OECD skill surveys. The OECD policy recommendations represent a normative approach which is not necessarily well tailored to resolve complex and differentiated problems of very heterogeneous countries. However, a cautious and intelligent use of the data allows picturing “large regularities”, which have to be interpreted cautiously in the context/background of the national realities, is always possible and welcome.

1.2. Levels of education and systems of education and training

E&T challenges are of common interest in Europe, but they refer to heterogeneous national situations and their management has to respect the subsidiarity rule. In its *Social Investment Package* of 2013, the European commission tried to define common fundamental priorities and standards

⁷ “The comparison of a large set of countries provides to the established results a certain degree of generality. Carrying out comparison at a large scale allows giving universal laws. In return, we necessarily miss available information on each of the studied countries” (le Donné, 2013).

(like the focus on early childhood education and on lifelong learning)⁸. The implementation of these common priorities could be submitted to contractual arrangements with the member States⁹. In order to foster this approach, it is necessary to have a balanced view of the main common and specific features among European countries. To foster upward convergence in Europe, it is necessary to take into account the diversity of the national situations.

Conciliate educative performance and social cohesion

The European strategy emphasizes two headline targets at horizon 2020, on early leavers from education and training (in the 18-24 years age group)¹⁰ and on tertiary education attainment (in the 30-34 years age group)¹¹ as shown in table 1. A good mix of both targets is probably a right indicator of the good working of the national E&T system, as it means simultaneously educative performance and social cohesion. In 2013, the EU average is not very distant from these targets, but the differences between countries are strong.

Table 1: the two headline targets in Education and Training 2020

	Current	Target
1 Early leavers from education and training <small>The share of the population aged 18-24 having attained ISCED level 0, 1, 2 or 3c short and not receiving any formal or non-formal education or training in the four weeks preceding the survey.</small>	12.0%	Below 10%
2 Tertiary education attainment <small>The share of the population aged 30-34 years having successfully completed ISCED level 5 or 6.</small>	36.9%	At least 40%

Source: European Training Monitor 2014

The correlation between the rate of early school leavers and the tertiary educational attainment is weak (cf. graph 1 hereafter): these two variables describe no-redundant performances of the education systems. A very high rate of early school leavers (more than 15%) seems logically rather contrary to a large tertiary educational attainment, but a rate inferior to 15% is compatible with very different performances of educational attainment. Spain is an exception: this country combines a relatively high educational attainment with the highest rate of early school leavers.

An econometric study of researchers from the Joint Research Center (European Commission) underscores a duo of determinant factors for the dynamics of both variables (for details, see Box 2):

- The family background (the “past”).
- The expected opportunities of employment and/or earnings (the “future”).

⁸ European Commission (2013a), *Communication towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020*, COM(2013)83 of 20.2.2013; European Commission, *Policy Roadmap for the 2013-2014 Implementation of the Social Investment package*, DG Employment, Social Affairs and Inclusion, 2013,

<http://ec.europa.eu/social/BlobServlet?docId=11150&langId=en>

⁹ This proposal is expressed by the report of the Friends of Europe High-Level Group on Social Union, *A European Social Union: 10 tough nuts to crack*, Frank Vandenbroucke (with Bart Vanhercke), Brussels, Spring 2014,

http://europesworld.org/wp-content/uploads/sites/3/2014/03/03_03_14_Report_SocialUnion_FINAL_V-1.pdf

¹⁰ Exactly, the share of the population aged 18-24 having attained ISCED level 0, 1, 2 or 3c short and not receiving any formal or non-formal education or training in the four weeks preceding the Labour Force Survey (Eurostat).

¹¹ Exactly, the share of the population aged 30-34 years having successfully completed ISCED level 5 or 6.

The authors use the estimated model to assess the national probabilities of reaching the two targets. This interesting work presents a disturbing lack: the education and training system, its main features are not identified as autonomous factors. So, the following sections propose some ideas regarding this necessary component, by examining the data from EC and OECD.

Box 2

Note on “Forecasting the Europe 2020 headline target on education and training, A panel data approach”, Catalin Dragomirescu-Gaina, Anke Weber, Joint Research Center, European Commission, 2013

This paper tries to rationalize, by an econometric approach, the two headline targets on *early leavers from education and training* (in the 18-24 years age group) and *tertiary education attainment* (in the 30-34 years age group). In the two cases, a duo of factors seems determinant for the dynamics of these two variables:

- The family background (the “past”).
- The expected opportunities of employment and/or earnings (the “future”).

The econometric approach

The econometric analysis of the causalities is made difficult by the observation windows and the data’s availability which would be necessary for robust identification and estimation of these causalities. Practically, unsatisfactory proxies must be used to measure the explanatory variables.

The right identification of the explanatory variables is politically important: if family background is a key determinant, the access to Lifelong Learning has consequences not only for the direct beneficiaries but also for their children.

For long term forecasting exercises (50 years ahead), cohort-based models, taking into account demographic developments plus enrolment and completion rates in education by cohort, are the most convenient. But it is a heavy accounting machinery. Over a ten years horizon, the paper develops a more modest econometric approach, which takes into account the expected impact of schooling decisions which have been yet partially taken. It tries to specify horizons different for the early school leavers (ESL) and the highly educated individuals: the former, lacking skills and facing poor job prospects, have a short planning horizon; the latter are sensitive to longer expectations (the skill premium of the tertiary education attainment or TEA).

The econometric strategy uses a panel data approach over the EU27, using national data from Eurostat: for the ESL, the data range is 1992-2012; for the TEA, 2000-2012. A specification in first differences, explaining the improvement in the Europe 2020 headline targets, is used for managing stationarity and cointegration problems. Classical criteria and tests are used to determine the best specification (simple, robust, stable).

An important aspect of the specification concerns the proxy for parental education attainment: inevitably, these proxies are rough, as they measure the mean education attainment in the supposed cohorts of the parents. They are used as sub-indicators in the *European Training Monitor*.

EU2020 headline target		Proxy for parental education attainment used in the econometric specification		Comments
	Age group for benchmark		Age group for parents	
<i>Early school leavers</i>	18-24	<i>Share of females with at most lower secondary education attainment</i>	35-44	<i>Various alternatives were tried by varying the gender or the age group in different specifications, but found less robust or with lower explanatory power.</i>
		<i>Share of males with at most lower secondary education attainment</i>	45-54	
<i>Tertiary education attainment</i>	30-34	<i>Share of adults with tertiary education attainment</i>	55-64	

Results

The two selected models show significant roles of the explanatory variables but, in the same time, a weak explained part of the variance: probably, many factors explaining the heterogeneity between countries (compositional effects, education system, skill mismatches) are not taken into account.

Early school leavers

$\Delta \log(\text{early school leavers})$	
$\Delta \log(\text{share of females' with low education, age 35-44})$	0.13*** (0.05)
$\Delta \log(\text{share of males' with low education, age 45-54})$	0.23*** (0.07)
$\Delta \log(\text{total unemployment rate}), \text{lag } 6^{\text{th}}$	-0.07** (0.03)
Constant	-1.82*** (0.55)
Observations	276
R^2	0.137
No. of countries	19
Estimation sample	1992-2012
Year dummies [†]	yes
Country dummies	no

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

[†] Only year dummies before 2000 were included to counter the unbalanced panel specification

The role of the family background is clear: more chances to be ESL when the education of the parents is low. The nature of the impact of lagged unemployment (as proxy for job prospects) is less obvious: according to the estimation, increasing unemployment reduces the rate of ESL. Probably, higher unemployment incites to use school as “parking”: it does not mean necessarily a higher educational attainment.

A consequence of this disturbing result is politically important: it means that better growth and employment prospects do not reduce mechanically the rate of early school leavers: the ESL could be tempted to exploit the immediate opportunities offered by the good side of the business cycle, without increasing their educational attainment. Specific policies (and not only macroeconomic growth) are necessary.

Tertiary Education Attainment

Again the role of the family background proxy is clear.

The lagged productivity growth is used as proxy for earning prospects, more relevant for schooling decisions of individuals choosing to entry into tertiary education. It is a tricky econometric issue, as there is a reverse causality between education and productivity: higher educational attainment is expected to boost future productivity. However, in the estimation, the lag is not imposed *a priori* but selected empirically: for the 30-34 age group, a 13 years lag corresponds to the time of enrolment decision.

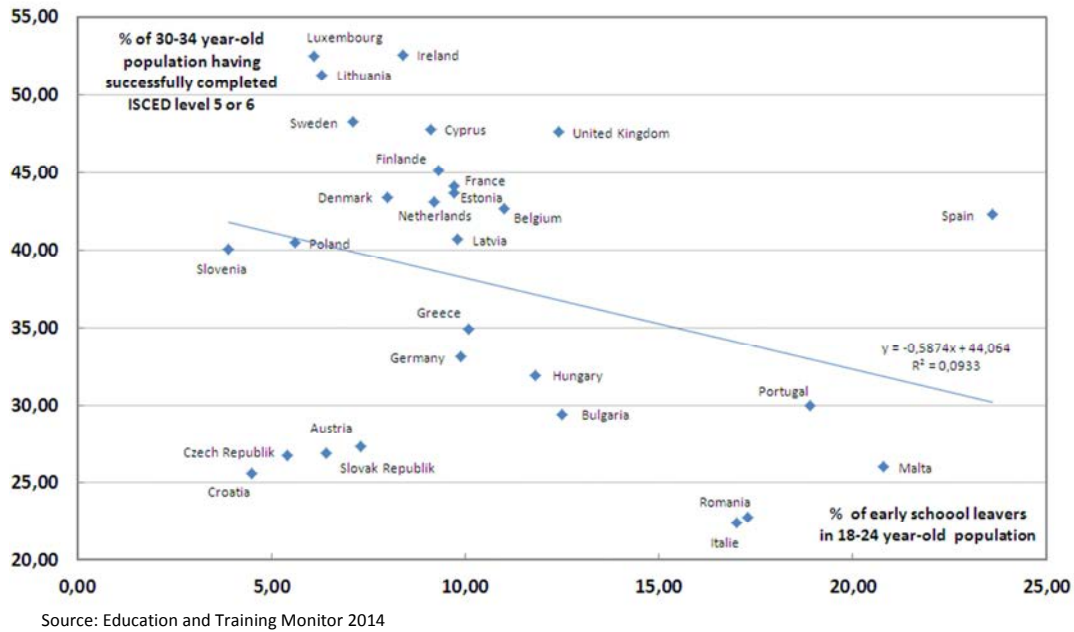
$\Delta \log(\text{tertiary education attainment})$	
$\Delta \log(\text{share of adults with high education, age 55-64})$	0.34*** (0.06)
$\Delta \log(\text{labour productivity}), \text{lag } 13^{\text{th}}$	0.58** (0.23)
constant	0.48 (0.60)
Observations	144
R^2	0.322
No. of countries	12
Estimation period	2001-2012
Year dummies [†]	yes
Country dummies	no

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

[†] Only year dummies for 2003 and 2004 were included to account for breaks in the data

Graph 1. Early school leavers and tertiary education attainment (EU, 2013)



Educational attainment and enrolment rates: an incomplete and vulnerable process of catching-up between countries

There is a consensus for the objective of rising the overall education levels. For the European countries, it naturally means the increasing access to successful tertiary studies. But, on the one hand, it is not a “free lunch” and, on the other, if higher educational level becomes over-education when people entry into the labour market, it is a factor of economic failure and subjective frustration (see below the section on mismatches).

The proportion of tertiary-educated adults (25-64 years-olds) remains very unequal among European countries. Nordic countries, UK, Ireland are clearly above the average, Italy and Romania at the bottom. Between 2000 and 2012, there is no clear evidence of reduction of these large differences. An important point interferes with this inequality: in central Europe (Germany, Austria, Poland, Czech Republik, Slovak Republik, Hungary), there is an important proportion of adults (more than 50%) whose highest level of education is upper secondary or post-secondary non-tertiary **with vocational orientation**. This fact suggests the reality of historic national arbitration between vocational upper secondary education and academic tertiary education.

However, over the long term of generational renewal, there is a significant progress, measured by the present difference of the proportion of tertiary-educated, between the younger (25-34) and the older (55-64) adults in some countries near or below the average: Poland, France, Spain, Portugal (a difference close to 20% or more). So, a long-term catching-up stands out through the generational renewal but this process is incomplete and vulnerable to economic circumstances: the catching-up of educational “output” depends, partially, on the catching-up of educational “input”, assessed by the ability of the education system to enroll students and to allocate sufficient resources to that. The OECD Indicators show the reality of such a catching-up, but it is a partial and fragile process, including between European countries: if the management of the crisis leads to some national disinvestment in education, it could impede the continuation of the catching-up process for educational attainment¹². The catching-up of educational attainment depends particularly on the catching-up of enrolment in education at critical age (15-19 years), corresponding to the transition between upper secondary and tertiary education.

¹² These points are also underlined by the report of Friends of Europe High-Level Group on Social Union (2014).

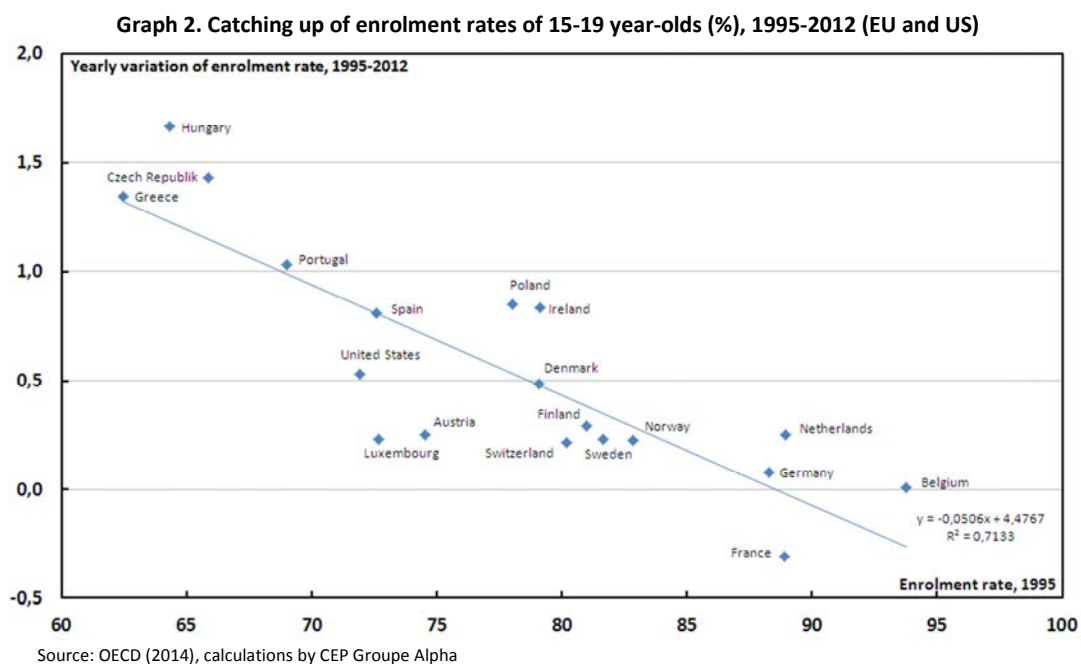
The economic literature on socio-economic catching-up between countries proposes a simple test of the reality of such catching-up for one particular variable: if the catching-up prevails, the **growth** of this variable between an initial date and a final date should be inversely proportional to the **level** of the variable at the initial date (and the coefficient of this relation should give an information on the intensity of the catching-up process).

We can apply this approach to the assessment of the convergence between the enrolment rates of young people (15-19 olds) in the education system, by considering two periods: 1995-2012 and 2006-2012. The second period permits to have more countries observed. Clearly, it is a too short period to assess a medium-term process but it reveals eventually the impact of the crisis, comparatively to the longer period 1995-2012.

Each graph (graphs 2 and 3) relates the **level** of the enrolment rate at the initial date (1995 or 2006), on the abscissa, and the **variation** of this rate between the initial and final (2012) dates, on the ordinate. In order to make the graphs comparable and to have easily comprehensible numbers, this variation is expressed as yearly variation of percentage points (the difference between the final rate and the initial one, divided by the number of the years between the two dates)¹³.

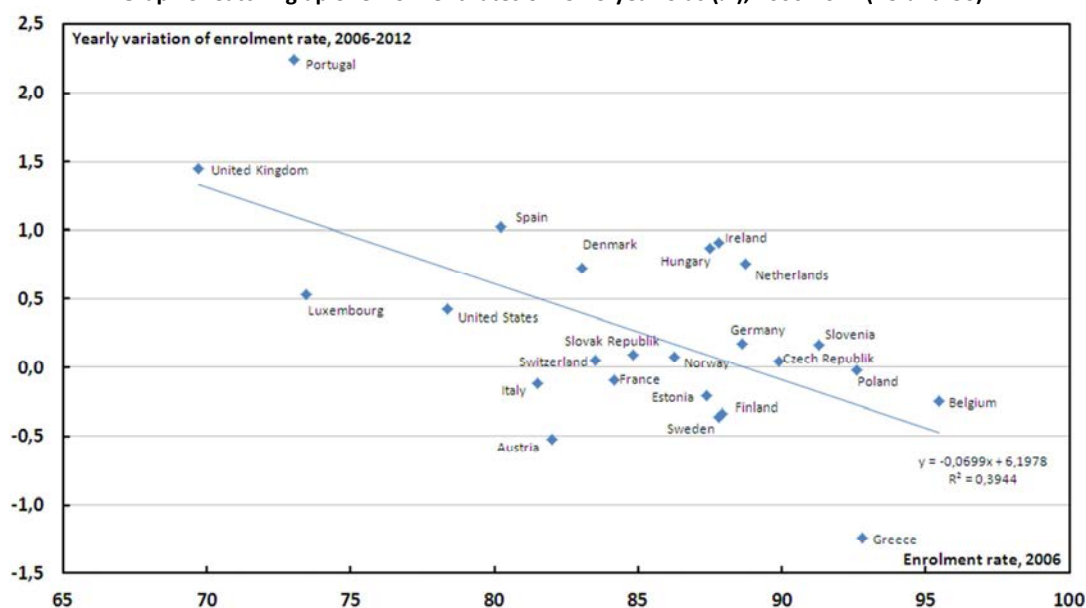
On the complete period 1995-2012, the catching-up process for the enrolment rates of 15-19 year olds is almost perfect! The correlation is strong and the coefficient of the regression (-0,05) indicates that one country having a backwardness of 10 points for the enrolment rate reduces this backwardness by 0,5 point each year: the catching-up of such a country could be complete in 20 years. Greece, Portugal, Spain embody perfectly this relationship. The catching-up is yet faster for Hungary, Poland, Ireland. France is a disturbing particular case: this country has a very high enrolment rate, but this rate decreases (a reduction close to 5 points over the complete period).

On the short period 2006-2012, the catching-up relationship does not disappear but it is less robust, the correlation is weaker. On the one hand, it is normal: if, in the middle-2000's, the catching-up process was close to achievement (it is not true for UK!), it should have been less intense after. On the other hand, some new problems happen: the enrolment rate decreases in a range of countries: France, Estonia, Belgium, Finland, Sweden, Austria and, dramatically, Greece.



¹³ In these graphs built by using OECD data, we set the OECD European countries (when data are available) and the United States, as this country is always a useful comparison for European countries. The data come from OECD but the graphs and calculations are the responsibility of the authors.

Graph 3. Catching up of enrolment rates of 15-19 year-olds (%), 2006-2012 (EU and US)

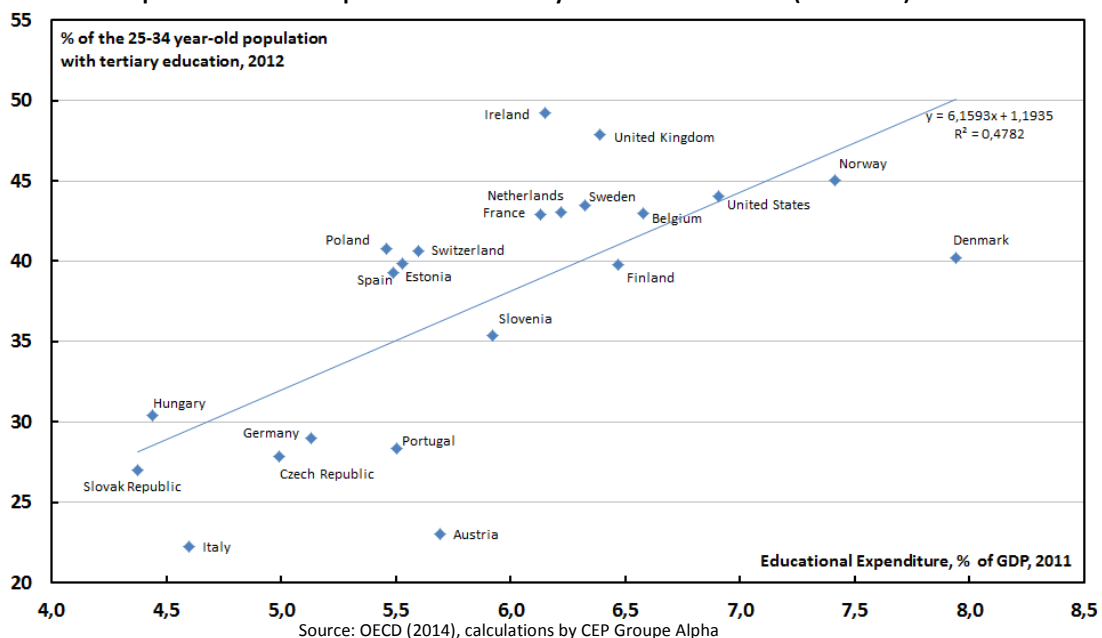


Source: OECD (2014), calculations by CEP Groupe Alpha

No high educational attainment without *balanced* educative effort

The rate of 25-34 year-old people with tertiary education is obviously correlated with the financial effort, measured by the global educational expenditure, in % of the GDP (graph 4).

Graph 4. Educational expenditure and tertiary education attainment (EU and US)



Source: OECD (2014), calculations by CEP Groupe Alpha

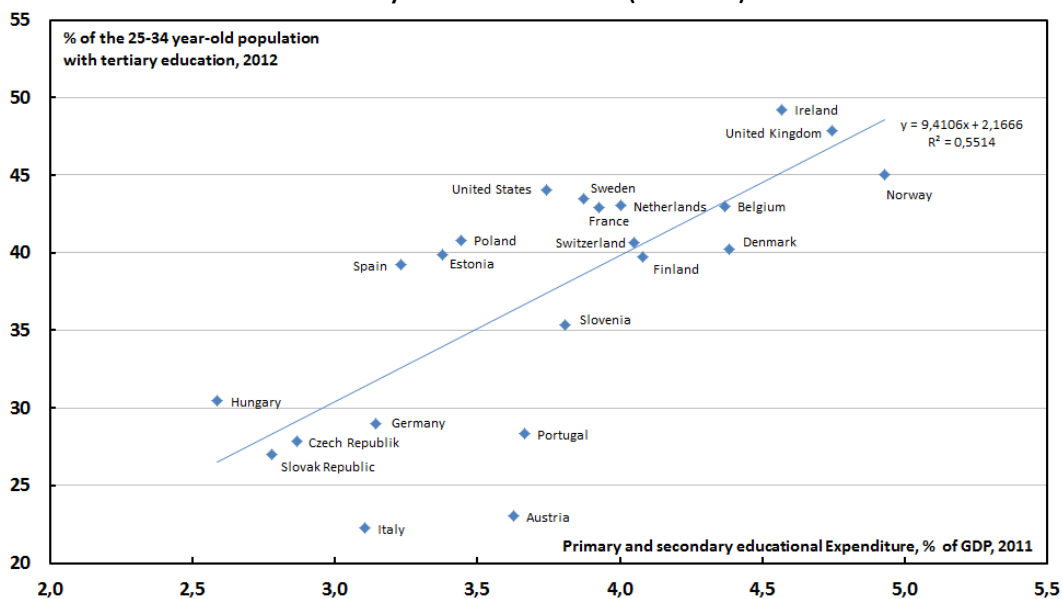
The correct interpretation of this correlation has to take into account two features:

1. The attainment of tertiary education by an individual depends on his whole school path. This individual reality has macro-implications: the rate of tertiary-educated people in the 25-34 year-old population is highly correlated to the expenditure in primary and secondary

education, in % of GDP (graph 5). If we draw the same graph with the only expenditure for tertiary education in abscissa, the correlation is significantly weaker than in graph 5. To increase the rate of tertiary-educated young people is associated to a global effort of expenditure in primary and secondary education, not only in tertiary.

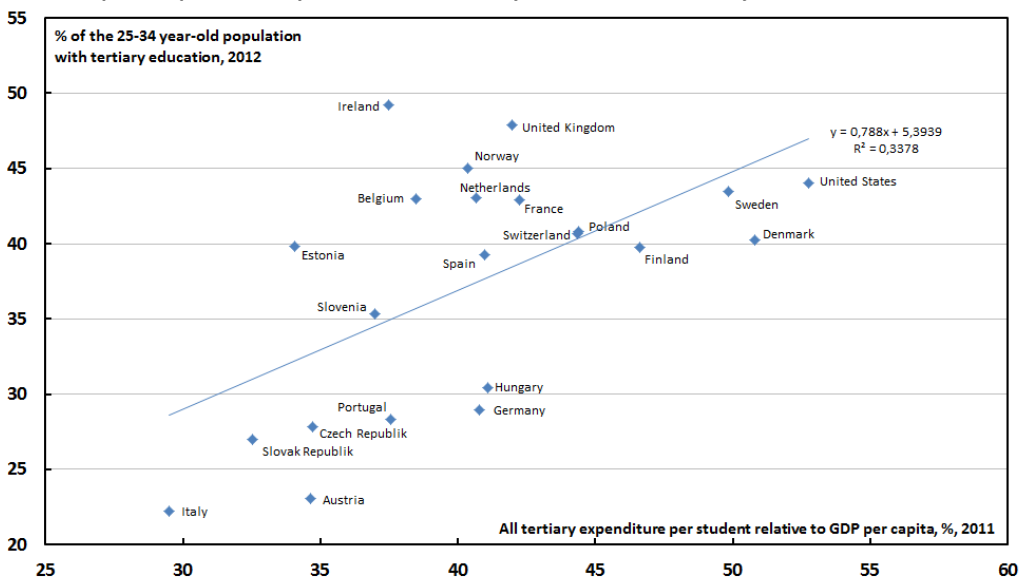
2. The cost of the tertiary education per student is higher than in primary and secondary education (a supplement close to +50% for OECD average). So, to extend the access to the tertiary education means to be able to finance this extension. The rate of tertiary-educated young people is clearly correlated with the “effort” of tertiary expenditure per student, expressed in proportion of GDP per capita (graph 6). This indicator seems a convenient measurement of this effort, as it takes into account the own wealth of the country. And the figures speak for themselves: it is difficult to reach the rate of 40% of tertiary-educated young people without reaching a level of tertiary expenditure per student also close or superior to 40% of the GDP per capita.

Graph 5. Expenditure in all primary and secondary education and tertiary education attainment (EU and US)



Source: OECD (2014), calculations by CEP Groupe Alpha

Graph 6. Expenditure by student in all tertiary education and tertiary education attainment



Source: OECD (2014), calculations by CEP Groupe Alpha

Increase the rate of tertiary-educated young people supposes a balanced effort of increasing expenditure in the successive steps of the educative system¹⁴. By using, a little recklessly, the value of the slopes in the previous correlations, we could give the following rough idea: **to increase the rate of European tertiary-educated young people by 10 points implies a supplementary effort at least equal to 1,5% of GDP, among which 1% in the primary and secondary education.**

However, the specific effort for tertiary education depends on the resources allocated to the building of the “elites”. While this cost is particularly high in the US elitist model, which allocates 2,7% of its GDP to the only tertiary education, it represents a great effort in all countries. In EU, the average level of expenditure per student in tertiary education is close to 40% of the GDP per capita, comparatively to 26% in the secondary education (*source*: OECD). To continue the process of catching-up of educational tertiary attainment between European countries supposes probably that the backward countries are able to reach this threshold of 40%, without rationing their primary and secondary education system. The investments in the successive stages of the educative system are complementary, not substitute. But in the present reality of the fiscal constraints, this complementarity is not easy to manage. The European Structural Funds could be more clearly mobilized to help the catching-up countries to manage a balanced development of their education and training system.

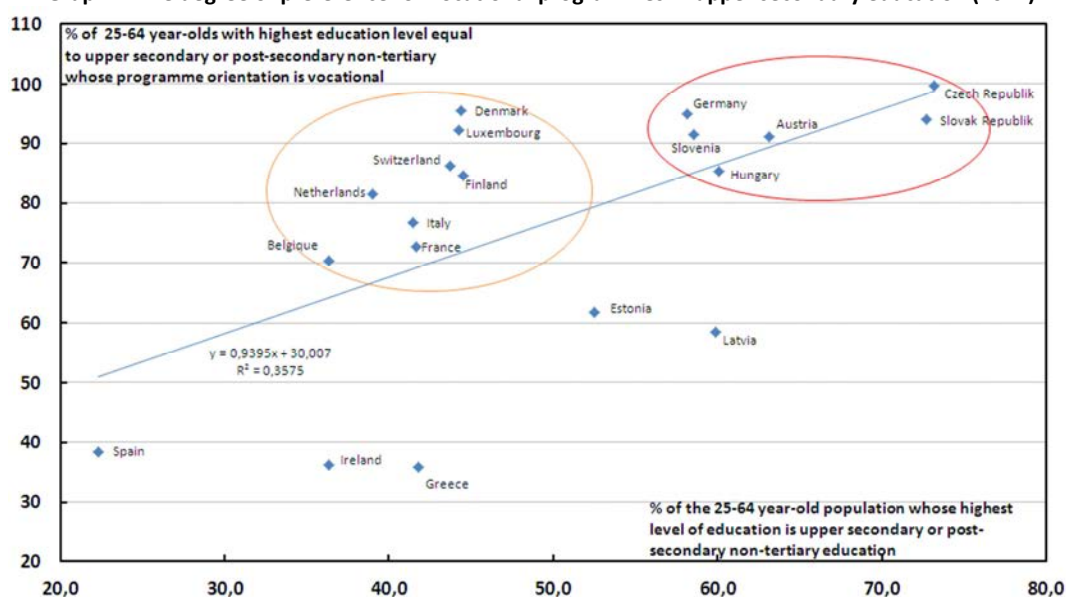
A favourable influence of vocational “culture” on the rate of early school leavers?

Several countries seem to have some preference for *vocational* upper secondary (or post-secondary non tertiary), comparatively to academic tertiary education. It is the result of a long historic trend, which could be measured jointly by the proportion of 25-64 year-old people whose highest educational level is upper secondary or post-secondary non tertiary (abscissa of the graph 7) and, *within* this first population, by the proportion of those with vocational orientation (ordinate). The graph shows clearly the common feature of the “Germanic” countries (red ellipse), which demonstrate this preference for vocational upper secondary education and which have a rather weak rate of tertiary-educated people. The countries of the orange ellipse have a superior rate of such people (except Italy): these countries “prefer” the access to tertiary education.

Is this preference or culture of vocational secondary education a possible factor of reduction of the rate of early school leavers in the young generations? Surely not the only factor but, possibly, one partial factor. It is suggested by the graph 8 whose abscissa is the ordinate of the previous graph (the “preference” for vocational secondary education) and whose ordinate is the rate of early school leavers. The red ellipse groups the “Germanic” countries with high preference for vocational orientation and (relatively) low rate of early school leavers. No surprise, when regarding this graph, if Spain is interested by the Germanic “dual system”...

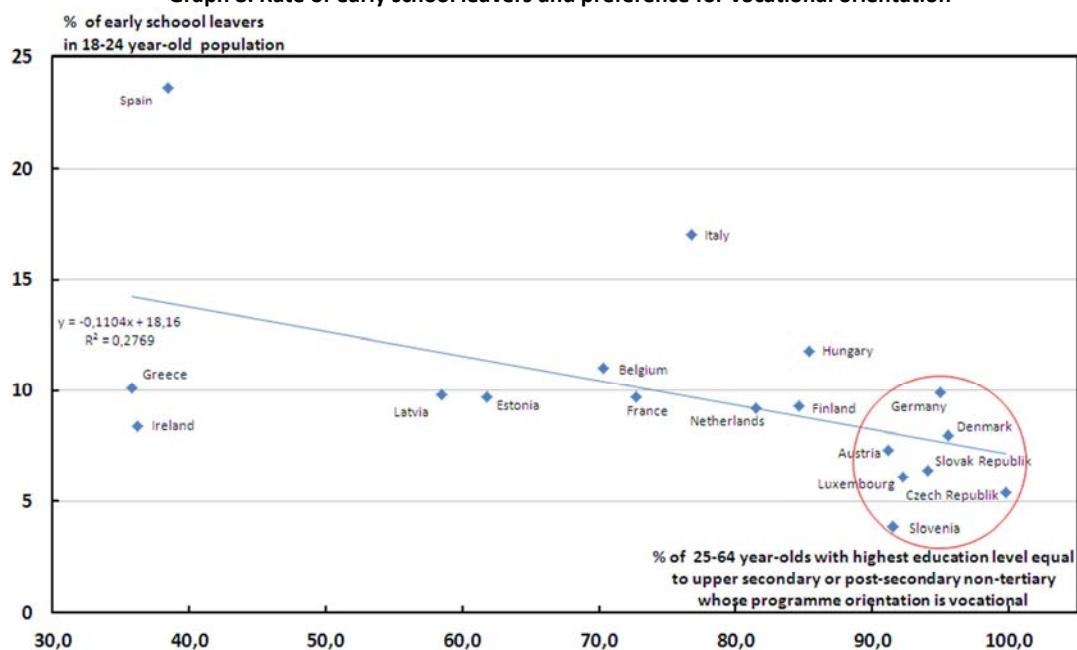
¹⁴ For example, in the French case, the economists Philippe Aghion and Alexandra Roulet (*Repenser l’Etat, Pour une social-démocratie de l’innovation*, Seuil, 2011) consider it was an error of the French governments of Nicolas Sarkozy to finance the necessary investment in the universities by the no-replacing of the half of new retired teachers in the primary and secondary education. The performances of the students in the primary and secondary are crucial for the socio-economic future of the country and a necessary, although not sufficient, condition of good performances is the tutoring by highly qualified teachers.

Graph 7. The degree of preference for vocational programmes in upper secondary education (2012)



Source: OECD (2014), calculations by CEP Groupe Alpha

Graph 8. Rate of early school leavers and preference for vocational orientation



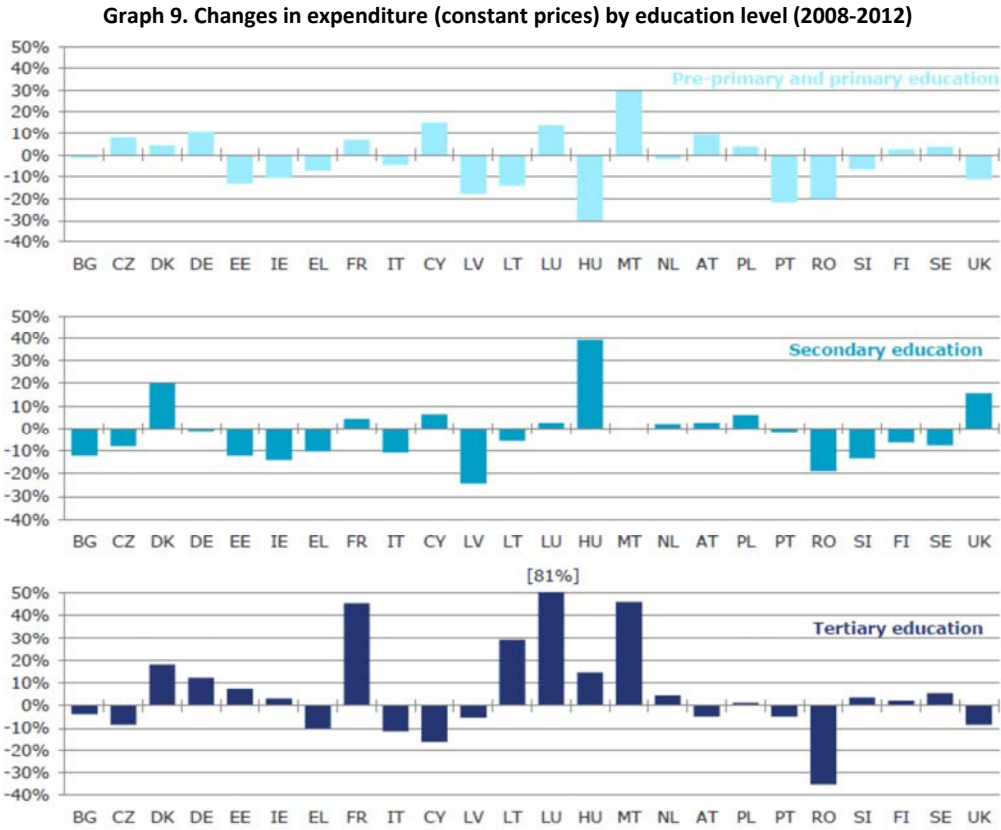
Source: OECD (2014), calculations by CEP Groupe Alpha

The impact of the crisis and of the austerity policies: threats on European competitiveness

The increase of educational attainment is conditioned by a sufficient global level of educational expenditures *and* a right balance of the resources between the successive stages of the educative system. From this point of view, the data of the European Training Monitor 2014 show that the balance is a sensitive issue (graph 9): a majority of EU countries records, between 2008 and 2012, a negative or weakly positive variation (at constant prices) of expenditure for pre-primary, primary and secondary education. The expenditure decreases in real terms for primary and pre-primary education in thirteen Member States and for secondary education in fifteen Member States. The number of

countries reducing expenditure for higher education is lower (ten) and some countries increase strongly this latter expenditure (like France). Since 2008, according to ETM, only six countries saw a decrease in expenditure across all levels of education (Bulgaria, Greece, Italy, Lithuania, Portugal, Romania).

The difficulty of the balance is becoming particularly sensitive in the countries which cut significantly their education expenditure in the last years. According to ETM, nineteen Members States recorded a cut in real terms in 2012 and, in six of them (Greece, Spain, Cyprus, Hungary, Portugal, Romania), by more than 5%.

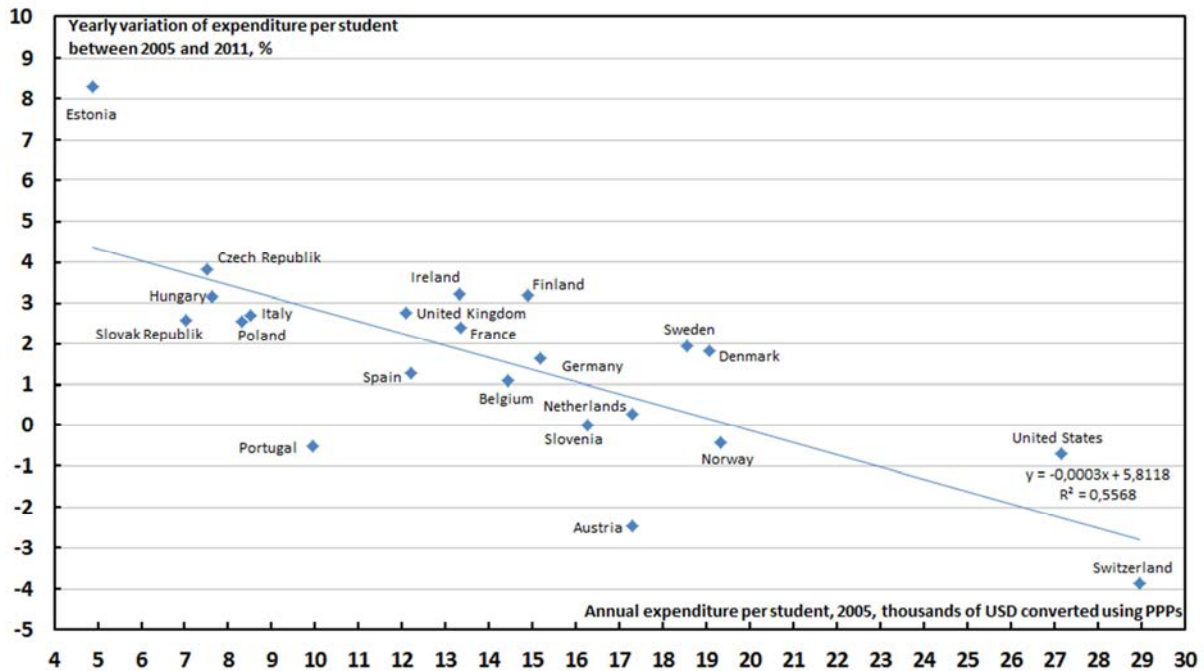


Source: European Training Monitor 2014

As demographic trends are not identical among countries, a more relevant measurement of the expenditure level is the average expenditure per student. If we consider only the tertiary education, a catching-up relationship continues to prevail between the backward countries and the leader countries over the period 2005-2011 for the expenditure by student (graph 10). Such relationship can be showed by relating the initial level of expenditure per student in 2005 (abscissa) and the yearly growth rate of that expenditure between 2005 and 2011 (ordinate). The negative slope of the correlation line indicates the average speed of the catching-up process: a country having a backwardness of 10000 USD for the expenditure per student in tertiary education records 3 supplementary points of yearly growth rate of this expenditure¹⁵. Clearly, in the specific case of Portugal, the catching-up process fails.

¹⁵ In order to respect the theoretical references, it is better to have a regression between logarithms of the final and initial levels of expenditure by student (but the scales of the graphic representation are less obvious for the reader). If we do such a regression, the regression coefficient R^2 is a little higher (0.59) and the slope of the regression line indicates directly the yearly rate of catching-up between backward and leader countries (4% of the gap by year).

Graph 10. Catching up of national expenditure per student in tertiary education, 2005-2011 (EU and US)



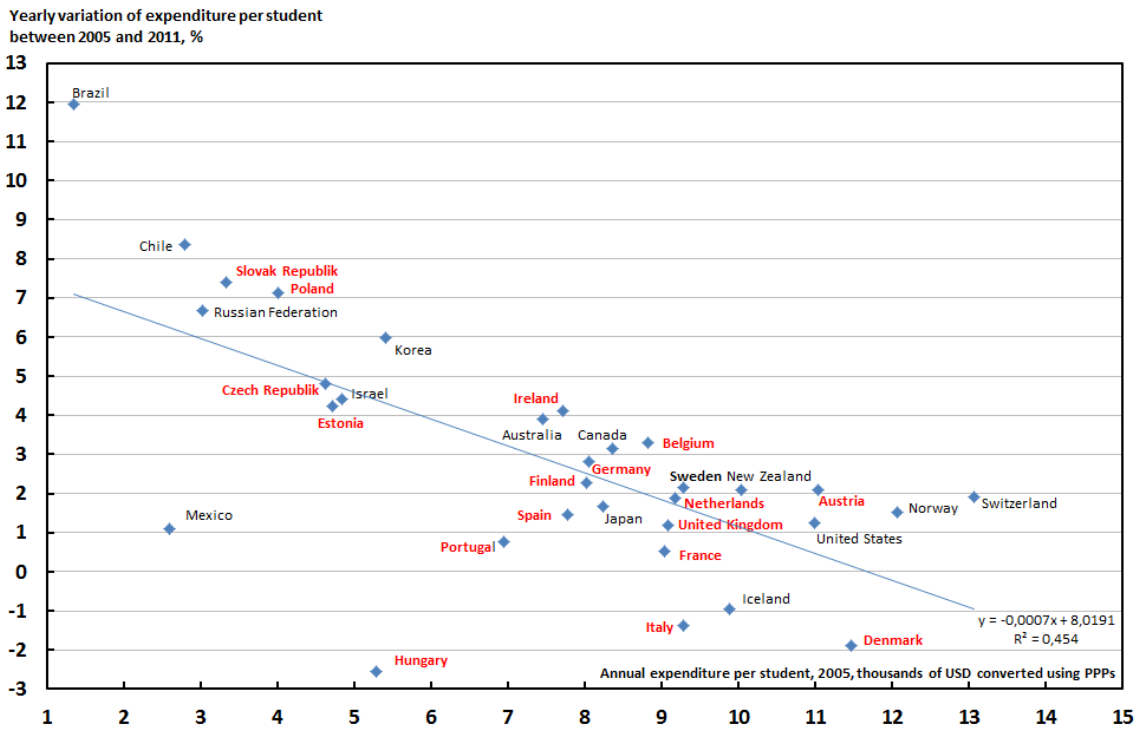
Source: OECD (2014), calculations by CEP Groupe Alpha

Note: All expenditure data are adjusted to 2011 prices using the GDP price deflator and expenditure in national currency is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP.

If we consider the expenditure per student in primary and secondary education, the feature is significantly different. In this case, the relationship between the only European countries is less clear, as these countries are initially closer among themselves (than for tertiary education) and as some EU countries drop out. It is more expressive to embed the European countries into the general catching-up relationship among OECD countries (graph 11, with the EU countries in red). The graph shows the impressive catching-up of some non-European countries (Brazil, Chile, Korea) and the lagging behind of some EU countries (particularly Hungary, Italy, Portugal, and... Denmark, with absolute decrease in the expenditure). In 2011, the average expenditure per student in Korea (7650 USD) is higher than the Portuguese one (7280): it was not yet true in 2005, as indicated by the graph; in 2011, the Chilean expenditure (4520 USD) is equal to the Hungarian one: it was yet inferior in 2005.

So, an important contradiction happens for European countries (clearly with different intensity from one country to the other) : **the high level world competition incites to put the effort on the tertiary education; but, if the consequence is a weakening of the primary and secondary education, the final result could be different from a general and fair increase of the educational attainment** (from this point of view, the US model, which gives greater place to the high level tertiary education is not very convincing, as it presents weakness in the primary and secondary education).

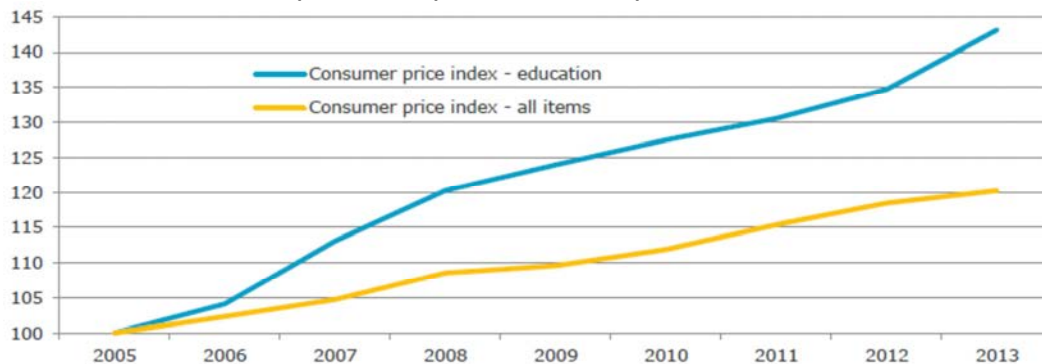
**Graph 11. Catching up of national expenditure per student between OECD countries, 2005-2011
(primary, secondary and post-secondary non tertiary education)**



Is the increasing private financing of the tertiary education a solution to manage this contradiction? It raises other problems of social justice. In European countries where the private part in the expenditure for tertiary education is high, the majority of this private part comes from the households: according to OECD, clearly in the United Kingdom (in 2011, 69,8% of financing from all private entities and 60,7% from households); but also in Italy (33,5% and 25,3%), Portugal (31,4% and 22,3%), Netherlands (29,2% and 15,2%), Poland (24,5% and 22,6%), Spain (22,5% and 18,8%). And the education is a service whose relative price increases two times more rapidly than the general consumer price index (graph 12).

But an important precision is necessary to understand these numbers: the private sources include all money transferred to educational institutions from private sources and, so, the public funding via subsidies to households. Taking into account the amounts and rules corresponding to these subsidies is essential to have a correct assessment.

Graph 12. Development of consumer price of education



Source: European Training Monitor 2014

Efficiency of educational expenditures: a complex challenge

If sufficient resources are needed to reach educational targets, however the efficient use of these resources is also necessary. But the production process of the human capital (educational attainment and professional skills) is a complex domain, whose cultural, organizational and pedagogical components are not easy to measure.

The OECD proposes a decomposition of the salary cost of teachers per student (CCS), as major parameter of the educational expenditures:

$$CCS = SAL \times instT \times \frac{1}{teachT} \times \frac{1}{ClassSize} = \frac{SAL}{Ratiostud/teacher}$$

SAL: teachers' salaries (estimated by statutory salary after 15 years of experience)
instT: instruction time of students (estimated as the annual intended instruction time, in hours, for students)
teachT: teaching time of teachers (estimated as the annual number of teaching hours for teachers)
ClassSize: a proxy for class size
Ratiostud/teacher: the ratio of students to teaching staff

The last right member of the equation can be technically considered as the ratio between the average teachers' salary and the "efficiency of the educational system", if we accept to measure it by the ratio students / teaching staff. This last ratio can be estimated as the product of the annual teaching time of teachers and of the class size, divided by the annual instruction time of students. Clearly, the notion of efficiency is here a metaphor, as the production of human capital cannot be assimilated to an industrial process: to raise the class size, beyond an uncertain threshold, is certainly not the best way to have increasing returns of scale. When comparing the countries for a given level of education, OECD considers that teachers' salaries are the main driver of the differences of CCS and the class size the second main one.

The graphs 13 and 14 concern the national decompositions of CCS respectively for lower and upper secondary education (considered as decisive steps in a complete educational pathway). The abscissa measures, for each OECD country, the negative or positive difference (in %) of the national CCS from the OECD average (all national costs are converted in USD, according to purchasing power parities). The ordinate measures the part of this difference which corresponds only to the level of teachers' salary (SAL), comparatively to the OECD average salary.

For example, the CCS in lower secondary school of Netherlands is, in 2012, 40% higher than the OECD average and the contribution of the salary level is +60%. What means, by difference, that the whole contribution of the ratio students/teachers is negative, equal to -20%: the class size is higher in Netherlands (20,8) than the average size in OECD (17,8) and the ratio students / teachers also higher (15,6 against 13,2). The Dutch teacher of lower secondary school is better paid than his average OECD colleague (68064 USD against 41382) but the Dutch educational system is more "efficient" ...¹⁶

The compared levels of CCS show great differences between countries, partially linked to the levels of socio-economic development: the first factor of CCS level is the size of the resources which can be allocated to education by the country. From this point of view, several central and eastern European countries (in the south-west corner of the graph 13) have a low level of CCS.

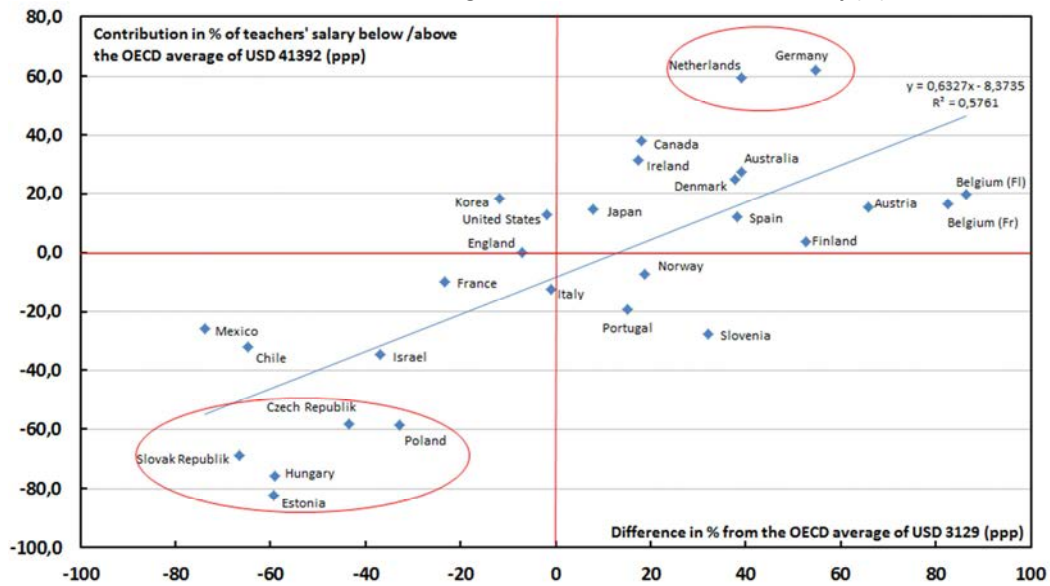
The regression coefficients show that, on average, approximately 2/3 (in lower secondary schools) and 3/4 (in upper secondary schools) of the national differences of CCS are due to the differences in salary level. But, around this average proportion, the dispersion of the countries is significant. Some countries (typically Germany and Netherlands) have a high CCS and a very high part of this compared CCS level explained by teachers' salary: these countries give greater place to the level of this salary. The situation is inverse in many central and eastern European countries (see the two red ellipses in the case of lower secondary schools).

Both graphs, for lower and upper secondary schools, give similar information, with some nuances. In the case of upper secondary, France and Portugal (in red ellipse) are two countries which have a high

¹⁶ These numbers come from the table B7.2b of OECD (2014).

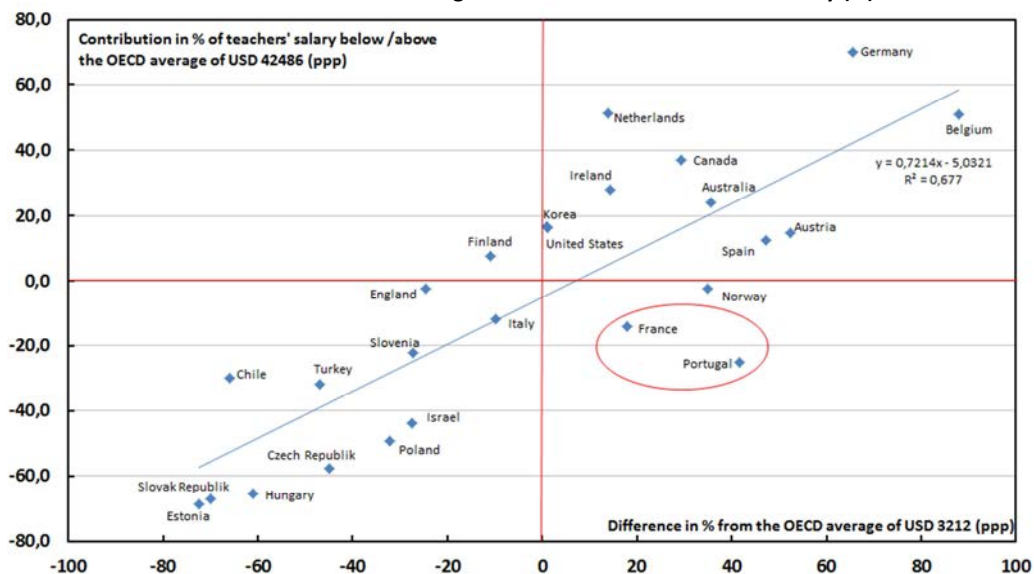
CCS but not explained by the compared teachers' salary (inferior to the OECD average): the low level of the ratio students / teachers explains their relatively high CCS.

Graph 13. Salary cost of teacher per student in lower secondary education (2012)
Difference from OECD average and contribution of teachers' salary (%)



Source: OECD (2014), calculations by CEP Groupe Alpha

Graph 14. Salary cost of teacher per student in upper secondary education (2012)
Difference from OECD average and contribution of teachers' salary (%)



Source: OECD (2014), calculations by CEP Groupe Alpha

The level of CCS and the respective contributions of the salary level and of the ratio students / teachers are the complex joint outcome of the general development level of the country and of collective (implicit or explicit) choices.

It is not easy to assess the consequences of these choices for the educational targets. For example, we could expect that, for a given development level, a high CCS (well paid teachers, low class size,...), especially in secondary schools, is a means to reduce the rate of early school leavers. It is not easy to demonstrate such assertion by a simple comparison between countries. And some contrary evidences suggest that the problem could be the opposite: some countries (not all, fortunately) have

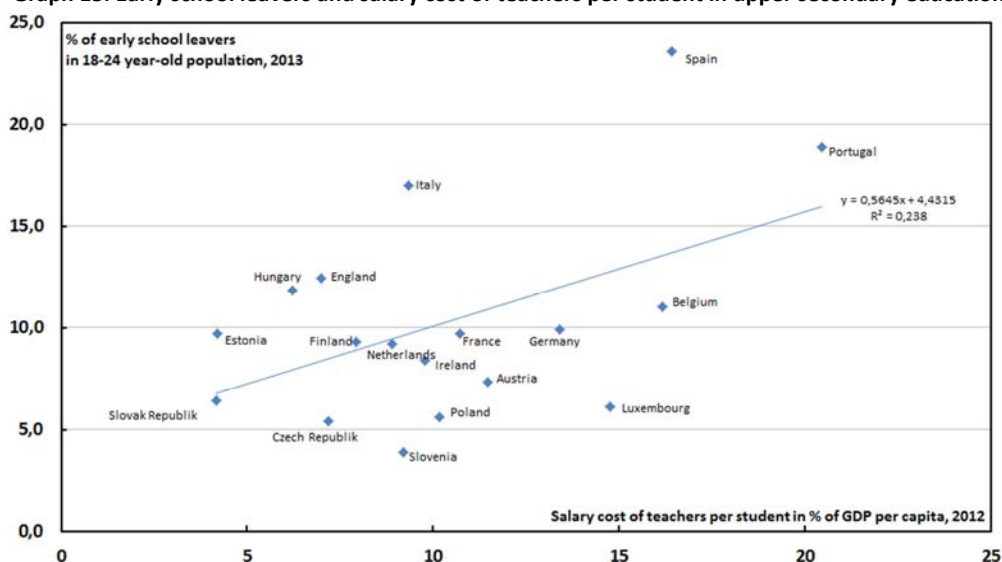
a high CCS (relatively to their development level, measured by the GDP per capita) but a big problem of efficiency, if measured by the rate of early school leavers.

The graph 15 below shows, for the European countries, the relationship between their CCS in upper secondary schools (in % of their GDP per capita) and the rate of early school leavers (if we consider CCS in primary or lower secondary education, it is not significantly different). The correlation is weak and its sign is not conform to the expected one. It is clearly the impact of three countries: Italy, Portugal, Spain, with relatively high CCS and high rates of early school leavers. If we remove these three countries (graph 16), the correlation between the two variables becomes perfectly null.

What could be said? Nothing clear about the impact of more or less high CCS on the rate of early school leavers, but a warning about the lack of efficiency of high CCS in some well identified countries : Italy, Portugal, Spain. As the salary level of the teachers does not seem the main or only factor of the high relative CCS (with some differences between the three countries), there is probably a problem of efficient organization of the education system: in Portugal and Spain, the low class size is not sufficient to reduce the rate of early school leavers. To say more supposes more investigation into the organisation and working of each national education system.

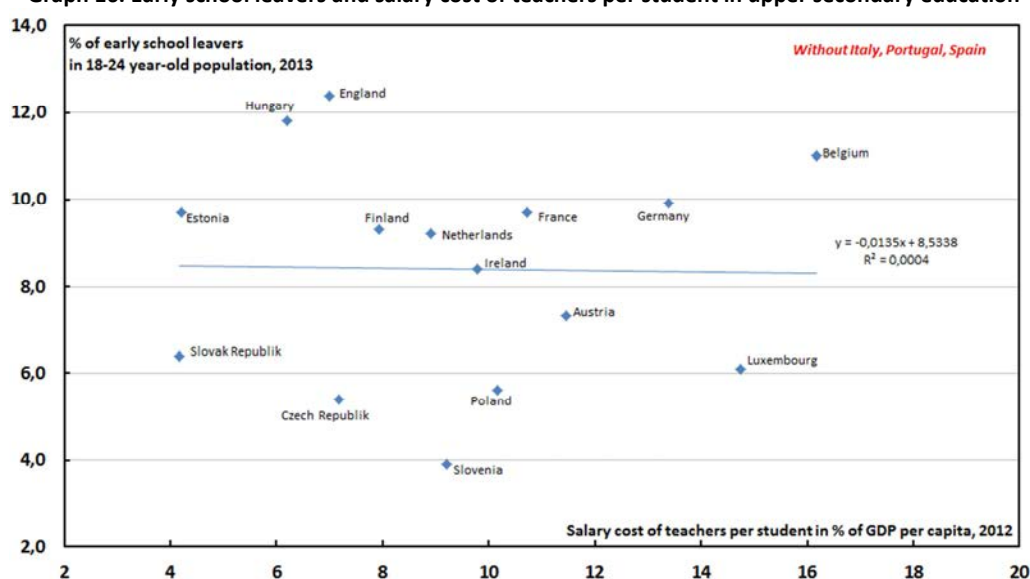
In each country, OECD presents estimations (in equivalent USD) of the private and public returns of a superior education level comparatively to the inferior one. The methodological complexity of these estimations make difficult the comparison between countries: the estimation supposes to take into account and to actualize all flows of private and public costs and earnings on the working life. But these estimations are useful to give a proxy of the private and public loss when an early school leaver does not achieve the upper secondary level. For example, in the case of Spain, the net present value (in 2010) of the private difference (benefits – costs) for a man attaining upper secondary education compared with a man attaining only lower secondary education is estimated close to 115000 USD (after conversion using purchasing power parity). The net present value of the public difference is estimated close at 20000 USD. These values could be understood as the minimal estimation of the private and public losses in case of a student leaving the secondary school before the achievement of the upper level. Minimal because, in other conditions, this student could also have achieved tertiary education.

Graph 15. Early school leavers and salary cost of teachers per student in upper secondary education



Source: OECD (2014), calculations by CEP Groupe Alpha

Graph 16. Early school leavers and salary cost of teachers per student in upper secondary education



Source: OECD (2014), calculations by CEP Groupe Alpha

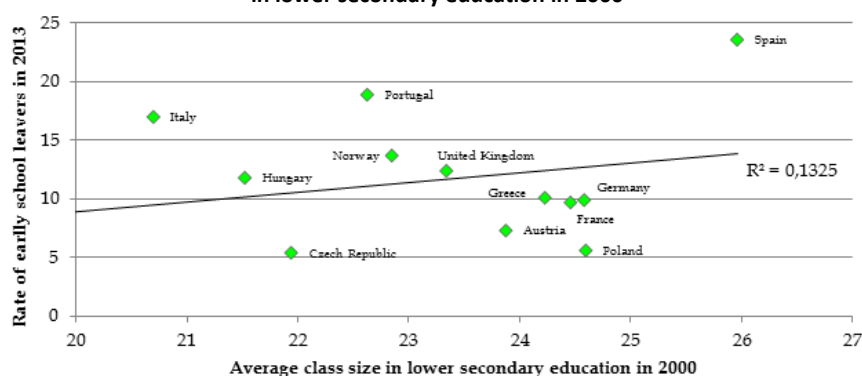
The attractiveness of teachers' profession, factor of students' performances?

The link between expenditures in education and educational achievement does exist, however the question of how to allocate the budget is complex. The teachers' compensation is a key issue, as it represents the major part of the expenditure: on average across OECD countries in 2011, 3,4% of GDP was spent on "core education services" (except for tertiary education), which include teachers, school buildings, teaching materials, etc. While dealing with education budget constraints, teachers' compensation still has to attract new teachers in order to cope with the aging teachers' supply and to improve students' performance.

One major issue about the attractiveness of teachers' profession is that with equal qualification, teachers are paid less than the other tertiary-educated workers but the gap narrows when the level of education rises. Between 2000 and 2012 teachers' salaries rose in all EU countries with the exception of France and Greece. The statutory salaries of teachers with 15 years of experience is USD 39 024 on average at the primary level and USD 40 570 at the lower secondary one (the EU averages are close to the OECD ones). Teachers' salaries thus increase with the level of education they teach, but also with their qualification and experience. However, the crisis induced governments to reduce expenditures: as a consequence, salaries increased less since 2005 than between 2000 and 2005. Since 2009, the average teachers' salary (at constant prices) has decreased in OECD primary and secondary education, particularly in a range of European countries (Estonia, Greece, Hungary, Ireland, Italy, Portugal, Spain, United Kingdom).

Findings from PISA survey (2012) suggest a positive correlation between high relative salaries for teachers (measured in % of GDP per capita) and good performance of students in mathematics, but only in high-income countries, whose per capita GDP is more than USD 20 000. In low-income countries the overall performance of students is not related to teachers' compensation, which suggests that adequate infrastructures are first required as condition of good performances.

Graph 18. Rate of early school leavers in 2013 according to average class size in lower secondary education in 2000



Source: OECD (2014), calculations by CEP Groupe Alpha

There are less than 16 students for every teacher at the primary level (OECD average), but this student-teacher ratio decreases in lower secondary education (1 teacher for 13 students). Sweden, Poland and Portugal benefit from the lowest ratios at both levels of education, while France is above the OECD average at both levels. Portugal, Spain and France present smaller teacher-student ratio in the upper secondary education than the OECD average (1 teacher for 14 students). At the tertiary level, the teacher-student ratio ranges from 11 in Sweden to 20 in the UK, with an OECD average around 14¹⁷. The ratio of students to teaching staff is lower in more vocationally oriented programs than in academic and advanced-research programs.

Educational expenditures and achievement rely on a trade-off between several factors. For example, class sizes can be reduced by increasing the time spent at school, either by extending the length of compulsory education or increasing teaching time requirements. Teaching time decreases with the level of education: on average public-school teachers teach 1001, 782, 694 and 655 hours per year respectively at the pre-primary, primary, lower and upper secondary levels. Those figures did vary by more or less than 10% in the majority of countries between 2000 and 2012, except in Spain where teaching time increased by 26% at the secondary level. In countries where the number of teaching hours ranges below the OECD average, pre-primary teachers are required to teach significantly more than in other levels. The repartition between non-teaching time and the statutory teaching time (scheduled number of hours per year a teacher must teach a class) has also to be defined. The proportion of teaching time compared to total working varies from one country to another, from 35% in Czech Republic to more than 50% in England¹⁸.

1.3. Acquisition and relevance of skills

Preliminary: the Education and Training 2020 benchmarks

In the *Education and Training 2020* programme, the EU has established specific benchmarks related to the acquisition of skills:

- the share of 15-years olds with insufficient abilities in reading, mathematics and science to be less than 15%.

¹⁷ However comparisons at this level are not totally reliable as students often attend several different classes. At this level of education, it has also to be mentioned that it is less straightforward that a small ratio is desirable.

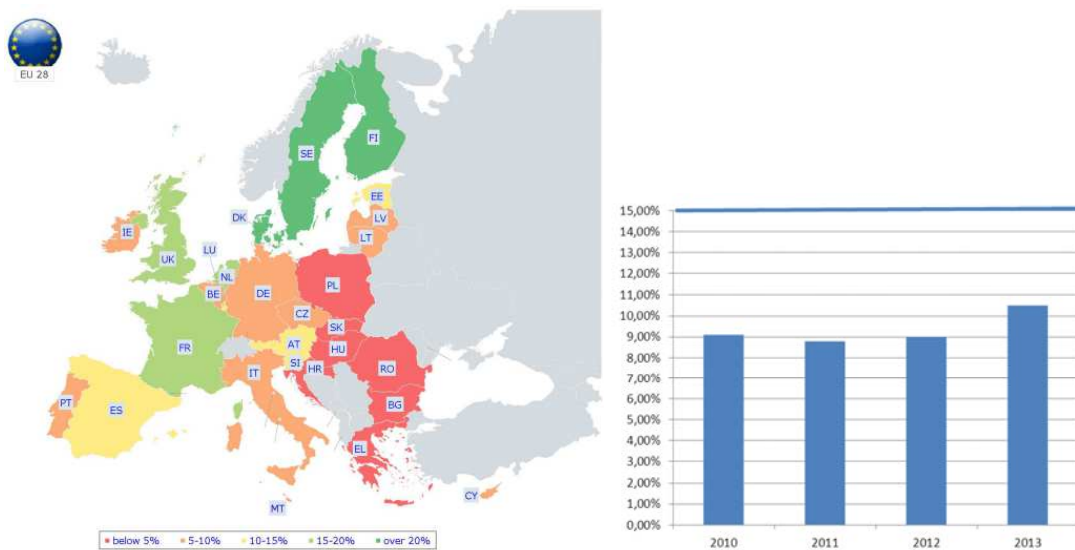
¹⁸ Non-teaching time includes preparing lessons, correcting students' work or staff meetings for example.

- an average of at least 15% of adults (age group 25-64) to participate in lifelong learning actions.

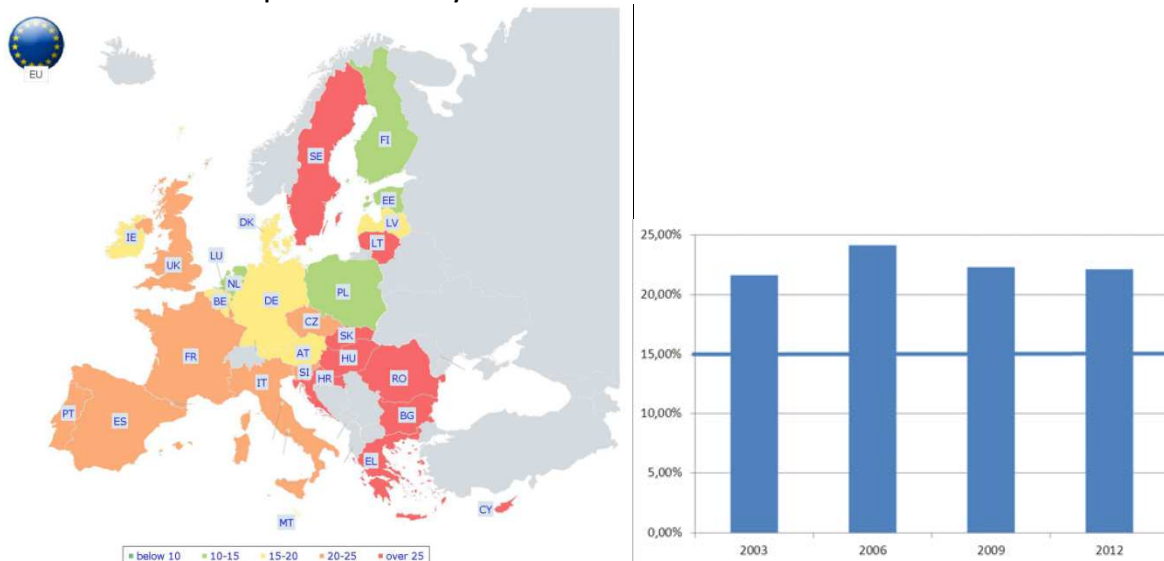
We have to notice that none of these goals is achieved *at the EU average*, whatever the year considered. But the situation is quite heterogeneous, because for each indicator, a few countries attain the goals established by *E&T 2020*. This is shown in the graphs (19-22) presenting the degree of attainment of the goals for each EU country in 2013 and for the EU average for the last years available (source: *Education and Training Monitor 2014*). On the graph presenting EU averages, the benchmark is represented by the bold blue line. On the “countries” graph, the green colors correspond to countries achieving the goal established by E&T 2020. The other colors (yellow, orange, red) indicate more degraded performances.

Nevertheless, some favorable evolution is perceptible for the skills acquisition of the 15-years olds for the last available data.

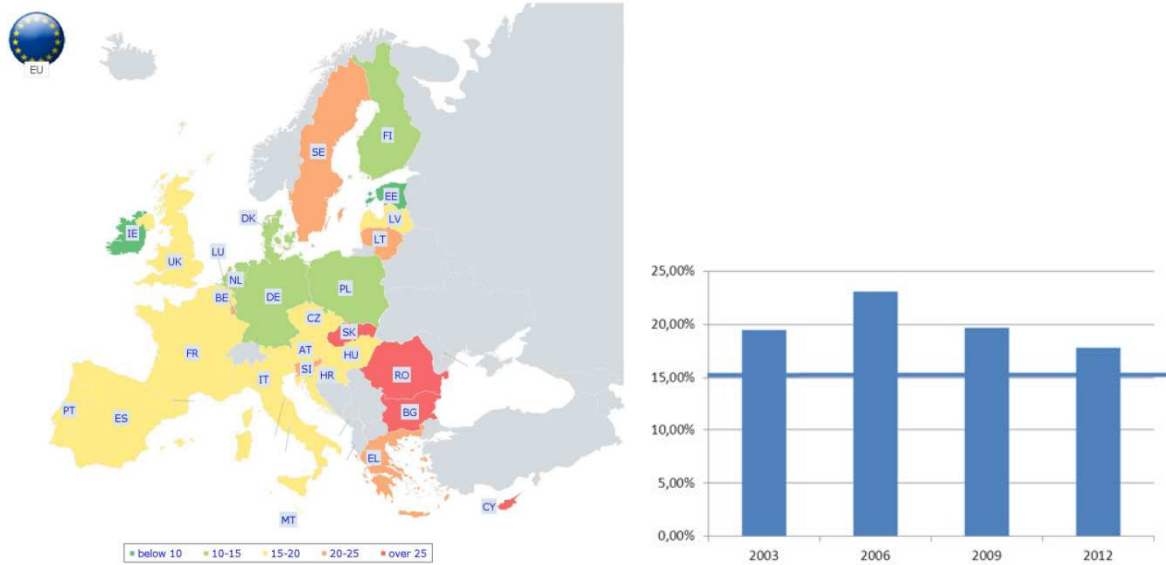
Graph 19: Share of adults (age group 25-64) participating in lifelong learning actions



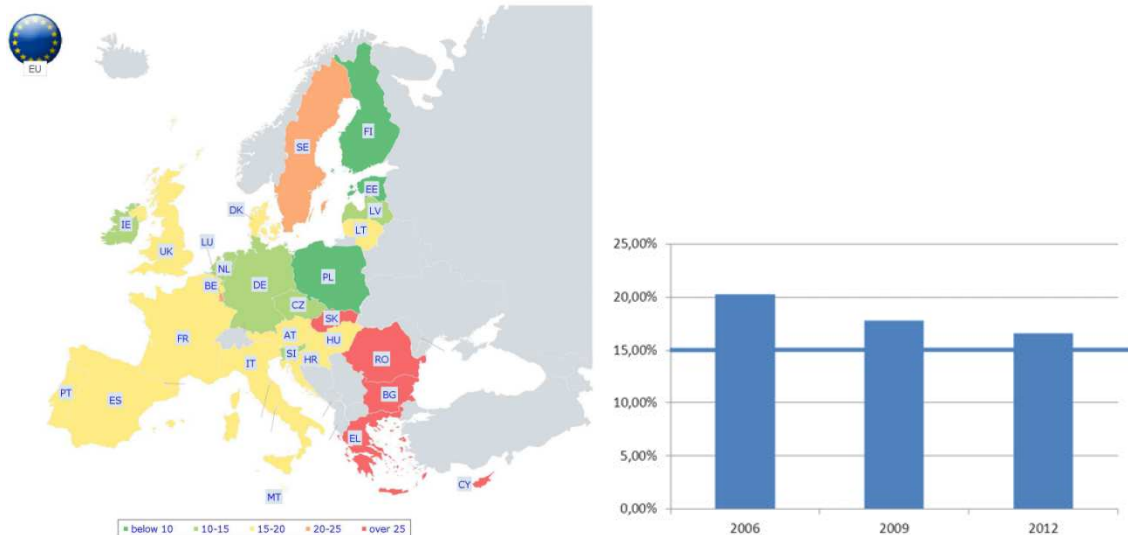
Graph 20: Share of 15-years olds with insufficient abilities in mathematics



Graph 21: Share of 15-years olds with insufficient abilities in reading



Graph 22: Share of 15-years olds with insufficient abilities in science



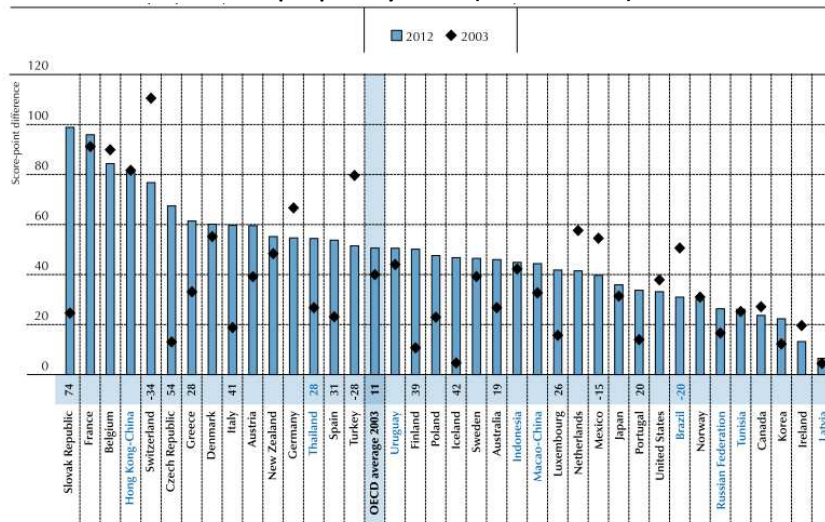
The rest of the section discusses the factors improving the acquisition of skills and the existing heterogeneity in this acquisition.

The effort of early childhood education is unevenly dispatched among countries, but represents an important factor for the student’s future performance

Early childhood education, i.e. *pre-primary education*, is unevenly dispatched in the OECD and European countries. In particular, the available data underline that at age 3, between 51% (Finland, Poland) to 95-98% (France, Finland) of children are enrolled in early education institutions (source: OECD, 2014). The large variation in the level of expenditures (public and private) in early childhood education among countries also confirms the inter-countries dispersion of the effort. As underlined in OECD (2013a) and OECD (2014), childhood education is an important input for the student’s future performance. There is empirical evidence that early entry in the education system improves the preparation and the success of the student in the formal education system (Heckman, 2000; Chetty et al., 2011). Recent data provided by OECD underline that there is a large benefit for the

performance of the students having pursued pre-primary education, as shown in graph 23 below. It notably shows that the relationship between students' mathematics performance and their attendance in pre-primary school has generally strengthened between 2003 and 2012.

Graph 23. Relationship between students' mathematics performance and their attendance in pre-primary school (2003 and 2012)



Source: OECD (2013a), Figure IV.1.13.

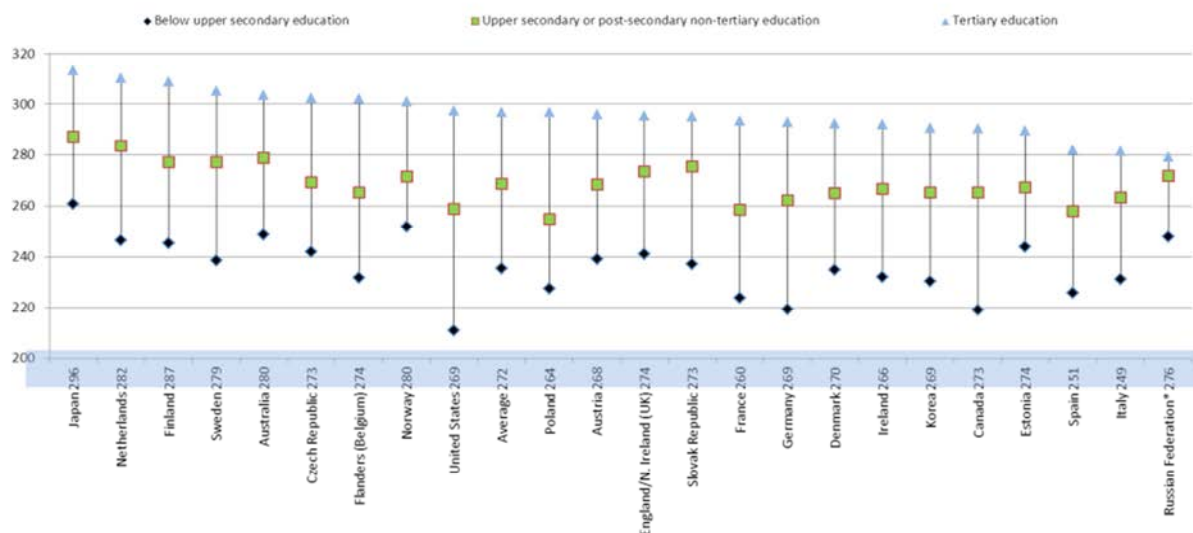
Note 1: (mean) score-point difference in mathematics performance (PISA 2003 and 2012) between students who reported having attended pre-primary education for more than one year and those who hadn't.

Note 2: countries are ranked on the criteria of the mean score-point difference in mathematics performance for the year 2012.

Skills level as a non-linear function of educational attainment

The existing data show evidence of the favorable impact of educational attainment to gain high skills, but the relation between education and skills is rather complex. For instance, inside a given country, the higher the education level is, the higher the literacy skills levels; but, for a given level of educational attainment, the difference in the skills levels can be strong between countries (cf. graph 24). In addition, the gap between the percentage of older (25-34) and younger (55-64) adults is rather large, underlining a progress in the acquisition of skills for the youngest generations. The magnitude of this gap also varies quite significantly among the OECD countries (graph 25).

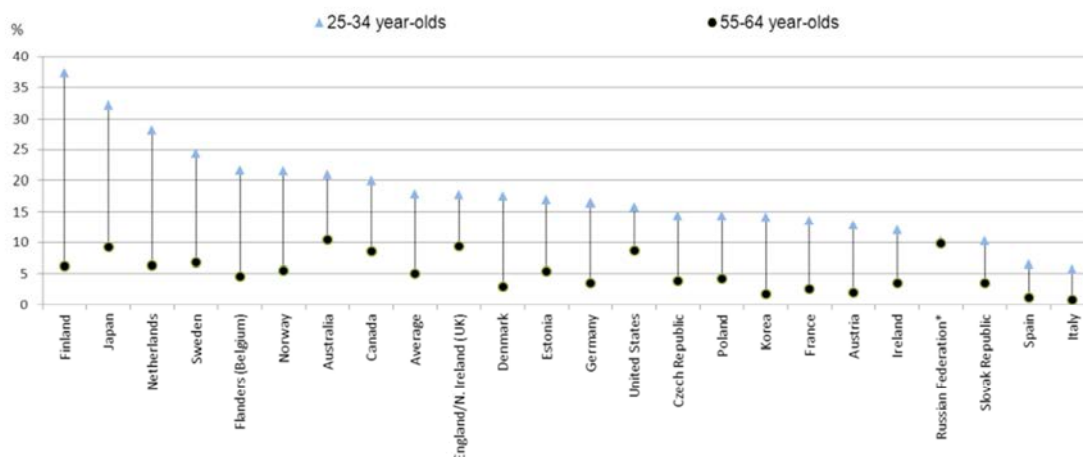
Graph 24. Mean literacy score by education attainment (2012)



Source: OECD (2014) with PISA 2012 data.

Note: countries are ranked on the criteria of mean literacy score by tertiary educated people.

Graph 25. Percentage of younger and older adults scoring at the highest literacy proficiency level (2012)



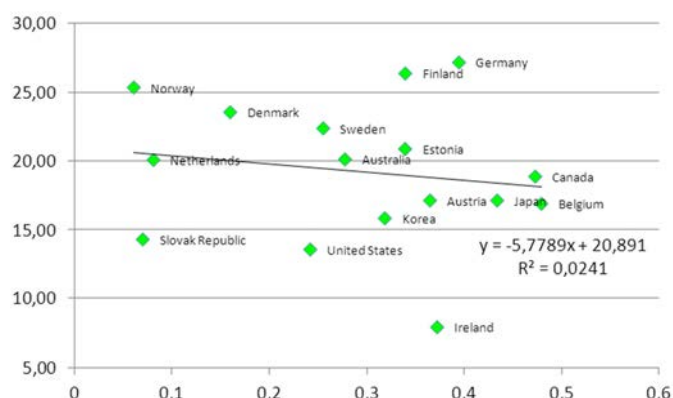
Source: OECD (2014) with PISA 2012.

Note: countries are ranked on the criteria of mean literacy score of 25-34 year-olds.

Skills levels and the intensity of ‘vocational-type’ education among adults

An established dual system or more generally, a special importance dedicated to vocational education and training and/or apprenticeship could induce different and more specialized, or higher level of competences. According to the data available, the intensity of vocational education among the graduated does not seem to have any incidence on their competence level (in average). For instance, the two graphs 26 and 27 below show no *inter-country* evidence of correlation between the proportion of upper secondary education graduated adults and the percentage of the related population having obtained the highest scores (levels 2 or 3)¹⁹ for the test of the skill “*problem solving in technology-rich environments*” in the 2012 PIAAC survey (OECD). It suggests that the level of education (even with non-linearities, coming from significant differences among EU countries) is more important for the skills level than the type of education received (‘vocational’ or ‘general’). Nevertheless, the share of vocational education could have an impact in the labour market (we underline this effect in section 1.1.4).

Graph 26. Skills level and intensity of vocational education among adults of the secondary upper education level

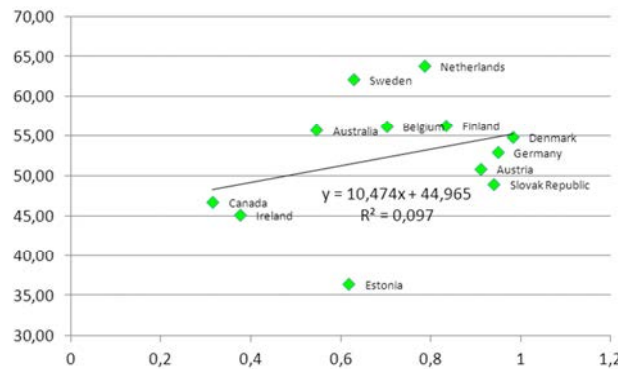


Source: data from OECD (2014) and PIAAC 2012, CEP-Groupe Alpha calculations

Note: % of graduated individuals with an upper secondary education level having pursued vocational education *in abscissa*, % of upper secondary level educated adults scoring at levels 2 or 3 in problem solving in IT-rich environments *in ordinate*.

19 The different levels/categories of scores for the corresponding test are: opted out of the computer-based assessment (OECD member/partner choice); no computer experience; failed ICT core test; below Level 1, Level 1, Level 2 and Level 3.

Graph 27. Skills level and intensity of vocational education among adults of the tertiary education level



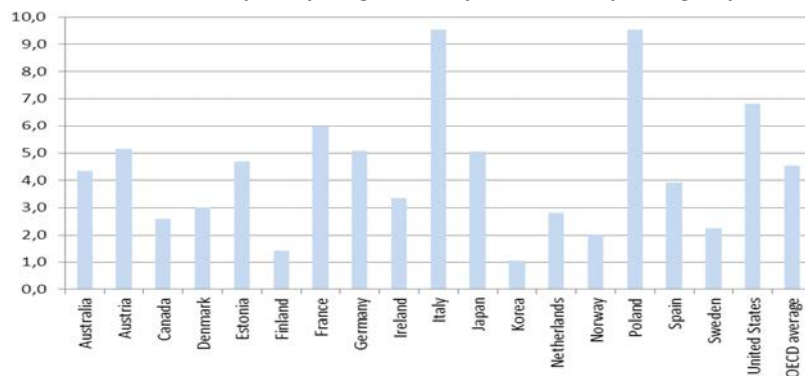
Source: data from OECD (2014) and PIAAC 2012, CEP-Groupe Alpha calculations

Note: % of graduated individuals with a tertiary education level having pursued vocational education *in abscissa*, % of tertiary educated adults scoring at levels 2-3 in problem solving in IT-rich environments in *ordinate*.

The importance of familial background for the individual's educational attainment

There is a large literature in economics dealing with the importance of familial background of educational outcomes, underlining a significant impact of parental background and education (e.g. Haveman and Wolfe, 1995; Holmlund, Lindahl and Plug, 2011, Fleury and Gilles, 2015). This feature is notably highlighted by the gap in the likelihood of participating in tertiary education depending on parental education (graph 28): the ratio of likelihood in the participation of high educated families to that of low educated families is higher than the unity in all OECD countries except one (Korea). This ratio largely varies among countries, underlining significant differences of *intergenerational mobility in education*, i.e. the evolution in the educational status between parents and their child.

Graph 28. odds ratios of the likelihood of participating in tertiary education depending on parental education (2012)



Source: OECD (2014) with PIAAC 2012 data.

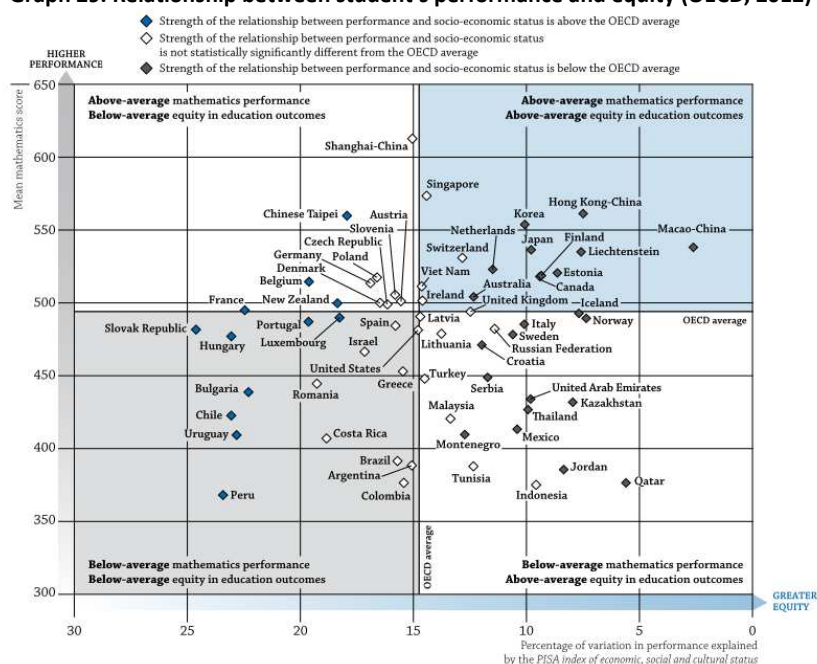
Note 1: the level of education of the highest educated parent is considered.

Note 2: The "odds ratio" reflects the relative likelihood of participating in tertiary education of individuals whose parents have upper secondary or tertiary education compared with that of people whose parents have only below upper secondary education.

A complex relationship between equity and student's performance

The relationship between the degree of equity and the student's performance largely varies with the country. This link is not linear and not necessary positive, but is rather complex, as shown in graph 29 for OECD countries. Indeed, for a given level of equity, significantly differences in student's performance may be observed between the countries (e.g. Tunisia and the United Kingdom). Similarly, a given level of performance may be associated with countries exhibiting sensible differences in equity (e.g. France and Norway).

Graph 29. Relationship between student's performance and equity (OECD, 2012)



Source: OECD (2014), Chart A9.4 p. 194, with mean score in mathematics (PISA 2012) for the student' performance
 Note: mean score of the country is *in ordinata*, indicator of equity in education outcomes in the country *in abscissa*.

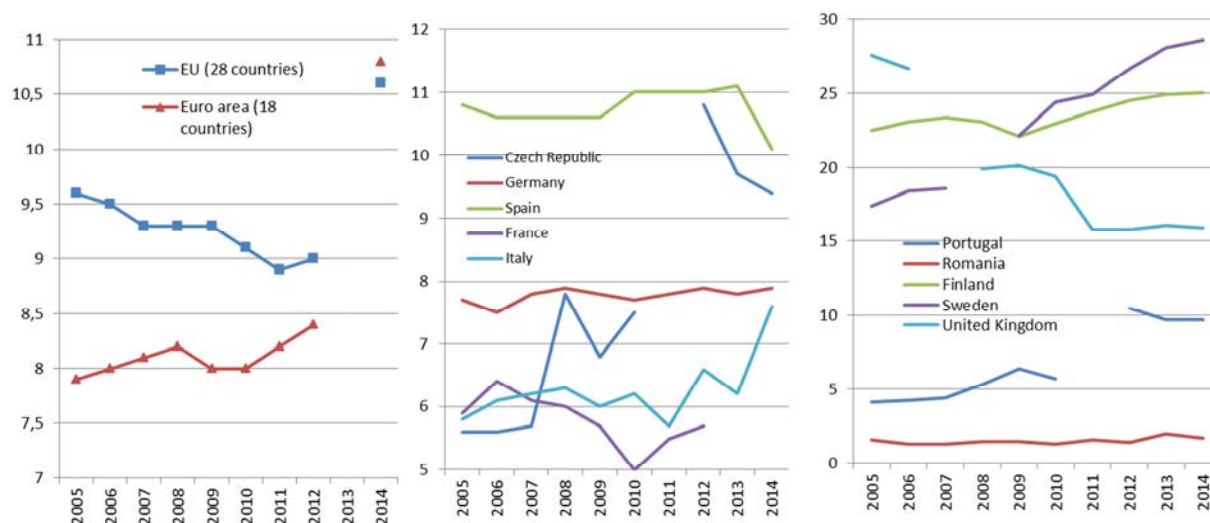
A rather modest and stagnating participation to adult learning, with unequal access

The overall participation to lifelong learning actions is rather low in the European Union. In particular, with data from the Labour Force survey (LFS), the level of participation of the adult population is below the benchmark of “15%” of the *Europe 2020* strategy at the EU28 and Eurozone level and in most countries considered for our qualitative survey (cf. part2), with some notable exceptions as Sweden, Finland or UK (graph 30). A particular concern is that the progress of this indicator has stagnated or has started decreasing since the beginning or the 2000s (exceptions: Czech Republic, Spain). Yet, comparisons between countries should be made carefully, because of methodological issues. Indeed, while temporal evolutions for each country seem ‘robust’, the comparability between countries may be a little biased. For instance, for Denmark and Finland, the data about Training in the LFS come from administrative data (Eurostat, 2012), which quantifies the possibilities of comparison with the other countries. Some breaks in the data series due to definition changes occur for some countries²⁰ (the year where it starts, in case, there is no data displayed on the graph).

Finally, a persistent failure in the actions of adult learning is that higher skilled workers have a far higher likelihood than the lowest skilled workers to participate in the learning (graph 31).

²⁰ At least for France, there is a large question of consistency of the data provided for 2013: the rate of participation to LLL activities is 5.7% in 2012 and is supposed to be 17.7% in 2013, with a break in the data serie. But the rate of growth for 2012-2013 hardly corresponds to the ‘ground’ reality and appears totally unrealistic for us not to consider seriously this (no statistic is not available for 2014).

Graph 30. Participation by the adult population in lifelong learning actions (% , 2005-2014)

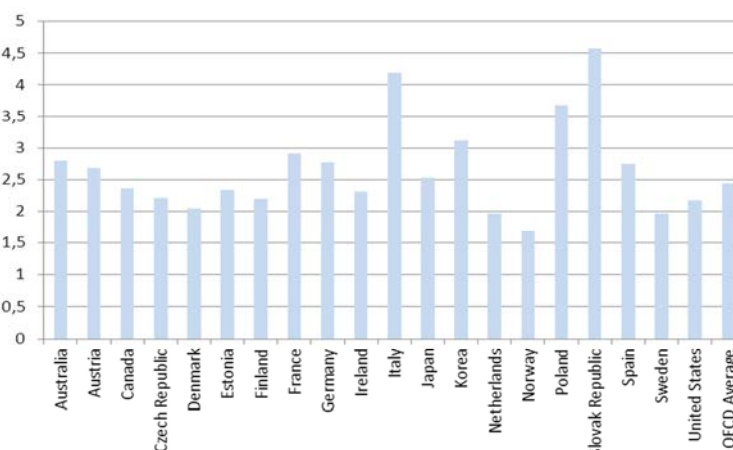


Source: Eurostat, Labour Force Survey.

Note 1: the lifelong learning actions refer to persons aged between 25 and 64 who have stated that they have received education and training in the 4 weeks preceding the survey.

Note 2: the data for 2014 are provisional and are unavailable for France. Absence of data for any other year/country indicates a break in the data serie

Graph 31. Participation to adult learning relatively to the skills level (odds ratio of the likelihood of participating, 2012)



Source: OECD (2014) with PIAAC 2012 data, graph from CEP-Groupe Alpha.

Note: The odds ratio reflects the relative likelihood of participating in adult education (formal or non-formal learning) of individuals whose parents have the highest level of literacy proficiency (level 4/5) compared with that of people whose parents the lowest level of literacy proficiency (level 0/1).

Acquisition and relevance of skills: conclusion

The acquisition of basic skills (maths, reading, science) appear in the most of the EU member as clearly insufficient relatively to the goals fixed by the Union in E&T 2020. The goal displayed by the Union regarding *Lifelong learning* appears even more challenging because the performance in LLL actions appears is generally poor.

Lifelong learning challenges embody skills that goes beyond the skills only acquired in investment in education during compulsory (formal) education. Beyond the level of education attained, the *skills* content of any learning program is strategic because they represent practical and operational knowledge to the learners. The education expenditures are important, but for any given budget it is possible to choose between different combinations of learning, which may be resulted of different trade-offs: vocational vs generation education, social sciences vs hard sciences (for tertiary education), etc. Lifelong learning brings together skills that may have been acquired early, during

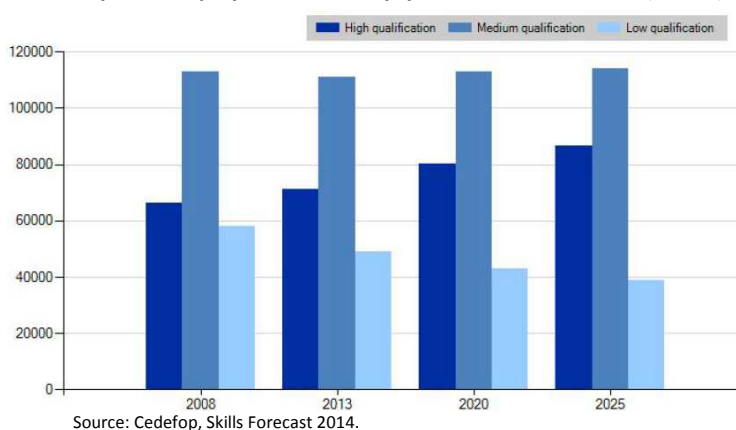
compulsory schooling, in higher education, and skills that can be acquired throughout the adult and professional life: this skills acquisition in different settings may be more or less continuous. It induces a more or less renewal of skills at the individual level, and between generations on the labour market. The discontinuity and complexity in the accumulation of 'education' capital underlines both the ambition and the difficulty of implementing the European concept and (central value) of *Lifelong learning*.

1.4. Insertion and transitions on the labour market

Overall, education is a good protection against unemployment and improves the probability of keeping his job during the economic crisis. On average in OECD countries, the unemployment rate for graduates of tertiary education has remained below or equal to 5%, the graduates of the second cycle of secondary education remained below the 8 % but the individuals whose educational level is lower than the second cycle of secondary education has crossed several times the 10% between 2000 and 2012 and finally reaching 13.6% in 2013.

This trend is reinforced because technological advances have transformed the needs of the global labour market, individuals who have specific or higher skills are strongly requested. So, the economies of the OECD countries are dependent on an adequate supply of highly skilled workers. The projections for employment in Europe indicate that about 35% of jobs will require a degree of higher education by 2020, while in 2012 only 27.6% of the workforce EU (between 25 and 64 years) had this level of qualification (Cedefop data, see graph 32). In most OECD countries, employment rates are the highest among the highly skilled individuals. Meanwhile, less skilled individuals face a higher risk of unemployment.

Graph 32. Employment trends by qualification, 2008-2025 (EU28+)



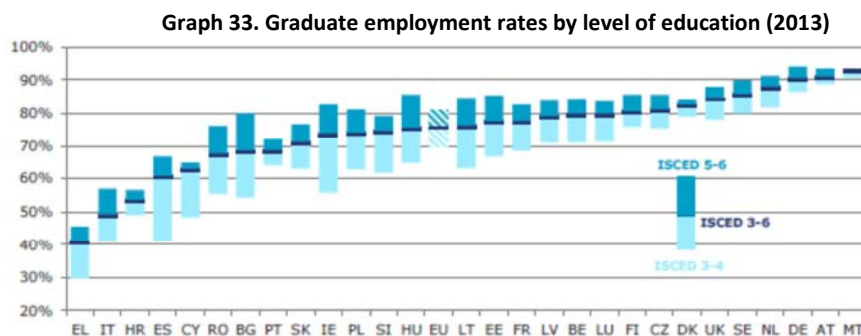
The level of education influences the employment rate of young graduates

The conditions of access to employment for young people entering the labour market varies greatly by level of education. Looking at the employment rate of graduates²¹, it appears that, all in the world, higher education recent graduates have a higher employment rate than the upper secondary and

²¹ The term "graduate" refers to any person who has left education and training with at least upper secondary or post-secondary, non-tertiary qualifications (ISCED 3 to ISCED 4, excluding ISCED 3C short), or with tertiary qualifications (ISCED 5 and 6) and applies to those aged between 20 and 34 who left education and training no more than three years prior to the reference year.

post-secondary recent graduates. This is explained by the fact that changes in the structure of employment is in favor of university graduates

But there are large disparities by country: qualification level facilitates more or less access to employment (see graph 33). In Germany, the level of employment exceeds 90% for ISCED 5-6 and 88% for ISCED 3-4. In Italy, the proportions are only 58% and 42%. Several types of explanations can be advanced. First, the education system promotes more or less the integration of young graduates. In countries like Germany or Denmark, young people benefit from initial training system where the professionalizing content is well recognized by companies. In contrast, graduates from countries like Spain or Italy (whatever their degree) must pass by unemployment and prove themselves by agreeing to begin with unskilled jobs. But it also appears that they are in countries where there has been a sharp decline in jobs' offer and particularly for young people, so that the degree produces less effect on the professional insertion.



Source: Eurostat, Labour Force Survey.

Note: Countries are ranked in ascending order by the total employment rate of recent graduates (ISCED 3-6), i.e. the ET 2020 benchmark performance.

In order to make progress in this field, the Council of the European Union adopted a new ET 2020 benchmark on *graduate employability* in May 2012. The aim is to reach a graduate employment rate of at least 82 %. In 2013, on average across the EU, the employment rate of recent graduates from higher education is 80.9% whereas the employment rate of those with upper secondary education attainment is 69.5%. But with the economic crisis, these rates have declined for three years. For ISCED 3-6, the employment rate decreased from 77.4% in 2010 to 75.5% in 2013 (graph 34).

Graph 34. Evolution of employment rate of recent graduates (2013)

		2010	Current *		
		EU average	EU average	Top performance	Bottom performance
The case for education					
Education investment	As a percentage of GDP	5.5 ₂₀	5.3	7.9	3.0
	Year on year change at constant prices	1.7 ₂₀	-1.1	6.2	-26.8
Employment rate of recent graduates	ISCED 3-4	72.1	69.5	90.8	29.7
	ISCED 5-6	82.7	80.9	94.1	45.4
	ISCED 3-6	77.4	75.5	92.2	40.0

Source: Education and Training Monitor 2014.

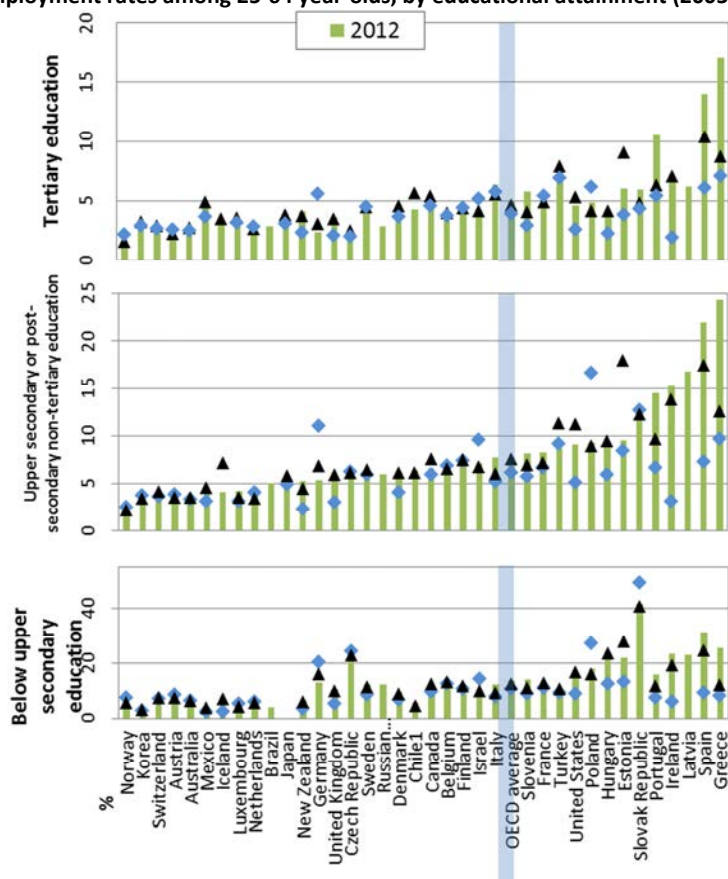
Although national situations are different, decreasing the rate of employment has been a focus of all countries' policy initiatives. Since 2011, according to the European recommendation, countries are implementing several policies to increase work experience opportunities, correct skills mismatches and upgrade young people's skills (see the Eurydice report: European Commission/EACEA/Eurydice, 2013).

An unemployment rate largely related to tertiary education attainment

One of the major objectives of the *Europe 2020* strategy is to increase to 40% by 2020, the proportion of 30- 34 years with a diploma of tertiary education or equivalent qualification. In 2013, 36.9% of this age group was graduated at the tertiary education level or equivalent.

Over the past decades, almost all OECD countries (including European countries) have seen significant increases in the educational attainment of their population. Between 2000 and 2012 the proportion of people with tertiary education increased (at an average annual rate of more than 3%). This can be explained by the fact that for a person, it always brings to pursue higher education professional integration. Individuals who hold a tertiary degree can expect even higher net returns than individuals who invested only up to the upper secondary level of education (graph 35). More, in all countries in the sample, the tertiary graduate unemployment rate is lower than others levels. However, it remains high for countries like Spain and Portugal: in these countries, the unemployment rate for tertiary education is so high that it may become discouraging for personal investment in E&T.

Graph 35. Unemployment rates among 25-64 year-olds, by educational attainment (2005, 2010 and 2012)



Source: OCDE (2014)

But it should be noted that for a country like Spain gains for tertiary education on literacy skills are lower than in other countries. This may explain a lower insertion of this degree level in the labour market.

The vocational nature of education for middle-educated people favors employability

The vocational education and training (VET) can be defined as “education which is mainly designed to lead participants to acquire the practical skills, know-how and understanding necessary for

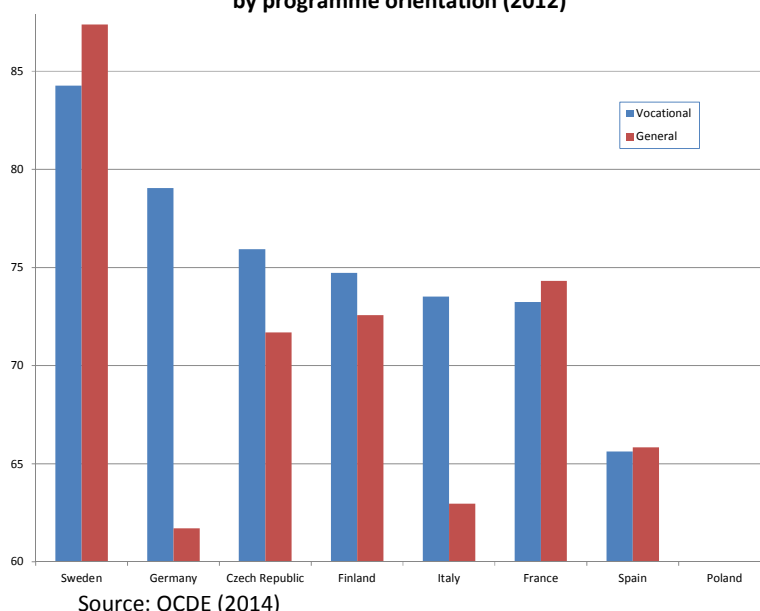
employment in a particular occupation or trade or class of occupations or trades”²². It is most often addressed to students with upper secondary or post-secondary non-tertiary education.

By combining learning at school and at work, VET aims at improving insertion in the labour market. In fact, the impact of the nature of the training on employability differs across countries. In the sample selected for the qualitative survey (cf. part 2), we can distinguish (see graph 36):

- Countries whose employment rate is higher for VET than for general training (Germany, Czech Republic, Finland). With a high rate of employability for VET and a low rate for general education, Italy is similar to the group. However, with an equivalent differential, his case is still very different from Germany where VET compensates for the weakness of the enrollment tertiary rate.
- Countries whose employment rate is higher for general training than for the vocational one (France, Spain). Also included in this category Sweden which has the particularity of having extremely high employability rate for both VET and general education.

Beyond the nature of training, there are national structural effects strong enough. Spain has very low employability rate whether for VET or general training. In the contrary, Sweden presents in both cases the strongest employability rate.

Graph 36. Employment rate of adults with upper secondary of post-secondary non-tertiary education by programme orientation (2012)



The problem is that the skills acquired through VET may be of limited use in a labour market changing rapidly. Similarly, people with upper secondary qualifications usually have levels of literacy proficiency below those of people with a general upper secondary education. This questions the countries, faced with the crisis that try to import the model of the German dual system like Spain, Portugal (ETUI, 2014) to improve the effectiveness of their education systems. But it is not sure that the efforts are at the height of the model and above that necessarily produce the same effects out of its national context.

Literacy proficiency improves employment rate

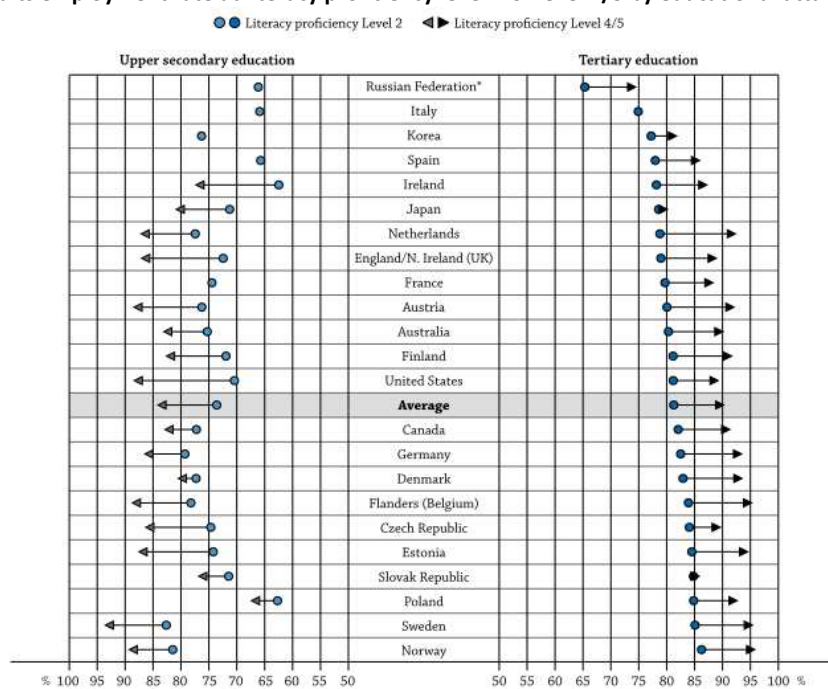
Literacy, numeracy, science and technology are the basis for learning and are a determining factor in finding a job and integrating into society. At the time where the digital revolution opens the way to new forms of reading and writing, literacy skills are even more important. The EU's growth strategy

²² Definition of the *International Standard Classification of Education (ISCED-97)*.

Europe 2020 aims to promote smart, sustainable and inclusive growth. For this purpose, this strategy emphasizes the "basic" skills in reading, numeracy, science and technology. A high-level group dedicated to reading was created. His report (see EU high level group of experts on literacy, 2012) highlights the importance of reading literacy in the 21st century and the need for commitment and cooperation at the political level to achieve real improvements.

Effectively, higher skill levels are associated with higher employment rates in almost all the countries (graph 37). This is true for graduates of tertiary education graduates and for the second cycle of secondary education: in Finland and Sweden, the employment rate for individuals at Level 4 or 5 of literacy skill level are higher by more than 10 percentage points for those individuals at Level 2. However, the value given to the level of training and expertise varies with the national labour market.

Graph 37. Adults employment rate at literacy proficiency level 2 or level 4/5 by educational attainment (2012)

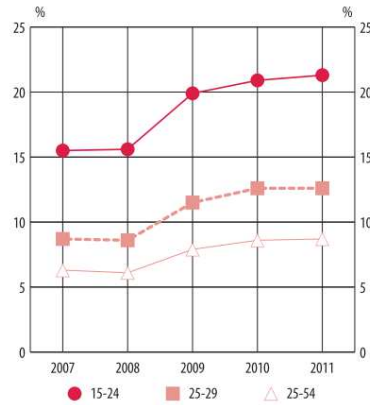


Source: OCDE (2014)

Persistent difficulties in the insertion of young people on the labour market

In OECD countries, about 20% of young adults were unemployed in 2012, the highest percentage recorded for over a decade. This phenomenon is particularly strong in Europe where, according to the *2012 Youth Report of the European Union*, youth unemployment of 15 to 24 increased by 50% in the EU since September 2008, from 15% in February 2008 to 22.5% in July 2012. Youth unemployment rates have been consistently higher than that of the population as a whole. The increase in the share of youth unemployed has been significantly greater than for the older active population since the start of the financial crisis in spring 2008.

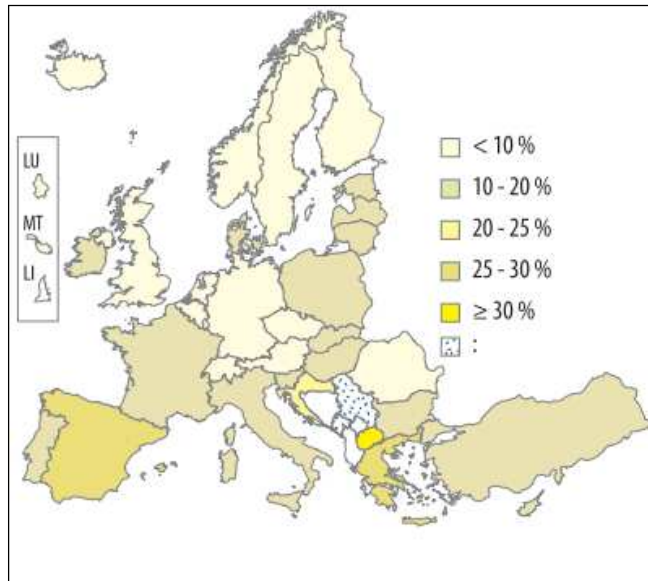
Graph 38. Increase of unemployment rates of young people EU-27 average, by age (2007-2011)



Source: European Commission (2012)

In the sample selected for our qualitative survey (part 2), the difference between the country where the youth unemployment rate is the highest and the one where it is the weakest is at its maximum (cf. graph 39). For the 25-29 years old, a difference of more than 20 points separates Sweden that shows the lowest rate from Spain, the Member State with the highest rate (32.5%), followed by Italy (29%) and France (22.4%).

Graph 39. Unemployment rates of young people aged 25-29 by country (2011)

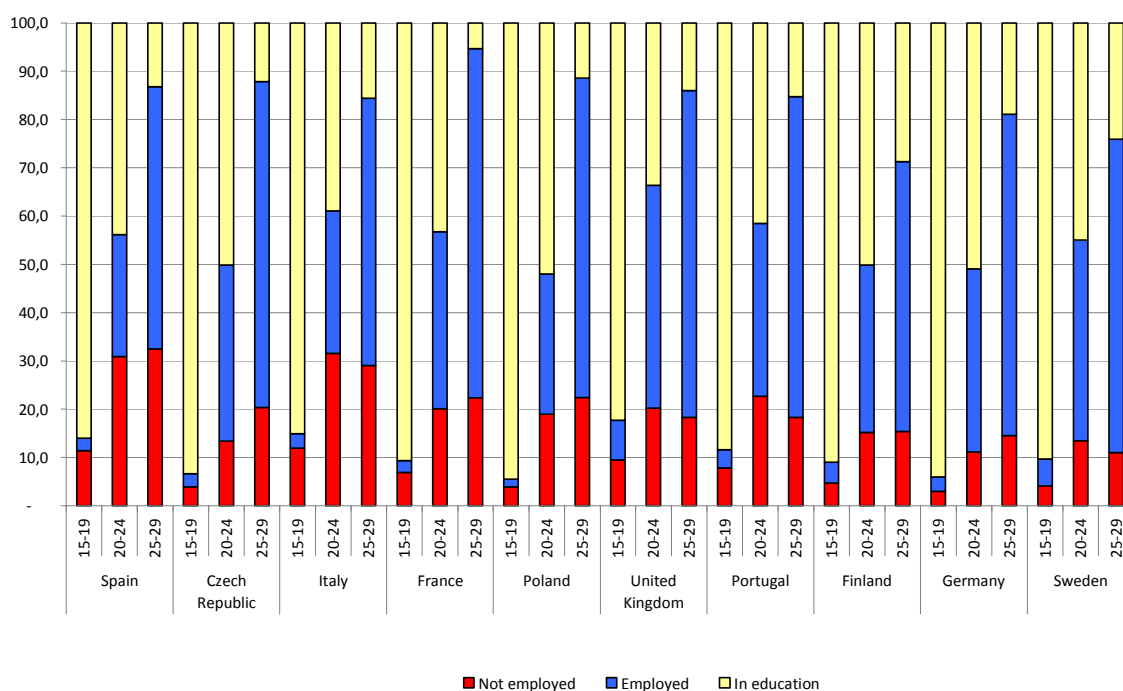


Source: European Commission (2012)

There are two groups of countries (cf. graph 40):

- The countries of Southern Europe and Central Europe which have youth unemployment rate of 25 to 29 years over 20%.
- The countries of northern Europe whose rate appears lower than or equal to 15%.

Graph 40. Percentage of 15-29 year-olds in education and not in education, employed or not (2012)



Source: Eurostat

The European Union tries to reduce youth unemployment and increase employment rates. In this aim, it adopted a series of measures. For instance, the European Commission launched in 2010 the *Youth on the Move* initiative, a set of policy devices relating to education and employment, for young Europeans. It is part of the *Europe 2020* strategy for a smart, sustainable and inclusive growth. It relies on the coordination of national policies to determine the measures to be taken at European and national levels and encourage them.

Furthermore, other actions have been implemented. The first of them is the package *Youth Employment (2012)* which continues the application of measures for Youth in the overall package "Employment". It includes:

- The proposal for Member States to establish a *Youth Guarantee*, adopted by the Council in April 2013.
- Consultation of the social partners on a quality framework for traineeships, followed by the presentation by the Commission of a Council recommendation proposal in December 2013, adopted by the Council in March 2014.
- The European Alliance for Learning and the announcement to reduce barriers to the mobility of young people.

The European Council also agreed in February 2013 to launch the *Initiative for youth employment* a European program against unemployment of young people (< 25 years old) to reinforce and accelerate the measures provided by the *Youth Employment* device. It focuses on helping young people who are unemployed and do not follow in education or training, in areas where the youth unemployment rate exceeds 25%.

The European Commission also published the Communication "Working together for young Europeans" (European Commission 2013b). It aims at accelerating the implementation of the Youth Guarantee and investments for young people and to develop tools to help countries and EU companies to recruit young people.

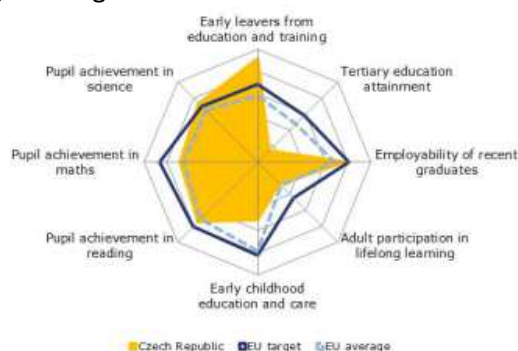
Part 2. National issues in E&T and Trade Unions perceptions

This part uses mainly the national data from European Training Monitor (2014), OECD and Eurostat. It is also based on a qualitative survey targeting trade unions confederation²³ in ten European countries: Czech Republic, England, Finland, France, Germany, Italy, Poland, Portugal, Spain, and Sweden. A survey including a large set of question on the whole area of E&T (from childhood education to Lifelong learning issues) has been sent to national contacts (unions). For five countries, the survey was provided answers (Finland, Germany, Italy, Portugal, and Sweden): for these countries, this part addresses the current (national) issues in education and training and underlines the conception and perception of Trade Unions, incorporating the answers made by some trade unions. For the rest of the countries, this part only includes current (national) issues in education and training.

2.1 Czech Republic : major weakness in higher education and for Lifelong Learning

Main features on the labour and education markets

Czech Republic is characterized by quite low unemployment rates. In particular, the younger people (<25 years old) suffer from a high unemployment rate that stays high (15.9% in 2014) but that has significantly decreased over the 2005-2014 period and that is much lower than at the EU level (higher than 22% for Eurozone and for the EU average). In terms of education, the chart below underlines mainly the relatively low performance of Czech Republic for the rate of tertiary education attainment. However it also shows the good performance of Czech Republic for the rate of early leavers from education and for the employability of the recent graduates (age 20-34) which confirms the good general conditions on the labour market. As many former communist countries, the performance of primary and secondary education is good as shown by the mastery of basic skills, which is in the European average. Conversely, the vocational training system is failing and the rate of Adult participation in lifelong learning is low.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

²³ Please refer to the Appendix for a complete list of Trade Unions that had participated to the survey.

Recent policies and reforms related to E&T

The recent public E&T policies implemented during the last years include:

- The National Qualifications Framework (NQF) for higher education is being developed.
- The "Equal Opportunities" Action Plan adopted by the Government end 2012, together with EU-funded projects, could contribute to reducing the very high and specific ESL rate among Roma children.
- 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 pre-school offer, together with recent measures to increase quality.
- The Government submitted end 2012 a proposal to strengthen the role of mathematics and science in the state Framework Education Programmes.
- 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 government has submitted end 2012 a proposal for practical training in companies for students of upper secondary and Higher Education (HE).
- The government adopted in January 2013 an action plan to 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.
- An action plan adopted in 2009 consisted in transforming 325 secondary schools into centres for lifelong learning offering various forms of continuing education

European policy recommendations

The European Council (2014) notably recommends to Czech Republic:

- Ensure that the accreditation, governance and financing of higher education contribute to improving its quality and labour market relevance.
- Accelerate the development and introduction of a new methodology for evaluating research and allocating funds in view of increasing the share of performance-based funding of research institutions.
- In compulsory education, make the teaching profession more attractive, implement a comprehensive evaluation framework and support schools and pupils with poor outcomes. Increase the inclusiveness of education, in particular by promoting the participation of socially disadvantaged and Roma children in particular in early childhood education.

2.2 Finland: high overall performance in E&T with few weak points

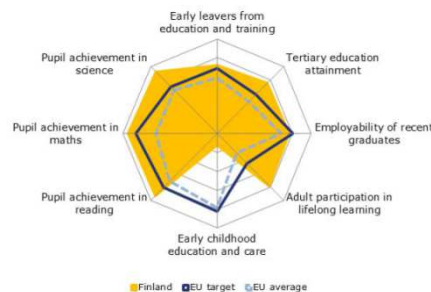
In the news

There is currently a preparation for a new-primary law for early childhood education. This law would make pre-primary education compulsory for 6 years old children²⁴.

²⁴ For now, education is compulsory in Finland for the 7-16 years old, including primary education. Pre-primary education (preschool/kindergarten) is not compulsory and concerns the 6 years old children. All children under school-age have a right to early childhood education and care (ECEC), with municipalities being responsible for arranging the ECEC service (source: Finnish Board of Education). ECEC is based on the *Day care* principle (defined in terms of socially oriented daycare) and may take different forms (for instance in crèches, day-care centres and kindergartens). In 2012, the enrolment rates at age 3 of children in any form of ECEC is rather

Main features on the labour and education markets

The labour market is characterized by a moderate rate of unemployment (8.7% in 2014) below the average of the UE27 or the Eurozone (10.1% and 11.6%) and which has only marginally increased with the crisis. The unemployment of young people stays a problem (with a frequent lack of relevant skills as underlined in the European Training Monitor 2014), with a rate of 20.5% in 2014 (below the European averages). On the education side, Finland exhibits a strong performance in most of the fields, which can be *summarized in the chart below*. In particular, the skills of the 15 years old are very high (scores at PISA 2012), there are higher tertiary attainment rates, and the rate of participation to Lifelong Learning (LLL) is the highest in Europe (but with important inequalities in the access to LLL, older and less skilled people being significantly disadvantaged). An important feature of Finland is the *liberal adult education*²⁵ that is very developed and that beneficiates to ca. one million or more people per year: this partly explains the Finnish performance in LLL at the scale of EU, which is also largely fostered by a very rich offer in terms of VET. Through the Competence-base system²⁶, Finland has a long experience in recognition and validation of non-formal and informal learning.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

The number of NEETs stays an important problem in Finland, estimated to ca. 40 000²⁷. In addition, there exist some skills mismatches due to on-going structural economic changes.

Recent policies and reforms related to E&T

The E&T policies recently implemented in Finland include:

- The *Youth Guarantee package*, a social device for young people introduced in 2006 and enhanced in 2013 (including a guarantee of employment, education or training, an enlargement of study places in VET, a young adult skills programme, a youth workshop, an outreach youth work).

moderate (50%, source OECD): this is notably explained by the opportunity for parents to stay at home to care for new-born and small children.

²⁵ *Liberal adult education* in Finland consists in non-formal learning whose goal is to strengthen “*social cohesion, active citizenship and the conditions for lifelong learning*”. This type of education is very developed and very specific to Finland, with a large number of teaching hours devoted to the field of culture (craft and design, music).

²⁶ The philosophy being to provide “*a flexible way of demonstrating, renewing and maintaining their vocational skills, or of qualifying for a new profession when their work tasks change*” (Finnish National Board of Education).

²⁷ For a whole population of 5.2 million inhabitants.

- The Finnish Parliament is due to examine in 2014 an Act establishing and National Qualification Framework *“for Exam-based and other Competences”*.
- The reinforcement of student guidance and after the end of compulsory education

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines the necessity for Finland to *“improve the labour-market prospects of young people and the long-term unemployed, with a particular focus on vocational education and targeted measures”*.

The position of the SAK trade union regarding investment in E&T in Finland

The Confederation of Trade Unions SAK (*Suomen Ammattiliittojen Keskusjärjestö*, Central Organisation of Finnish Trade Unions) considers that the EU strategic framework in E&T and the attached benchmarks *“as an important tool for national policy making”*, providing useful information for trade unions *“for lining their own perspectives”*. SAK also recognizes the PISA (OECD) survey as accurate information for national decision making, and the utility of the PIAAC survey (OECD).

SAK underlines the *“recents cuts in education spending and their impact on all levels of education”*. The Union points out the changes having intervened after 2011 and the policy lead by the new government that focuses on balance of public accounts. At the end of 2013, new structural measures have enlarged the budgetary cuts. In particular, the Union points out that the public funding for Adult education (in particular for *liberal education* which is an important feature of the Finnish society) and VET provision have decreased because of the budgetary savings, and that *“Schools and education providers have been forced to cut their activities including personnel”*, which will ensure negative consequences *“for the quality of education, class sizes increase, the local school system and school segregation and learning outcomes”*. The public funding for adult liberal education (an important feature of Finnish society) has also decreased.

SAK points out the strength of the Finnish E&T system:

- The system is built on the principles of LLL and free education, with education being seen *“as a key to competitiveness and wellbeing of the society”*: the LLL approach *“is already reality in Finland”*.
- The basic right to education and culture is recorded in the Constitution.
- Providing equal opportunities for all citizens to high quality education and training is a long-term objective of the Finnish education policy.
- The key words for the Finnish education policy are quality, efficiency and internationalization.
- There is very long tradition of social dialogue in Finland and *“the tripartite partnership with Government, trade unions and employer organisations is an integrated part of policy-making covering all levels”*.
- There are *“no educational ‘dead ends’”*. It is always possible to continue from one level of education to another.

The Union underlines the high levels of the skills of the adults (PIAAC 2012). This may results from the following features:

- *About re-skilling or upskilling programs*. There exist special programs for less skilled adults and immigrants (pupils in particular). Adults can benefit from courses from primary or secondary level, migrants may benefit from preparatory training in language skills and other abilities that are needed in further studies. Most of unemployed people are offered

“vocational labour market training for reskilling, upskilling or to complete a vocational qualification, a further or specialist vocational qualification, or a vocational module”. These examples incarnate the *“fundamental principle of Finnish education to provide equal opportunities for learning and growth to every pupil or student”*.

- About skills other than basic skills. Digital and foreign languages are recognized to be important and are taken into account into the curricula. There exist specific programs

In addition, the recent years have been the occasion of implementation of new models of apprenticeships in Finland. The *Youth guarantee* program contains two devices, one corresponding to the “2+1” dual model²⁸ and the other to an apprenticeship pre-period system.

Despite of the positive aforementioned features, the SAK Union points out many worrying issues in the current state of E&T in Finland:

- About the teacher’s profession. The 2013 TALIS Survey reveals that a significant part (23%) of primary school teachers have *“wondered whether it might have been better to choose a different profession”*; they are typically less paid than secondary school teachers²⁹ (OECD, 2014). Teachers in Finland are afforded with *“fewer opportunities for developing in their profession”* (referring for instance to mentoring or continuing education)? They also feel that their own (initial) training *“fails to provide sufficient tools”* in parent-teacher interaction and multi-professional collaboration, controlling disruptive behavior in classroom and catering to the need of challenging students. The Union confirms that more upskilling and reskilling should be given to teachers and adds that teaching conditions are getting degraded (with a rise in both the teaching hours and the number of students per class).
- About social cohesion. While equality and local school networks *“have been the backbones of Finnish education policy”*, there is a large concern about a situation that turns for the worse: the union notes the first signs of segregation between schools³⁰ (especially in larger cities) after the recent budget cuts. This could have significant effects on learning outcomes.About youth unemployment. Despite public investment through the *Youth Guarantee* package, youth unemployment stays high in Finland, mainly due to the *“poor economic situation and public sector cuts in the areas of various ministries*.
- “About skills mismatches. Economic and demographic changes explain the existence of skills mismatches. In particular, the PIAAC survey underlines that the older the people the lower the skills on information technology. In general, the mismatches concerns people with low basic education and basic skills. The Union insists on the fact that *“labour market training and adult education should be allocated in situations of profession changes and unemployment for adult and aging population”*.

As recalled by SAK, Finland has a long tradition of preparing policies in multi-stakeholder working group where ministries, the National Board of Education, the social partners and the VET providers

²⁸ In this model, the apprenticeship receives two years of vocational education in schools before by one year of practical ‘hands-on’ field training a company.

²⁹ In its edition 2014, the Education and Training monitor for Finland underlines that teachers are well prepared, highly respected and rewarded. In fact, until lower secondary schools, teachers are less paid than similar educated profiles in the private sector. In the same time, in relative terms, i.e. relatively to the other member states, Finland exhibit higher average salaries (except for pre-primary school, OECD, 2014). This example underlines the problematic of the EU benchmark that indirectly relate to the concept of convergence between states: the ranking among the EU27/EU28 is not “everything”, the “absolute” performance is also very important.

³⁰ This new situation is now referred through the term of « *school shopping* » (parents sending their children not to the nearest school but to what they think as the best school).

participate. The role of trade unions is formally advisory but their role may go beyond that in practices thanks to their own experts of the E&T system: “social partners are sometimes de facto policy makers together with the government civil servants and politicians.” Whatsoever, the SAK Union particularly asks for the abandonment of the austerity policy (budgetary cuts and saving) and for more investments in the E&T of the adult population. Recommendations have already been made at a tripartite level to develop new models for apprenticeships (see supra)

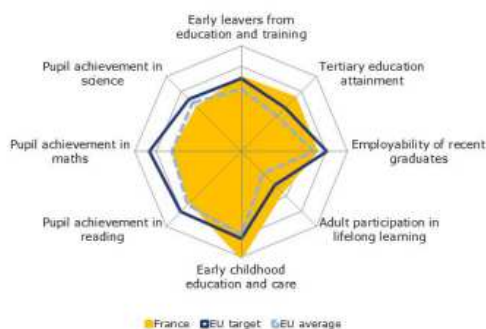
2.3 France : Some weaknesses in the acquisition of skills and for the labour market insertion of young people

In the news

In March 2015, the French Minister of Education presents her reform for the “*Collège*” (first part of secondary education). The philosophy of the proposed new model of *Collège* enhances the practical aspect of acquired knowledge, notably through earlier introduction of foreign language learning and introducing hours dedicated to interdisciplinary courses. The announcement of the recruitment of 4000 teachers is notably judged very insufficient by the trade unions because in average, it will practically mean not more than one teacher per school of this level. The Unions also ask for more autonomy to the teaching teams.

Main features on the labour and education markets

In terms of education and as *underlined in the chart below*, France exhibits a high performance in the rate of tertiary education attainment and the early childhood education and care. The country stands in the EU average for the mastery of basic skills, but it stays far from the attainment of the related indicators EU target; the last results at the PISA survey (2012 OECD) also underline the strong (and persistent) inequalities in the French school system. The chart shows a relative good performance in access to the adult participation in lifelong learning. Likewise, the rate for the early leavers from education and training is close to the EU average and benchmark. On the labour market, the global French unemployment rate stands at 10.2% in 2014 (this is also the EU average, below the Eurozone average rate) but the younger people (<25 years old) experience significantly larger unemployment than at the EU or Eurozone levels, in average (22.2%/23.7%).



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms related to E&T

Recent E&T policies implemented in France in the last years include:

- In January 2013, a decree has launched the 'rhythm of schooling' reform, implemented with flexibility at the municipalities level. This reform aims at raising the time devoted to sports and cultural activities in primary school, diminishing the daily hours, but adding a semi-day at school for pupils to compensate.
- The 2013 reform of compulsory education "*Refondons l'école de la République*" foresees additional means with a strong focus on pre-primary and primary education levels namely with the device 'More teachers than classrooms' (« *Plus de maîtres que de classes* »).
- The July 2013 reforms of both the compulsory education system and the higher education and research system demonstrate a comprehensive approach to adapt to the digital age, namely to the use and production of Open Educational Resources (OER). Both include training and support for teachers to adopt new pedagogical approaches. The development of 'e-Education' is seen as a major component of the digital economy. An ambitious action plan "*France Université Numérique*" (FUN)", with specific funding, was also launched in October 2013. It aims to support the international competitiveness of higher education actors by increasing their offer of Massive Open Online Courses (MOOCs) and by developing distance learning.
- The 2013 reform of the compulsory education system recognises the need to take upstream structural actions. One of the objectives is to halve by 2017 the number of youngsters leaving school without sufficient qualifications to enter the labour market.
- The recently adopted reform foresees a strong increase in the number of teachers and aims at more supportive pedagogical approaches. Both teacher and educational staff's initial education and continuous training will be revised and a new competence framework leading to a new master in teaching is expected to be adopted soon. The set-up of one new accredited institution in charge of the staff's initial education and continuous training (*Ecoles supérieures du professorat et de l'éducation*, 'ESPE') for each *Académie* (the administrative geographical zone of the Ministry of Education) is a key measure of the reform to introduce innovative approaches and more practical training for the future teachers.
- To facilitate transition to work, initiatives taken or planned by the government in 2013 aim at securing jobs with a focus on the less qualified reinforcing alternate training (namely apprenticeships), developing measures for early school leavers and launching the 'youth guarantee' with a focus on youngsters which are the most at risk of exclusion and poverty.
- The reform of apprenticeship and lifelong learning in 2014 aims to address those shortcomings and to revise also the financing system of vocational training. New measures to promote flexibility of adult education for all have been announced or recently adopted (namely the '*compte personnel de formation*' or 'personal training account' for each adult independently of his status).

European policy recommendations

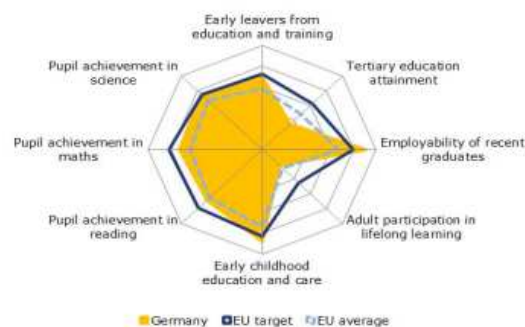
The European Council (2014) notably recommends to France:

- Pursue the modernisation of vocational education and training.
- Implement the reform of compulsory education.
- Take further actions to reduce educational inequalities in particular by strengthening measures on early school leaving.
- Improve the transition from school to work, notably by stepping up measures to further develop apprenticeship with a specific emphasis on the low-skilled individuals.

2.4 Germany : a successful dual system, weakness in early childhood education

Main features on the labour and education markets

The ETM 2014 highlights the relatively low tertiary education attainment of the country, which remains below the EU average. It is mainly due to the dual system implemented in the country. Another point to underline is the weakness of adult participation in lifelong learning, though it almost reaches the EU average. Otherwise, the ETM2014 shows a global good performance of Germany in terms of pupil achievement in basic skills, or in employability of recent graduates.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms

The recent E&T policies implemented in Germany include:

- The Higher Education Pact implemented in 2007 aims at absorbing the additional demand for university places. It is funded by the Federal Government and the *Länder*, with a Federal contribution between 4.7 and 7.9 billion euros from 2011 to 2015.
 - In 2008, the Federal and *Länder* governments planned to increase spending on education and research to 10% of GDP by 2015³¹. In this context the Federal government invested 12 billion euros more than previously planned in 2010 and 2013, 6 billion euros in financing childcare facilities, schools and higher education institutions and 6 billion in research. In 2011, public and private sector spending on education and research almost reached the initial target, as it represented 9.3% of GDP.
 - The “Qualification Initiative for Germany”, implemented by the Federal government and *Länder* in 2008, provides additional funds to reach targets concerning ECEC participation, reduction of the early school leavers rate, reduction of young adults without professional qualifications, tertiary education attainment, increase of participation in adult learning.
 - In 2011, the Basic Education Pact was implemented to fight literacy skills deficiencies, and on a longer term to foster employment.
 - National measures have been implemented in order to better recognize acquired skills: in 2011 the Federal Government introduced a nationally standardized system for the assessment of professional qualifications acquired in foreign countries, mainly to foster the integration of migrants into the German labour market. In 2013 the German National

³¹ Education target is set to 7% and 3% is dedicated to research.

Qualifications Framework for LLL was implemented to provide a framework which includes all qualifications that can be acquired in the German educational system. The aim is to make equivalences between qualifications more transparent, and thus to enhance access to LLL.

- The National Training Pact was extended until 2014³²: it provides yearly 60 000 new apprenticeship places and improves the transition from school to VET. A better involvement of migrants and disadvantaged young people is targeted to improve the program efficiency.
- The Federal Government aims at improving the quality of child care, through the “Early Opportunities Initiative: Nurseries Focusing on Language and Integration”.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines the necessity to:

- “Address regional shortages in the availability of fulltime childcare facilities and all-day schools while improving educational quality”.
- “Improve the employability of workers by further raising the educational achievement of disadvantaged people”.
- “Use the available scope³³ for increased and more efficient public investment infrastructure, education and research”.

The position of the confederation of German Trade Unions (DGB) regarding investment in E&T in Germany

Regarding indicators mentioned above, the DGB considers that the EU strategic framework and the attached benchmarks are “important to make comparison” but is skeptical about the possibility to draw conclusions, as indicators can be politically motivated. The Trade Union also considers that PISA is a good instrument as it provided a significant “wake-up call” to the country in educational issues. On the other hand the OECD PIAAC survey is seen as a reliable tool, but it should also evaluate broader skills and knowledge instead of being limited to literacy, numeracy and media skills. Though indicators can always be improved, the Trade Union acknowledges the weakness of adult participation which is mentioned in the ETM 2014, especially for people with “a migration background”.

The DGB highlights that the European Commission restrains its communications and directives to a unique economic point of view, and excludes social cohesion issues most of the time. The latter are also ranked too much into closed categories, while education and employment should be tackled together. On the investment side, the DGB finds the European policy of austerity regrettable as it leads to important cuts in the areas of training and education, which puts into question the Europe 2020 strategy “to ensure efficient investment in education and training systems at all levels”. In Germany, the DGB recommends to invest at least 40 billion euros by year in all educational infrastructures, from “nurseries” to “colleges and training institutions”.

The Trade Union acknowledges that the pre-primary and primary sector have been strengthened, as access has been facilitated, for example with an increased number of childcare places for children under the age of three. The actual challenge is now to improve the quality of delivered education, which can be funded by transferring funds dedicated to care allowance to the quality of early childhood education. National standards should be developed by both unions and national institutions in order to set rules in terms of teachers’ training or time for preparation and review. In order to foster equality of opportunity, the DGB supports the implementation of full-day school from the 1st to the 10th class, which should be all the more beneficial to deprived neighborhoods. It requires the Federal government to finance 40 000 school social workers. Overall, equity and efficiency should be put at

³² It has been implemented with new partners, such as the Integration Officer of the Federal Government, and the President of the Conference of Ministers of Education and Cultural Affairs.

³³ Allowed by a fiscal « sustained downward path »

the core of the educational philosophy, which for example implies that “young people should learn together until the end of 10th grade”. The DGB highlights two additional missions which should be run by the school. First, “career orientation and guidance in schools” is considered as necessary to foster equity. Second, socio-economic education³⁴ should be delivered at school in order to prepare young people to the working world and to enable them to take decisions in their own professional and personal life.

Overall, the DGB finds social imbalances regrettable, as they are present at all educational levels. For example access to higher education is mainly influenced by social origin: only 23% of students come from families in which parents hold non-academic vocational qualifications.

According to the Trade Union, the level of educational expenditure should be increased to 10% of the GDP by 2015. On the contrary, the DGB finds the ongoing rationalization regrettable as it first degrades the educational quality, and second requires an increasing share of private funding from childcare to university. The latter fact is worrying as it leads to social division.

Concerning the quality of education, the teaching job has been devalued so far, while teachers should be highly motivated and well-trained. The Trade Union supports a better design of their training and working conditions in order to make the educational campaign successful: it includes a culture of “mutual trust”, an adequate remuneration, the reduction in duty hours for teachers and the development of smaller classes. These whole conditions should make the teaching job more attractive to young professionals. On the teaching content side, the DGB regrets that the development of digital competences teaching does not come with relevant media equipment in schools, and supports the reinforcement of foreign languages teaching in primary and secondary schools.

The DGB’s assessment of the adult population performance in reading, writing and counting in Germany is not laudatory, as they count approximatively 7.5 million people in the country who can “read or write individual sentences but are not able to understand (...) even short texts such as work instructions”³⁵ (14% of the working German population). Four percent of the population is directly affected by illiteracy, as 2.3 million people in Germany “can read or write single words but not entire sentences”. Eventually, the Hamburg study reveals that almost 40% of the population encounters difficulties in correctly spelling even common words, which represents 21 million individuals. Those worrying facts should encourage the government to develop training programs. The Trade Union rather considers the Federal Government as inactive on these issues, which requires trade unions to settle qualification agreements in several branches, and which leads to fragmented initiatives from different ministries or European fundings. The DGB still mentions the new “Workplace-oriented literacy and basic education of adults” funding program; until 2015, the project is funded by the Federal Ministry of Education and Research with a budget of 20 million euros. It aims at “counselling and training” actors of the working world in their daily life and at fostering continuing training programs for trainers and lecturers in education programs.

In general, the initial education system is considered to provide the right skills for the insertion and transition on the labour market, but some problems arise in specific branches. Another limit is the difficulty of insertion on the labour market for young individuals, mainly because a significant part cannot find a training place. The Trade Union regrets the rationalization of the training supply in Germany, which lead to the disappearance of more than 50 000 training companies³⁶, “especially

³⁴ The Trade Union considers a global curriculum which would include « *political, social, cultural, environmental, legal and ethical dimensions* ».

³⁵ These figures are quoted from the 2011 survey done by Hamburg University. It was implemented in 2010 as a supplementary study to the *Adult Education Survey*.

³⁶ In 2004, the Hartz Law implemented a double-accreditation system for vocational education and training providers which were publicly funded, but 60% of them were not certified (Ferraci and Martinot, 2014).

small and medium-sized enterprises". To improve transitions on the labour market, the DGB recommends a more developed assistance in "VET training, guidance and mentoring".

In order to tackle important mismatches on the labour market, the DGB recommends:

- A training guarantee for all young people.
- An equitable distribution of the costs for training through the introduction of sector funds. It could be implemented by social partners, which should ensure a fair financial compensation between training and non-training firms.
- To improve the quality of education in order to ensure the attractiveness of vocational training. To be competitive on the labour market, young people should be provided broad training, by a well-trained staff. A high-quality education should be delivered; adequate remuneration and reliable career prospects should be ensured. The DGB highlights the importance of considering vocational training as equivalent to an academic diploma, and "in some countries (...) to change how people think to ensure that vocational training is not seen as inferior to a degree".
- Strengthening social partnership: the dual system is not commonly managed by the Federal Government and the social partners anymore. The role of the latter should be reinforced, for example by making sure that the reorganization of training regulations is only made with trade unions.

One major recommendation of the DGB is the necessity to overcome the strict separation between vocational and academic education. Both academic knowledge and on-the-job experience should be enhanced in order to foster employability. Instead of combining the strength of vocational and general education, the Trade Union rather highlights the "competition", the "battle for the minds", between dual and higher education. A common vision for academic and professional education should be implemented, allowing for equivalences between academic diploma and vocational qualifications.

2.5 Italy : persistent weaknesses and chronic lack of investment in E&T

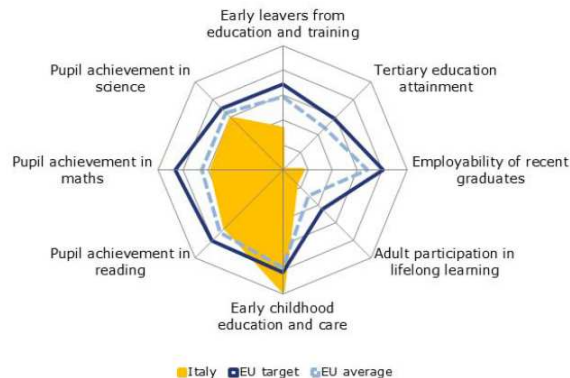
In the news

A "Jobs Act" has been adopted in December 2014 in the Italian Parliament and enters into force in March 2015. This Law proposes to create a new type of labour contract, a permanent contract with progressive rights that rise with the employment tenure, with higher flexibility for companies to dismiss employees during the first three years. The idea is to give a progressive protection to workers in relation to the employment tenure in perspective to facilitate hiring. Defenders of the project justify it by the state of the labour market in Italy: there is indeed a very strong duality of the labour market, with about only 13% of new contracts with permanent duration. This new Law is very disputed by the CGIL and UIL trade unions, for whom the law will not create new jobs but will only increase again precarity on the labour market.

Main features on the labour and education markets

Italy has a major difficulty on the labour market, with an unemployment rate of 12.2% in 2013 (last Eurostat data available for Italy, higher than the EU or Eurozone average). But the most disturbing fact is the unemployment rate of young people, which amounts to 40% in 2013. These two rates have doubled on the 2007-2013 period. Italy is also characterized by more NEETs than in EU in average. On the education market, Italy is characterized by many weaknesses, as

underlined in the chart below: Italy exhibits a relatively low performance of Italy for the rate of early leavers from school, the rate of tertiary education attainment and the employability rate of recent graduates. There is also a very weak rate of adult participation in lifelong learning.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

In addition, there is a large problem of skills mismatch on the labour market for the youngest cohorts E&T monitor, 2014). The total education expenditures (in % GDP) are lower than in Europe (there is a similar situation for the 'expenditures by student' indicator).

Recent policies and reforms related to E&T

The recent E&T policies implemented during the last years in Italy include:

- The 2010 University Reform, the Self-Evaluation, Evaluation and Accreditation system of universities (AVA) system and the principle of increasing share of public funding for universities allocated on the basis of teaching and research performance.
- The Cohesion Action Plan (2011) aims to improve the use of European structural funds and as an important focus on education.
- The creation in 2011 of 62 higher vocational institutions to provide short-cycle tertiary qualification focused on key economic sectors, and the definition of a national system for LLL to increase participation of adults.
- The June 2012 labour market reform (underlining the role of apprenticeship).
- Agreement of December 2012 between State, regions and local authorities: all certification of qualifications obtained in Italy have to make reference to the European Qualification level from January 2014.
- Creation of a National System for the Evaluation of schools institutions to improve school quality (2013).
- The Decree of January 2013 establishing a national system of validation of non-formal and informal learning.
- A decree (2013) made career and counselling activities to upper secondary students compulsory as from the penultimate year of upper secondary education.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines the necessity for Italy to:

- *“Implement the National System for Evaluation of Schools to improve school outcomes in turn and reduce rates of early school leaving.*

- *Increase the use of work-based learning in upper secondary vocational education and training and strengthen vocationally-oriented tertiary education.*
- *Create a national register of qualifications to ensure wide recognition of skills.*
- *Ensure that public funding better rewards the quality of higher education and research.”*

The position of the UIL trade union regarding investment in E&T in Italy

The Confederation of Trade Unions UIL (*Unione Italiana del Lavoro*, including the sectoral Union *UIL Scuola*) and considers that the EU strategic framework in E&T and the attached benchmarks “*handle issues of great importance for the education sector*”. The Union also appreciates the utility of the PISA (OECD) survey while also seeing it as one of the many possible sources of information, but recognizes the utmost importance of the PIAAC (OECD) survey as reliable source of data on adult skills.

On a general point of view about E&T, the UIL points out the “*chronic lack of investment in education or training in some sectors*”. Reacting to the “*recent*” budgetary cuts, the Union judges the level of expenditures being too low and not effective, and that “*Fiscal constraints and law provisions have reduced rather than improved the quality of our system*”. It also considers that “*further reforms announced by the actual government, coupled with further cuts to the spending will not change the situation*”.

The Union underlines in particular many worrying issues:

- *About the teacher’s profession*. Teachers benefit from an unsatisfying social status characterized by a salary that is “*less than other professionals or employees with the same level of education*” and frozen since 2009. The union also regrets that “*there are no real teaching quality policies*”.
- *About the adults’ skills and education*. The skills of the Italian adults in literacy and numeracy are rather low: for each type of skills, no more than 30% is evaluated to have a good level of skills in the PIAAC survey, that correspond to ability that go beyond the basic (simple) interpretation of texts, graphics, or statistics. UIL is very concerned by this issue and admit the importance of the survey, but underline the need to take into account these results to build and manage adequate policies. The Union indeed judges very severely the role of the continuing vocational education and training (CVET) system, which is not capable “*of attacking concretely the difficulties that separate the world of training (and school) from that of the work*”. More generally, a same division is perceptible “*between the world of work, the institution and social partners in Lifelong Learning approach and the national and decentralized school approach*”.
- *About skills mismatches*. The males unemployed are recognized as having a more pronounced process of obsolescence of skills, while women unemployed have skills levels similar to that of women employed so that should be “*better exploited on the professional level*”. Young people and especially from Center and Southern Italy suffer from large mismatches, as 45-50 years old men and women.
- *About young people situation*. Many students are closed away from the labour market at the end of their education, and the Italian NEETs’ rate is extremely high (the second highest in EU in 2013).

UIL particularly recommends the following types of policies or actions:

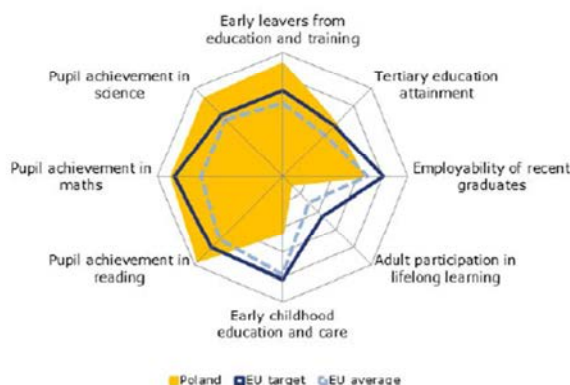
- Reforms of the Italian VET and of the Higher Technical Education and Training should address the problems of separation between labour market, stakeholders and social partners and the E&T system.

- Improving the national coordination on existing territorial autonomies to improve transitions on the labour market.
- Improving the coordination between E&T system and the need of the labour market. In particular, by directing more young students into vocational or apprenticeship pathways. But, also by allowing or promoting a “ *bigger involvement of the social partners in the management of tools address, training and entry into the world of work coordinated by a single national center which sets targets and monitor its operational effectiveness*”.
- Other urgent reforms that are appealed are: (1) A complete and integrated national system of lifelong learning (allowing recognition of non-formal and informal learning); (2) The establishment of E&T pathways linked with the labour market, and a system of secure and dedicated resources, “*starting with a rationalization and integration of existing ones to avoid having more laws designed to lifelong learning without additional expenses for the national and regional budgets for their realization*”; (3) The establishment of a real national system of VET, and “not regional ones like now”.
- Finally, the social partner regrets not be involved in social dialogue in many E&T issues by the government, and ask for a change. The Union underlines that “*tripartite dialogue is fundamental for innovating policies*” and that doing reforms in E&T with social partners “*can give important and significant contributions in each field of Lifelong Learning, for their experiences of the labour market, of the needs of skills and for the attention to the personal and professional growth of citizens*”.

2.6 Poland : good academic performances, weaknesses in early childhood education and lifelong learning

Main issues of E&T and current situation

In the case of Poland, the chart underlines the good performances of Poland for the acquisition of the basic skills at school and for the educational attainment. But, before primary education, the access to childhood education is weak. The employability of the recent graduates is close to the European average. Probably, Poland meets with noteworthy mismatches between academic education and reality of the jobs. The weakness of the adult participation to the Lifelong Learning does not help to reduce these mismatches.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms

The E&T recently implemented in Poland include:

- A reform of the education and science system was introduced in 2010-2011 to strengthen university-business links and to make the courses more flexible and based on learning outcomes. Legislative amendments in 2012 introduced dual studies linking academic studies with practical training in companies.
- In order to improve the quality of vocational training, a VET reform has been implemented as from the 2012/2013 school year. Schools can now create curricula based on learning outcomes and modular qualifications. VET schools are encouraged to involve companies in the education process. The continuing education system will be more flexible, with the possibility for the adults to complete their vocational qualifications during special courses and to have their qualifications confirmed without the necessity to attend the vocational school.
- Since September 2011, pre-school education is obligatory for all five-year-olds. A new regulation was adopted in July 2013 to allow (starting from September 2015) every four-year-old to have a right to participate to pre-school education and (starting from September 2017), every three-year-old to have ensured place in pre-school education.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Program underlines three main objectives for the Polish Education and Training system:

- In order to reduce youth unemployment, to improve the relevance of education to labour market needs, by increasing the availability of apprenticeships and work-based learning places and by strengthening the cooperation between schools and employers, in line with the objectives of a youth guarantee.
- To increase adult participation in lifelong learning in order to adjust skills supply to skills demand.
- In order to increase female labour market participation, by taking new steps to increase the availability of affordable quality childcare and pre-school education and by ensuring stable funding.

2.7 Portugal : High risks for the continuation of the catching-up process in education and skills levels

In the news

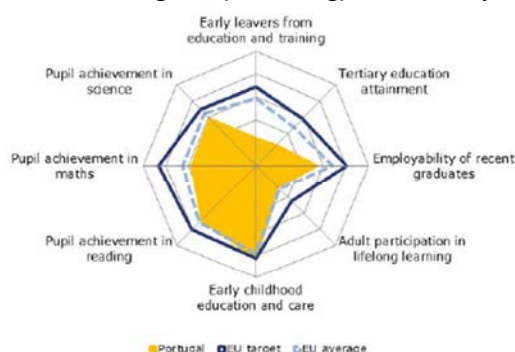
In Portugal the evolution of the E&T system is under the double pressure of hard fiscal constraints and of labour market reforms, both aspects linked to the adjustment process consecutive to the economic and financial crisis. According to ETM2014, "in 2013, education was the area which suffered the largest decrease in government expenditure, with funding for primary and secondary education reduced by 11.0% in real terms as compared to 2012 levels". The reform of labour market and collective bargaining took the way of deregulation and decentralization. The border between permanent and temporary contracts has been flexibilised, the redundancy indemnities have been brought into line with the European average, the incentives on unemployed people to recover a job have been reinforced. Since the peak of the crisis, the unemployment has decreased, especially for young people, but the policy priority is more a short term adaptation to the labour market than a

continuous effort of qualification. This effort remains necessary, as Portugal presents long term lacks³⁷.

Main features on the labour and education markets

The ETM2014 underlines mainly the relatively low performances of Portugal for the rate of early leavers from school and the rate of tertiary education attainment (among the people aged 30-34). It shows also the weakness of the employability of the recent graduates from upper secondary or tertiary education and of the adult participation in lifelong learning. But the ETM indicates also that “Portugal has achieved the strongest improvement in early school leaving of all EU countries since 2009” and “Portugal’s tertiary education attainment rate is improving, but this has failed to increase the employment rate amongst young people proportionally”. So, there is a critical challenge concerning the medium and long term impact of the crisis policies on the Portuguese path. For OECD (*Education at a Glance 2014*), the Portuguese catching up process in qualification and skills is showing “encouraging results” but the continuation of this process is not guaranteed.

Position of Portugal in relation to highest (outer ring) and lowest performers (centre) in EU



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms

E&T policies implemented by Portugal in the last years include:

- During the last ten years, the Portuguese governments have implemented policies to foster the educational attainment (extension of compulsory education until the age of 18, Confidence contract signed in 2010 by the government and the higher education institutions,

³⁷ It's a problem prior to the crisis, but the present policy does not solve it. The study published in Guichard and Larre (2006) expressed a clear-cut view on the performances of the Portuguese education and training system: “The lack of human capital in Portugal has become a key obstacle to higher growth. ...Improvements are needed to narrow the significant human capital gap with other OECD countries. Despite progress in the past decades, Portuguese children spend comparatively few years in formal education, and they do not perform as well as children from other OECD countries. Adults, especially the least educated, do not participate enough in lifelong learning and training programmes. This situation does not stem from a lack of resources devoted to education and training but from inefficiencies and misallocation of spending, and weaknesses in the quality of the services that compound the low starting point of Portugal regarding education. Modernizing the Portuguese economy therefore requires a broad reform which increases human capital at all levels. The ongoing efforts of the authorities in the three areas - basic and upper secondary education, tertiary education and adult training - go in the right direction but implementation remains a challenge”. The fiscal austerity has interrupted the continuity of the public programs implemented, since 2006, in order to develop the human capital in Portugal.

growth of the number of students oriented and enrolled in technical specialisation courses...).

- A major restructuring of the VET system is in course, with a "dual" orientation: increasing learning in a work based context, partnerships between professional schools of reference and private stakeholders.
- A restructuring of the network of qualification and vocational training centers, earlier in charge of the "Novas Oportunidades" initiative, has been implemented by the present government: a more open access to Lifelong Learning remains a key challenge in a country where the average educational attainment of the adult population is limited.
- The compatibility of these orientations with the hard fiscal constraints is a question.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines two main objectives for the Portuguese Education and Training system:

- Improve the quality and labour-market relevance of the education system in order to reduce early school leaving and address low educational performance rates.
- Ensure efficient public expenditure in education and reduce skills mismatches, including by increasing the quality and attractiveness of VET and fostering cooperation with the business sector.
- Availability of affordable quality childcare and pre-school education and by ensuring stable funding.

The position of the CGTP-IN trade union regarding investment in E&T in Portugal

The CGTP (*Confederação Geral dos Trabalhadores Portugueses*) considers as "relevant" the EU strategic education framework and the attached benchmarks, as well the comparative information on students' performances supplied by the OECD PISA survey. The Trade Union regrets that the Portuguese government does not assess rightly these results, which show, according to OECD (*Education at a Glance 2014*) that "Portugal is one of the three OECD countries whose students improved their performance in maths since 2003". The CGTP regrets also that Portugal has not participated to the last PIAAC phase, because of the government's decision, in 2012, to stop the work engaged on PIAAC.

But the CGTP considers also that "the EU focus on cuts in public spending has endangered the performance and the achievement of benchmarks". Such cuts, "in all levels of education", with closure of many primary schools, are not the way to improve the "poor ranking" of Portugal on several education and training indicators. This situation has long term roots, namely "the absence of corporate culture on education and training and the failure of the right of workers to vocational training". A progress happened for new generations, thanks to "the access to the public, universal and free education implemented since the mid-70s... but in recent years there has been a regression, especially since the austerity policies". The new feature of labour market "does not encourage the upgrading of skills".

A range of consequences of the present policies is underlined by the CGTP:

- "The devaluation of professionals in the E&T area, with pay cuts, job insecurity and redundancies". Indeed, OECD indicates that the statutory Portuguese teachers' salary (after 15 years of experience), on the basis 100 in 2015, was at the level 111 in 2011 and 93 in 2013 (at constant prices using deflators for private consumption): the recent decrease is impressive.
- The transfer of expenses from the state to families, "already overcharged by high taxes, lower wages and unemployment". Particularly, "families pay much of the early childhood

education”, which suffers from lack of public funds, in despite of the awareness of the importance of early childhood education as factor of “integration into society as an autonomous, free and supportive human being”.

- The impact of fiscal cuts is structural. “The quality of education is decreasing because of unfair spending cuts”. The CGTP incriminates the increase of teachers’ working hours outside classroom (“enormous amounts of time with bureaucratic activities”, transport time strongly increased by geographical distribution) and the lack of modern equipment in schools and working rooms. Consequently, the learning of key skills (foreign languages, digital competences) does not correspond to the actual needs.
- The setback of the public and private efforts of lifelong learning, in a country where “only 30% of adults have at least a 12 years education”. The European funds do not fill the gap in national investment: “Even with the new structural funds, it is not possible to identify a clear strategy that answers to this need and the educational system is not able to fulfill it by its own.” The “New Opportunities Program”, implemented by the former government to include people having low initial level of education in a training and certification path, was stopped by the present government³⁸. Since 2012, a substitute and less ambitious program is yet in preparation: “Lots of adults found themselves in the middle of certification processes without a solution to finish them, and this reality still remains these days”. The new Centres for Qualification and Professional Education “work without *public financing program whatsoever*”. Today, priority is given by the government to short term adaptation to the labour market, by the way of short and targeted training actions. For CGTP, “*the country needs a national plan to qualify adults and older workers*”.

The CGTP considers that the initial education system supplies “*partially*” the right skills for the labour market and that “*the lack of integration [into this market] has mainly to do with the lack of employment due to the country's development model and the austerity policies*”. Mismatches exist on the Portuguese labour market: “*There are mismatches in the high qualifications, which are not absorbed by the productive system (although such knowledge is necessary to the structural transformation of the economy towards a knowledge economy). On the other hand, the average basic level of education of the working population is below the needs of the economy*”. However, the search of a better integration into the labour market should not be the only criterion to reform the education system: on the one hand, “*there should be diversified processes of completion of education, which are adapted to the characteristics of young people (since they are not a homogenous group or face all the same problems)*”; on the other hand, there are education areas “*which are necessary to human development and the construction of citizenship, such as History, Philosophy, Arts, Literature or study of mother tongue: in Portugal there has been an attack on these areas of knowledge, which is a civilizational regression*”.

In order to improve the transition to the labour market, the movement towards a ‘dual system’ is “*important, although not enough without job creation*”: “*In Portugal, the dual system does not adequately address the challenges: lack of apprenticeship places in companies / organizations, little follow-up. In the case of younger (6th grade), dual training was implemented too early and linking it to the failure school, which, in our opinion, results in more failure and perpetuates social inequalities*”. In order to reduce the number of early school leavers and young NEETs, the access to the dual system should not be the result of academic failure but a positive choice, what needs “*a good monitoring of the trainees*”. For the moment, the Portuguese Young Guarantee is not yet an appropriate response, because it lacks “*a real systemic approach*”: “*in most cases, early school*

³⁸ The interesting experience of the “New Opportunities Program” is documented by the *book Challenges, actors and practices of non-formal and informal learning and its validation in Europe*, (Damesin, Fayolle, Fleury, Malaquin and Rode, 2014).

leaving is due not to school, but more to the problems that young people bring from home and we must address these problems earlier.”

To face these challenges, the CGTP puts forward a range of claims and proposals (here summarized):

- Free education for all and at all levels of education; end of school fees in public higher education and other subsystems (as in VET); social support for those in need; improvement of the students’ social background.
- Increased public investment in education (including new equipment, namely IT equipment) on the basis of diagnosis of training needs for the country's development and planning of education and training. A statistical system for education and training is necessary. The needs’ assessment should be taken into account to provide the skills that put the graduates in a position to make their career choices. Any guidance on the acquisition of skills should take into account the interests of the person, as a professional able to expect and adapt to the demands of the labour market.
- Dignify the profession of teacher/trainer and improve its social status, with job security and decent wages; increase the number of teachers.
- Greater attention to adult education, by putting in place a qualification plan for adults; fulfillment of the right to the minimum training time for all workers and progressive increase in the number of hours, which also implies supervision over law enforcement in enterprises; practical training in the workplace with appropriate monitoring of trainees, linking the content to training objectives; reform of the certification process of training centers ; involvement of representative organizations of workers in training.

2.8 Spain : Persistent deficiency of articulation between education system and labour market

Main issues of E&T and current situation

In the case of Spain, the ETM2014 underlines the big problem of transition from education and training to the labour market (with also big regional disparities). The access to the early childhood education, the acquisition of the basic skills and the tertiary education attainment are close or above the European average but the high rate of early school leavers and the weak employability of recent graduates show deficiencies of the articulation between education system and labour market.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms

E&T policies recently implanted in Portugal include:

- In April 2012, a Royal Decree Law sets urgent measures to rationalize public expenditure in education: increasing the number of teaching hours per teacher; reviewing class-sizes (considered as low compared to EU average); adjusting the offer of upper secondary and first-cycle university degrees to real demand; reviewing the university fees in order to bring them closer to the real cost of higher education.
- A Royal Decree of 2012 establishes the bases for dual vocational training and introduces measures to develop apprenticeship contracts. The implementation depends on the 17 Autonomous Communities. During 2012, 4000 students, 500 enterprises and 140 schools participated in pilot projects.
- In November 2013, the parliament adopted the Organic Law for the Improvement of the Quality of Education (LOMCE). It offers flexibility in pathways and aims to increase the percentage of students completing upper secondary education and obtaining initial vocational diplomas. It sets up a two-year course of Basic Vocational Training.
- In 2013, the Ministry of Education is launching the elaboration of a National Strategic Lifelong Learning Framework, behind the former Action Plan for Lifelong Learning.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Program underlines the main objectives for the Spanish Education and Training system:

- To effectively implement the new educational schemes to increase the quality of primary and secondary education.
- To enhance guidance and support for groups at risk of early school leaving. To provide good quality offers of employment, apprenticeships and traineeships for young people and to improve the outreach to non-registered unemployed young people, in line with the youth guarantee.
- To increase the labour-market relevance of vocational education and training and of higher education, in particular by enhancing the cooperation with employers and supporting the training of trainers and tutors.

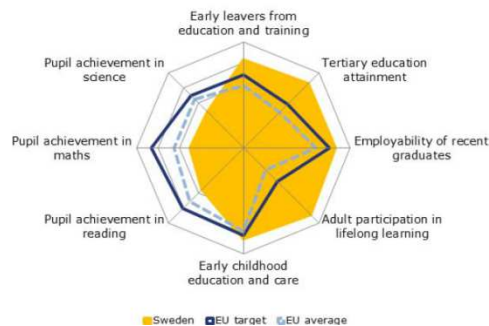
2.9 Sweden : high level of performance in many E&T sectors, with important flaws

In the news

Sweden plans to launch a *Youth guarantee* program. This program will be focused on young people in situation of unemployment and low skilled: typically, the NEETs are an evident target. This *Youth guarantee* notably puts emphasis on education and training in collaboration with the social partners.

Main features on the labour and education markets

The Swedish labour market is characterized by a relatively moderate overall unemployment rate (7.9%), significantly lower than the EU27 and Eurozone averages. But there exists a large youth (<25 years olds) employment rate, even higher than the EU27 average. On the education side, Sweden exhibits a high level performance in attaining or going beyond the EU targets and being higher than the EU average (see graph below)... with the exception, notable, concerning the skills of the young people (average score of the 15 years old in science, maths and reading in PISA 2012). The adult participation in LLL activities is very developed, and the rate of tertiary attainment is very high.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Otherwise, it should be noted that large skills gaps exist between the employed and the unemployed, and that there is a significant rise in the skills mismatches since the crisis (Education and Training Monitor 2014).

Recent policies and reforms related to E&T

A large number of policies have been implemented in the recent years, in particular on subjects linked to the relation labour-education:

- Since 2009, at the post-secondary level, higher vocational programs (2 years) have been developed to meet the needs of the labour market for qualified labour.
- To improve skills matching on the labour market, skills platforms have been set up in 2010 to coordinate skills provisions and short and long-term education and training planning, at the region level.
- The 2010 *Education Act* includes regulations to limit early school leaving with reforms of compulsory and upper secondary school.
- 2011 School reform: pathways have been differentiated between general and vocational education at upper secondary level.
- Since 2011, apprenticeship was introduced as alternative route to attain a vocational diploma.
- Different measures have been implemented to increase the attractiveness of the teaching profession: reform of initial teacher education with induction year for future teachers, specific funds for municipalities to support training of teachers) with the device *Boost for Teachers II* (2013), and a career development reform (2013).
- Modernisation of the higher education system through quality-based resource allocation since 2013.
- The Swedish National Qualification Framework is expected to be adopted in 2014.
- An institutionalized structure is being developed between schools and social partners ('national' and 'local program' councils).

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines the necessity for Sweden to:

- Take appropriate measures to improve basic skills and facilitate the transition from education to the labour market, including through a wider use of work-based training and apprenticeships.

- Reinforce efforts to target labour market and education measures more effectively towards low-educated young people and people with a migrant background.
- Increase early intervention and outreach to young people who are unregistered with the public services.

The position of the main trade unions regarding investment in E&T in Sweden

The confederations of Trade Unions LO (*Landsorganisationen i Sverige*), SACO (*Sveriges Akademikers Centralorganisation*) and TCO (*Tjänstemännens Centralorganisation*) consider there is no significant impact of fiscal constraints on the E&T system in Sweden. They typically point out that “*the level of expenditures [in education] is generally high*”, and that “*restrained educational expenditures is a problem that is far more noticeable in other European countries than in Sweden*”. However, they judge that there is a clear need of higher budgetary efforts in higher education, tertiary VET and continuing education.

The trade Unions emphasize the following strong features of the Swedish E&T system:

- Tertiary education has expanded very largely in Sweden in the last 25 years, with an increase in both students and college. This has allowed the access for children with weaker socioeconomic backgrounds. However, the trade unions would like the existing quantitative targets (volume) complemented by qualitative targets.
- The educational attainment has increased significant among younger generation, especially during the 1990s.

The Unions point out some major concerns regarding E&T in the country.

- About the types of E&T. General education is most developed and works better in Sweden than VET, very dispersed in quality and in students’ attraction. Similarly, initial education is traditionally stronger and more institutional (despite of the growing need for adult education).
- About the NEETs. There is in particular “*a high share of early school-leavers and pupils who finish primary and secondary school with insufficient qualification.*”
- About skills mismatches. The unions overall judge the existing mismatches “*more horizontal than vertical*”, and may notably result from insufficiency of VET or of the supply of tertiary educated workers. Also, many immigrant academics do not benefit from recognition or accompaniment to use their skills in their profession. In addition, a significant volume of adult workers “*are locked in jobs they may not want, due to the lack of continuing education*”.
- About student’s skills and equity. There is a large concern by the Swedish results to the PISA 2012 survey which underlined the declining overall performance and decreasing equity among students. Inequalities between schools and among students have increased since the 1990s according to many surveys, “*in part due to the introduction of School choice³⁹ in the early 1990s*”. This reform is seen by many observers as largely responsible to the decreasing performance of the Swedish students.

On some subjects, LO, SACO and TCO also expose some contrasted situations, with weakness and goods points, including:

³⁹ The *School Choice* reform allows parents to choose freely the school (public or private) of their children by using education ‘vouchers’ (before, there was an assignment to public school base on the residence). This reform has been accompanied by an explosion of the volume of (free) private schools (*friskol*). These *friskol* have been largely criticized, many of them having gone bankrupt (and half of these private school belong to some companies). This reform is seen by many observers as largely responsible to the decreasing performance of the Swedish students to the PISA tests.

- About the teachers' profession: teachers have a quite low social status in Sweden and their remuneration is significantly lower than that of other professions with the same education level. However, teachers' wages were not affected during the crisis (both coming from the facts that Sweden is not as affected by the crisis and because of a political and societal consensus that there is more of a need for rising wages). In addition, the teaching conditions are judged "good" but there is a large amount of time spent on other duties than teaching, including high administrative workload due to *"increasing governmental and municipal control and evaluation of pupils, schools and teachers"*.
- About skills' levels. There exists a very high level of the adults' skills in reading, writing, and counting. It is favoured by the relevance of the continuing vocational training system; however, the unions judge that the system should be *"even more adapted and accessible to the needs of skilled workers and immigrant workers"*, and that the programs directed toward unemployed people should be more flexible, better financed to have more impact because there is *"a great need for more and better education"* for them.

The trade unions consider that social and tripartite dialogue is able to provide significant contributions to policies and reforms in E&T in all fields, but in particular regarding *"continuing education, labour market relevance and transition of teachers' condition."*

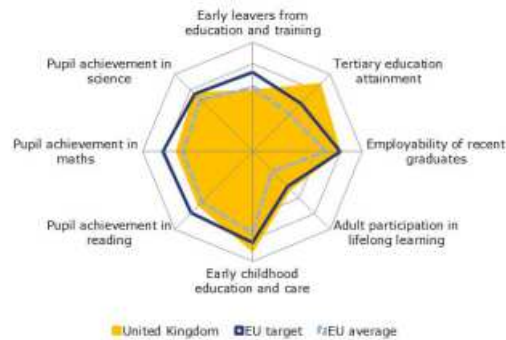
They identify in particular the following set of actions and policies regarding E&T:

- Policies addressing sector-specific mismatches: targeting more VET in some sectors and more tertiary education in some others.
- More education or possibilities of recognition of skills should be proposed towards (high and low) skilled immigrants.
- Some policies dedicated to *"improve the quantity and accessibility of continuing education."*
- *"Reforms to improve the teachers' status and professional development, and the attractiveness of the teaching profession."*
- Higher "flexibility" in the Swedish E&T system with more possibilities offered *"to change tracks during or after a theoretical secondary programme to a vocational one, or complement a theoretical programme with vocational courses."*
- Actions devoted to foster work-based learning in secondary VET.
- Policies that induce *"more labour market relevance and work-life contact in higher [tertiary] education."*

2.10 UK: an important share of young people with low basic skills, leading to employability difficulties

Main issues of E&T and current situation

In the case of the UK, the ETM2014 highlights the good performance of the country for tertiary education attainment. However, it also underlines the low performances for the rate of early leavers from school, as an important share of young people continue to leave secondary education without relevant skills.



Source: European Training Monitor 2014, published by the European Commission, presents the position of every country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

Note: The chart compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line).

Recent policies and reforms

Recent E&T policies implemented in the UK include:

- Reforms have been implemented in England to address the issue of young people with very poor basic skills: first, the age of compulsory participation in education or training rose to 17, then 18 years old. Second, the General Certificate of Secondary Education (GCSE) was reviewed and eventually a Pupil Premium was provided to schools to boost the attainment of pupils from disfavored backgrounds.
- A focus was made on young people in order to facilitate their transition from education to work. In 2013 the Traineeship program was implemented in England to provide 16-24 year-olds the necessary skills for the labour market, relying on apprenticeship or other jobs. In Scotland, the “Opportunities for all” program was a commitment to offer a place in learning or training to every individual aged between 16 and 19. It specifically targeted young people who were not already in learning, training, employment. Eventually, the “Youth Contract” was implemented in 2012 to tackle young people unemployment, orienting them either to learning or to working. It consists of wage incentives for young workers, incentive payments to recruit apprentices or disengaged 16 and 17 years old individuals, or extra resources to allow job advisers to provide a better job seeking support.
- In 2013, the plan of action “More Great Childcare” was implemented in England for delivering high-quality early childhood and childcare. The aim was also to help parents going back to work, especially by providing adequate opportunities to women to work and raise children at the same time.
- In 2012 the National Careers Service was created in England to provide information on training and career development and thus to boost the declining rate of participation of adults in lifelong learning.

European policy recommendations

The European Council in its recommendation of July 2014 regarding the National Reform Program 2014 underlines the necessity for the UK to:

- Maintain commitment to the Youth Contract, especially by improving skills that meet employer needs.
- Placing emphasis on addressing skills mismatches through more advanced and higher level skills provision and furthering apprenticeship offers.
- Reduce the number of young people with low basic skills.

Part 3. Towards a renewal of the *Education and Training 2020* strategy

This part firstly develops and discusses major issues of E&T underlined in the parts 1 (*Issues of investment in Education and Training in Europe*) and 2 (*National issues in E&T and Trade Unions perceptions*) of this document. Then the adaptation of European policies and the utilization of dedicated funds targeted to E&T are discussed, as well as the issues of the recent *Juncker Investment Plan*. Finally, this part proposes a synthesis through recommendations and major needs identified throughout the study.

3.1. Focus on major issues of E&T: equity, NEETS and mismatches

3.1.1. Equity and social background influences in acquisition of education and training

Many of the key indicators mentioned in ETM 2014 can be reached faster by focusing on limiting inequalities, from early childhood education to tertiary education attainment. For example raising the most disadvantaged pupils' performance can partly increase the average pupils' achievement in reading, mathematics and science. Adult participation in lifelong learning can also increase while targeting the initially least graduated individuals, who traditionally do not have access to continuous training programs. Moreover, targeting the most disadvantaged individuals is often shown to be the most cost effective policy. Eventually, relying on the hypothesis that inequalities are accumulated through life, reducing inequalities on one side might trigger a virtuous circle, eventually decreasing inequalities later in life.

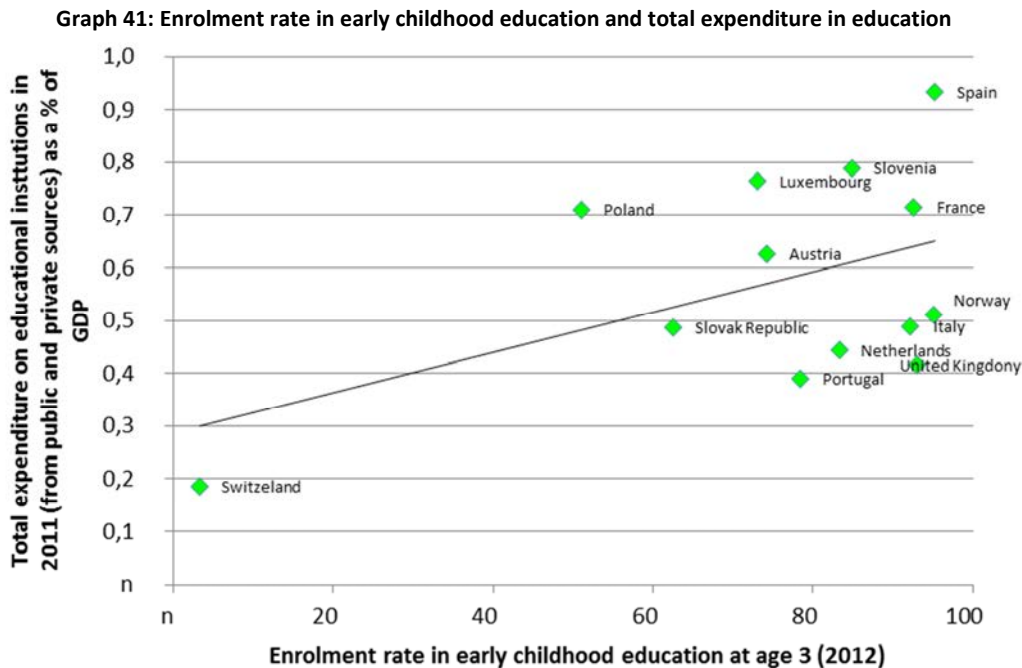
The concept of equity is linked to the one of "equality of opportunity", defined such that "*inequality should be tolerated only if it is due to person's in levels of effort, but not if it is due to circumstances which are beyond a person's control*" (Roemer, 1998). In the majority of policies implemented to raise equity, the underlying principle is that a meritocratic system should allow any individual to succeed in his educational and professional life as soon as he makes enough effort to reach his goal. Thus, reducing inequalities of opportunities should decrease the impact of social background on the individual performance, and thus smooth inequalities. More basically, OECD (2012) defines equitable education systems such that "*the vast majority of students have the opportunity to attain high level skills, regardless of their own personal and socio-economic circumstances*".

The European Commission has highlighted the importance of reducing inequalities in all education and training policies implemented by Member States. It highlights that "*such initiatives do, admittedly, incur costs, but the costs of inaction and a high drop-out rate are higher*". OECD (2012) also stresses that "poorly educated people limit economies' capacity to produce, grow and innovate", which should entail countries to invest in public policies targeted to the most disadvantaged.

Early childhood education and care

Insufficient investment in early childhood education might limit access to some populations...

Access to early childhood education is unequal across countries, as the OECD reports that at the age of 3, 70% of children were enrolled in early childhood education in 2012, but that it was the case for 51% of them in Poland, against 95% in Spain. Publicly-funded systems might raise access to pre-primary education, however it is not the only determinant: for example, in Spain, the share of the private sector in educational expenditures goes beyond the OECD average (29% vs 19% in OECD countries). A more reliable assumption is that, as a percentage of GDP, expenditure on pre-primary education does largely impact access to early childhood education (graph 31).



Source: Education at Glance, 2014

Investment in education also influences within-countries inequalities: countries which do not sufficiently fund pre-primary education might not only limit quantity but quality as well, as recruited staff might not be qualified enough to “support children’s cognitive, social and emotional development” (EENE report, 2006), or “childhood facilities and materials” might not be sufficiently developed. Thus, inequalities might arise as parents who can afford it will choose to send their children to private early education services. On the other hand some parents might be disfavored on the labor market if they choose to stay home.

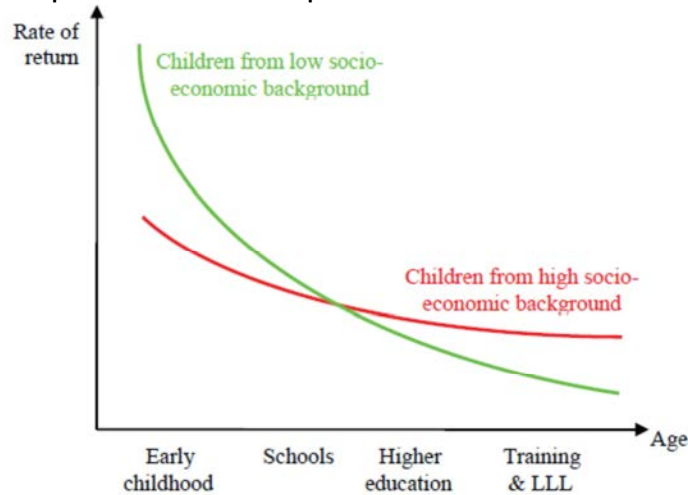
... while it has been shown to be a determinant investment for later educational attainment

The “Education at a Glance” report (2014) stresses that benefiting from early childhood education is positively correlated to a better performance in next stages of the educational process. Students evaluated through the PISA test show better results when they have attended “at least one year of pre-primary education”, independently from their initial social background. A deeper analysis showed that this positive link was strengthened in countries with “a longer duration of pre-primary education, smaller pupil-to-teacher ratios in pre-primary education, and higher public expenditure per child at the pre-primary level”.

The EENE report (2006) mentions academic studies (Heckman, 2000; Carneiro and Heckman 2003; Cunha et al. 2006) which “assess education and training policies over the life cycle of a person”. They show that a “skill multiplier” can arise in the education and training process: an investment in

education is not only relevant for a chosen stage of life, but it might also allow the next investment to be even more efficient. In this perspective, investment made in the early childhood education is all the more relevant that it might affect later educational outputs. The EENE report (2006) highlights that *“returns to educational investments are highest because of their effects of facilitating later learning”*. Moreover, early childhood education investments might be even more relevant for the most disadvantaged children, as the social background largely influences educational performance, at a very early age (graph 42). For example, Schütz et al. (2005) show that a higher enrolment and a longer period in pre-primary education smooth the relationship between 8th-grade students tests scores and their social background.

Graph 42: Returns to a Euro spent at different levels of education



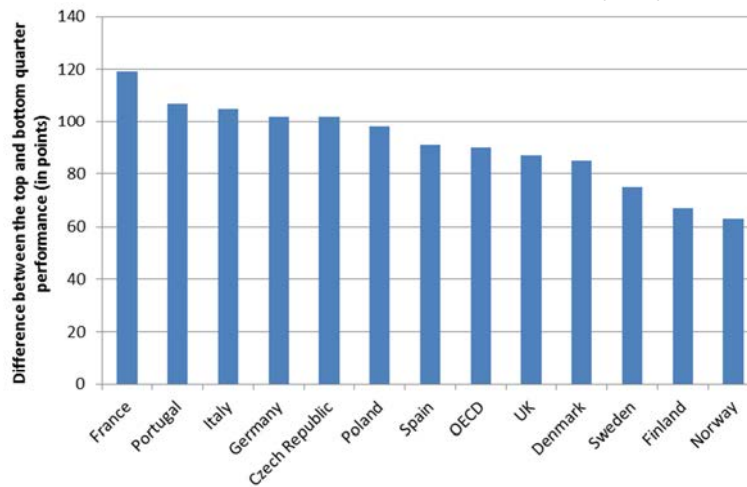
Source: EENE report (2006), in adaptation of Cunha and al. (2006)

Pupils achievement in reading, mathematics and science

In some countries, academic performance is more linked to social background than in other ones. For example, a note from PISA highlights that considering only the most favored students' test scores would place France in the first quarter of the ranking, but the country would fall in the index by 20 places if considering the least favored students. Looking at all PISA participating countries, *“disadvantaged students are, on average, more than twice as likely as students who are not considered disadvantaged to score in the bottom quarter of the performance distribution”*. Being considered as “disadvantaged” mainly relies on the familial background, *i.e* parents' occupation or level of education for example. The latter does also largely determine students' performance, as *“across OECD countries, students with highly educated parents outscore students with low-educated parents by 77 score points – equivalent to an entire proficiency level”*.

In order to compare performance in mathematics according to social background, OECD built a ‘PISA index of economic, social and cultural status’: relying on this, they show that test scores differences between the top and bottom quarters of this index are relatively important, and vary across countries (graph 43). In France, this gap reaches 119 points while the OECD average is 90.

**Graph 43: Difference between the socio-economic top and bottom quarter
Performance at PISA mathematics test scores (2012)**



Source: PISA (2012)

Eventually, inequalities also arise from other perspectives, for example between migrants and non-migrants: in Sweden or France, where 15% of students are immigrant, or in Spain, where this share reaches 10%, the differences in mathematics performance between non-immigrant and immigrant students are striking. It ranges from 52 points in Spain to 67 points in France, with a gap in Sweden equal to 58 points, compared to an average of 34 points in OECD countries.

In the report “Equity and Quality in Education” (2012), OECD makes some recommendations to ensure a better completion of upper secondary education. First, eliminating grade repetition would reduce costs and smooth social inequities. On the contrary, grade repetition is largely used in some countries: PISA 2009 results showed that 13% of 15 years-old students across OECD countries had repeated a grade at least once. This share reached 25% in countries such as Portugal, France or Spain. Countries where grade repetition is more frequent are also those where poorer students perform the worst. Second, OECD recommends avoiding early tracking: making classes with good students on the one hand, and those with more difficulties on the other hand is sometimes considered to be beneficial as it allows teachers to adapt to the class level. However it enhances inequalities between students in high and low tracks. Then, the report highlights the difficulty to find a compromise between parents’ freedom to choose their children’s school on the one hand, and the risk that it generates segregation by socio economic background on the other hand. An alternative option mentioned is to provide vouchers or tax credits to families. A first step would be to provide full information to all parents about schools and to provide support in their choice.

Access to higher education

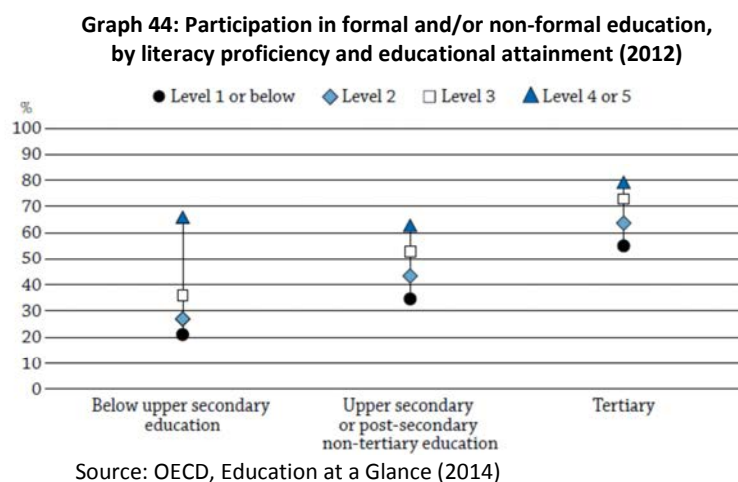
Access to higher education might also be limited according to students’ social background. As an illustration, Duru-Bellat and al. (2008) compare access to higher education in France and Germany: though both systems differ substantially, the authors first show that social origin does largely influence access to higher education, and the quality of the institutions chosen. As an example, French “upper service class students are significantly more likely to choose the elite track over BTS⁴⁰ than working-class students”. Moreover, parents’ education does also matter, as students whose parents hold a tertiary degree do more often choose the “elite” track than BTS. In Germany, social inequalities become clear between university and vocational training program students: students from favored social backgrounds are more likely to choose the former track rather than the latter.

⁴⁰ BTS (“Brevets de Technicien Supérieur”) are two-years vocational programs and are relatively selective.

Second, the authors highlight that unequal access to higher education also results from academic factors: in France, students who hold a general “*baccalauréat*” are more likely to choose university than a BTS track. The EENE report (2006) stresses the necessity to ensure that this differentiated enrolment in higher education does only result from an academic perspective and not from social factors: “the main reason for inequity in access is probably (...) that they do not have the prerequisite educational qualifications. To alleviate this inequality in access, policy has to intervene much earlier.” On addition to that, inequalities arise between students who can afford doing further studies and those who do not. Public support to students, especially the low-income ones, could thus promote a more equal access to higher education. OECD research (2008) shows that ensuring a “robust financial support system” impacts higher education outcomes, but also that the type of aid largely determines access to higher education. The choice between loans or grants to students is not obvious: some argue that loans “*allow available resources to be spread further*”, while others criticize a loan-system, which would be “*less effective than grants in encouraging low-income students to pursue their education*”.

Adult participation in lifelong learning

The Education at a Glance Report (OECD, 2014) highlights two main sources of inequalities in participation to lifelong learning. First, it does strongly depend on initial educational attainment and literacy proficiency (cf. graph 44). As a matter of fact, “27% of adults without upper secondary education participated in formal and/or non-formal education, while 71% of adults with tertiary education did” and “a highly proficiency person was thus almost 2,5 times more likely to participate in formal and/or formal education than a person with low literacy proficiency”.



Second, socio-economic status is a major determinant of participation to adult learning. Differences in participation are for example observed among employed and unemployed individuals: across OECD countries, 59% of the former participate in formal and/or non-formal education, while 44% of the latter do. Moreover, the likelihood to participate to an adult learning program decreases with age: the participation rate difference between 25 to 34 and 55 to 64 years old individuals reaches 28 points (62% vs 34%). “High inactivity among older people” could drive these observed differences, however it could also be driven by “fewer incentives for older workers to improve their skills”, which is more problematic for older individuals who still have to work. Parents’ education is also an important determinant of participation in formal and/or non-formal education: “adults with tertiary-educated parents are 1.7 times more likely to participate in adult education than those whose parents do not have an upper secondary education”. Influence of parents’ education is the most important in countries such as Germany, Italy or Poland, whereas the correlation is the weakest among Denmark, Sweden or Spain.

3.1.2. The NEETs issue

This section is largely based (but not only) on the report of Eurofound (2012) on the NEETs.

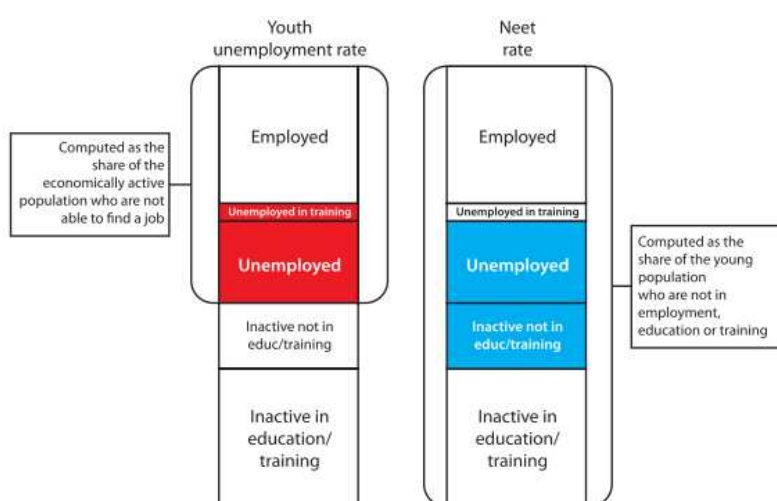
The highly problematic situation of a large share of young Europeans does not limit to the situation of employment: there are around presently 14 million young people *excluded from the labour and education markets* in Europe, representing 13% of the 15-24 and 20% of the 25-29 (Eurofound, 2012). The NEETS (“*not in employment, education or training*”) population represents such an important issue that since a few years, the European commission, refers to a set of dedicated indicators and leads active policies and actions to reduce the number of NEETs in the EU.

Who are the NEETs?

Definition

The NEET regroups the part of the young people (different age groups may be considered: 15-19, 20-24, 15-29, etc.) that present the features not to be “in employment, education or training”. Hence, it brings together both active (non-employed and not engaged in any educative activity) and inactive people (not engaged in any educative activity). The graph 45 hereafter presents the differences in the reference population use for the indicator of unemployment rate (in red) and of the NEET rate (in blue):

Graph 45. The unemployment and NEET rates



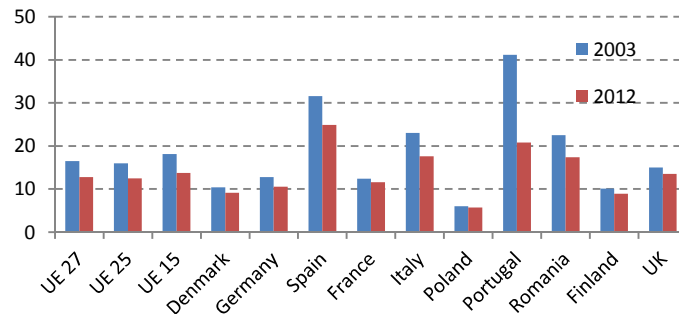
Source: Eurofound (2012).

The NEET includes probably a large part of young people who have left early from school without gaining any diploma, the *early leavers from education and training* (whose some could find a job). The rate of early leavers (computed by Eurostat for the 18-24 years old)⁴¹ remains high in the EU in 2012 (graph 46). It is clear-cut that in the most of the countries of the sample, with the exception of Denmark, Finland and Poland, the share stays beyond the benchmark set in the *Europe 2020 strategy (the share of early leavers from education and training should be less than 10%)*. But *early leavers*

⁴¹ Please note that this indicator is very imperfect because it focuses only on 18 years old and more, while a large part of early school leavers with difficulties in the school system are young people from 14 to 18 years. But this indicator is the best available and based on the *Labour force Survey* which only surveys individuals who are 18 years and older.

represent only a part of the population of the NEETs, gathering together inactive and active people and people who can have a qualification, or not (graph 47). The NEETS rate, computed since a few years in Eurostat data, stand for the 15-29 years olds above 15% at the EU28 level in average. This rate has moderately risen in a large share of the EU members on 2005-2013 and has decreased in only seven countries).

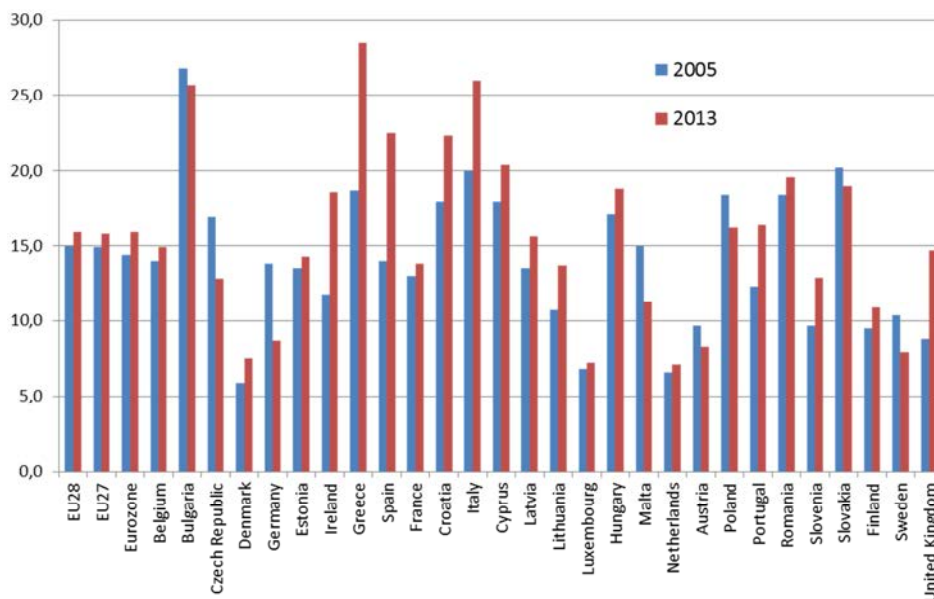
Graph 46: Early leavers from education and training (% of people aged 18 to 24, 2003* and 2012)



Source: Eurostat, Labour Force Survey.

Note: The early leavers rate (Eurostat) is defined by “the percentage of the population aged 18-24 with at most lower secondary education and who were not in further education or training during the last four weeks preceding the survey”. Lower secondary education refers to the ISCED (International Standard Classification of Education) ISCED 1997 level 0-3C.

Graph 47. Share of NEETS in the 15-29 years old population in Europe (2005-2013)



Source: Eurostat.

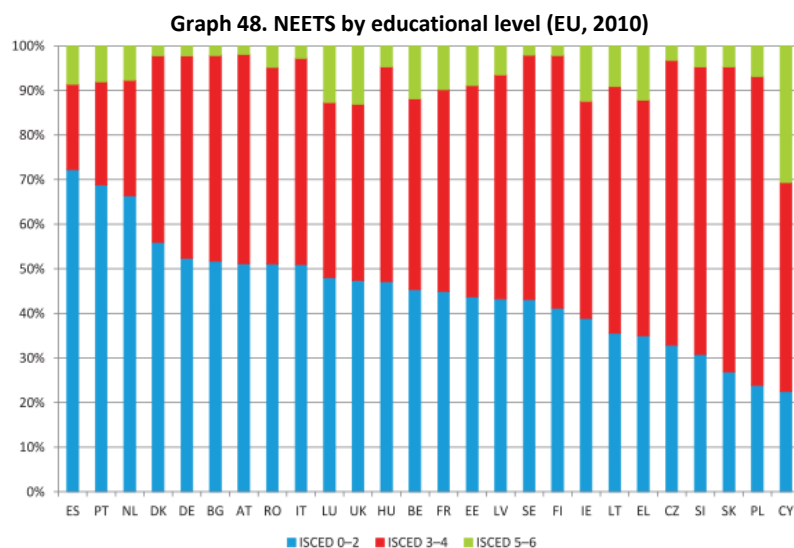
Note 1: the NEETS are defined on the basis of the whole population of the 15-29 years old which are not unemployed, in education or training.

Note 2: the rates cannot be directly compared with the rates displayed in graph 46 because the population of reference is not the same, and also because only early leavers from the school system are considered in that other figure.

A heterogeneous population

The NEET population is a group composed of people who are in very different situations: some are unemployed, some are ‘unavailable’ (sick, disabled, young carers, those with family responsibilities), some are ‘disengaged’ (including those in illegal activities like black market or crime), some wait for a job that correspond to their will, and some others may be described as ‘voluntary’ NEETS. Whatsoever, the lower educated people are over-represented among the NEETS, especially those

with the lowest qualifications (graph 48). The tertiary educated are less present in the NEETs population, representing a share of 10% in many countries.



Source: Eurofound (2012)

Note 1: the population reference for the NEETs is the 15-24 years-old.

Note 2: ISCED 0-2 pre-primary to lower secondary level, ISCED 3-4: upper secondary to post-secondary level, ISCED 5-6: tertiary

Determinants and risk factors

Many determinants, sometimes hard to distinguish from risk factors (are they cause or consequences?), could influence the NEET influence (Eurofound 2012).

Among them the existing literature notably underline the importance of the institutional and structural determinants like employment protection legislation, the existence of minimum wage, unions presence, the existence of a dual system of vocational training, the youth cohort size, the general macroeconomic conditions. In their original econometric estimations, Eurofound (2012) test the importance of these institutional determinants: their results mostly underline the significant effect of active labour market policies expenditures which seems the most robust determinant.

Among commonly factors considered as representing significant risk to become a NEET, the main ones are (Eurofound, 2012):

- *Family background*: poor working status, large family size...
- *Individual characteristics* education level, teenage pregnancy, health problems, low motivation...

Consequences of being NEET, economic and societal costs

Individual consequences

The first type of cost commonly attributed to the fact of being NEET is the individual consequences, which may take the form (not exclusively):

- Loss of young people's potential.
- Reduction in the accumulation of human capital.
- Long-lasting consequences linked to bad health, criminal activities, undermining of future employment prospects, poor employment outcomes, psychological distress, early motherhood, being homeless, being part of low-income...

Through this accumulation of 'negative effects, the fact of experience a significantly long period of time may induce an 'hysteresis'-like effect, a sort of permanent effect that could possibly be transmitted through generations.

Economic and societal costs

The consequence on the economic and social systems of having a large population of NEETs may be monetarily evaluated. Only a few works propose such evaluation (Godfrey et al., 2002; Coles et al., 2010; Eurofound, 2012). In these works, two main types of costs are distinguished: *public finance costs* (costs of the countries of paying employment insurance and other welfare benefits to NEETs) and *“total resource costs”* (bringing together the indirect losses for the economy, due to the lack of labour market participation of NEETs, including persona losses, loss of sales for the firms...). In the only study considering the EU 27 Level minus Malta (Eurofound, 2012), the cost *per year* of NEETs in 2011 is established at (a little) more than 140 € billion for the ‘total resource cost’ and to and to around more little more than 11 € billion as ‘total public finance costs’.

The societal costs are not measured in monetary terms but in terms of vitality of the democracy and participation to the politics system (in the broader sense). Indeed, the growing volume of the NEET represents an issue and a challenge for EU societies because the participation of them to the democratic vitality is an element of stability and cohesion of societies (Eurofound, 2012). While the NEETs may belong to very diverse groups, it is certainly a major challenge to ensure a better inclusion for the majority of them into the European societies.

Policies to take over the NEETs problem

As the group of NEET is rather heterogeneous, the dedicated policies should take into this feature, which notably necessitates intervening at different moments on the path between school and employment. In particular, at the *national level*, three main groups of policies to reduce the number of NEETS (see for instance Eurofound (2012) or Kramarz and Viarengo (2015)): (i) prevention measures, *i.e.* intervening before their leaving of the education system; (ii) measures targeted at reinsertion into the E&T system; (iii) measures to reinsert or to smooth transitions, on the labour market.

At the *European level*, a number of significant actions and policies have been quite recently fostered or decided:

- The *Youth Employment Package* adopted by the European Council in April 2013, notably incorporating *Youth Guarantees* that are implemented at the national level (cf. Box 3) and a social partner consultation on a quality framework for traineeship⁴². This Package has been reinforced and accelerated by measures in the *Youth Employment initiative*⁴³, aiming to support *“particularly young people not in education, employment or training in regions with a youth unemployment rate above 25%”*.
- The NEETS are now a *funding priority for the European Social Fund (2014-2020)*⁴⁴: *“A greater emphasis is placed on combating youth unemployment. The Youth Employment Initiative will help young people not in employment, education or training in regions experiencing youth unemployment rates above 25%. At least €6.4 billion will come in support of Member States’ efforts to put their Youth guarantee implementation plans in practice”*.
- Other projects targeted towards NEETs and funded by European institutions like the *Lifelong Learning Programme* by the European Commission (see the example of the *Net not Neet* project in Box 4).

⁴² The actions implemented in terms of implementing a dual system/structuration of a system of apprenticeship represent an essential issue for the European social partners, as underlined in the recent study by Unionlearn and ETUC (Unionlearn and ETUC, 2014).

⁴³ On the 4 February 2015, the European Commission proposes to make 1 billion euro from the Youth Employment Initiative available as early as this year: *“This change will increase by up to 30 times the pre-financing Member States receive to boost youth employment-reaching up to 650 000 young people and helping them get into work, faster”*.

⁴⁴ In a background document preparing the introduction of the 2014-2020 European Social Fund (*Promoting Inclusive growth*), the European Commission (2014a) firstly presents the every high unemployment levels for young European, while insisting on the necessity to observe the NEET rates.

Box 3: Youth Guarantees

Proposed by the European Commission in December 2012 and adopted by the European Council in April 2013, the *European Youth Guarantee* Initiative is a response to persisting high youth unemployment in EU. It ensures that “all young people under 25 – whether registered with employment services or not – get a good-quality, concrete offer within 4 months of them leaving formal education or becoming unemployed”. The good-quality offer should be for a job, apprenticeship, traineeship, or continued education and be adapted to each individual need and situation. EU countries endorsed the principle of the Youth Guarantee in April 2013.

It was preceded by national initiatives (guarantees) supporting young people, notably in Sweden (Job Guarantee for young people, introduced in 2007) and Finland (Youth Guarantee, introduced in 2005) or France (“*Garantie Jeune*”, part of the “*plan pluriannuel contre la pauvreté et pour l’inclusion sociale*” adopted in January 2013). In Sweden, under one third of the participants to the program in 2008 and 2009 went on to find a job or study place. An evaluation of 2011 shows that unemployed 24-year olds participating to the program found a job quicker than a comparable group registered on public employment service; but this effect was short lived: one year later, there was no difference between the two groups. In Finland, 83.5% of young job-seekers received a successful intervention within three months of registering in public employment service in 2011 (79.2% in 2010). The 25-30 years old not covered by the program were only at 30.5% successively placed in the same time period.

Box 4: the Net not Neet project

The project is funded by the European Commission as part of the *Lifelong Learning* programme 2013, in the key activity 1: *networks*. It aims at improving “*the performance of VET systems, employment services and appointed public authorities, by enabling them to better respond to the different and specific needs of NEET people at local and European level. This will be achieved by supporting and strengthening their services, methodologies and tools, and offering them new strategies to prevent and contrast the NEET phenomenon.*” The results are yet to come.

CIOFS-FP (*Centro italiano Opera Femminili Salesiane Formazion Professionale*, a non-profit association that pays great attention to the Labour World and the Vocational Training) is leader on this project that brings together partners that are regional or local administration and VET institutions in Europe (*Provincia di Livorno Sviluppo* from Italy, the *City Council of Valencia*, *MetropolisNet EEIG* from Germany, the *Regional Inspectorate of Education* from Bulgaria, the *Mardin Governorship-Provincial Directorate of Social Studies and Project Management* (Turkey), the *Association for Lifelong Learning* (Romania), the *Ballymun Job Centre* (Ireland), the *City of Dublin Education and Training Board*, the *Aarhus Social and Health Care College* (Denmark) and the City of Stockholm.

The methodology uses different media and interviews to develop and enforce local and European networks aimed at understand and propose actions and policies aimed at the NEET population:

- *Forums and Laboratories of Dialogue* that involve NEETs to discuss and propose new methodologies and tools for the VET system, employment services and relevant public authorities, according to their needs and expectations.
- *Peer reviews* that involve public and private stakeholders of the VET system, employment services and relevant public authorities, to focus and analyze their good practices.

Conclusion: the NEETS, a persistent issue that requires strong educational answers

The NEETs phenomenon is a worrying and persistent phenomenon which calls for significant European answers, notably for the social cohesion of the Union. It is particularly important for the

policies targeted towards the NEETS not to be procyclical: for instance, with the crisis, some countries have reduced their budgets devoted specifically to the early school leavers. Indeed, the economic literature underlines that with the economic recovery, the unemployment rate requires a quite long time to be reduced, especially for the long-term unemployed people and the most-far away from employment.

3.1.3. Did you say “mismatch”?

This section is a note on Flisi et al. (2014) and International Labour Office (2014).

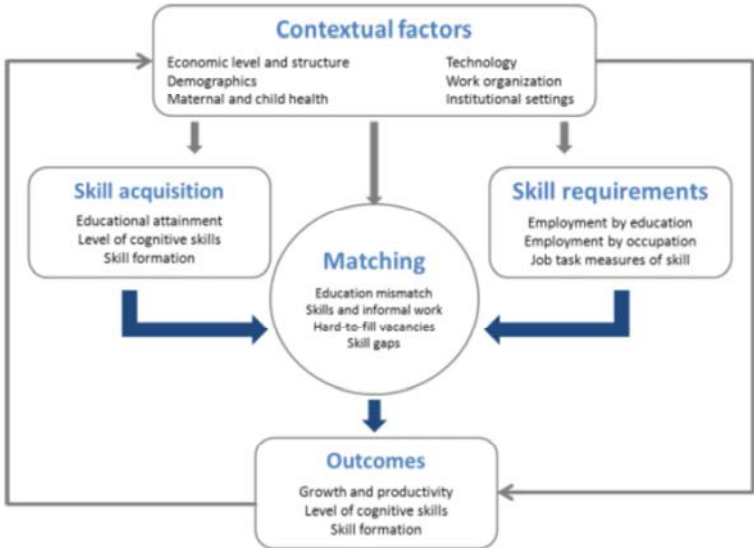
To measure and to analyze occupational mismatches on the labour market is not an easy task. Presently, there is not a straightforward approach, which dominates clearly the others. The objective and subjective dimensions of the phenomenon are mixed; its conceptualization is uncertain: the occupational mismatch could concern the educational attainment or/and the actual skills of an individual for or in a job. The reality of mismatches is a worry for the policy makers, without knowing easily what is good and evil: a low socio-economic equilibrium (low skills in bad jobs) could persist without apparent mismatches, while a convenient management of instantaneous mismatches could incite to positive dynamics, by upwards mobility.

Nevertheless, the apparent degrees of mismatches on the European labour markets, according to different measures, seem sufficiently high and persistent to indicate **the reality of a difficult articulation between the education and training system and the labour market**: “a labour market situation where it is difficult to find the right people for the right jobs” (Flisi and alii, 2014, p.4).

The ILO dual approach of over/under-education

The ILO paper presents a basic approach as conceptualized in graph 49 hereafter:

Graph 49. Economic context and skills mismatch



The paper presents a range of “frequently discussed types of skills mismatch”:

Table 2. Taxonomy of mismatches

Skill shortage (surplus)	Demand (supply) for a particular type of skill exceeds the supply (demand) of people with that skill
Skill gap	Type or level of skills is different from that required to adequately perform the job
Vertical mismatch	The level of education or qualification is less or more than required
Horizontal mismatch	The type/field of education or skills is inappropriate for the job
Overeducation (undereducation)	Workers have more (less) years of education than the job requires
Overqualification (underqualification)	Workers hold a higher (lower) qualification than the job requires
Skills obsolescence	Skills previously used in a job are no longer required and/or skills have deteriorated over time

Within this taxonomy, the ILO paper concerns mainly over and under-education. The phenomenon is quantitatively significant: “In country studies reported in the literature, between 10 per cent and one-third of the employed are found to be overeducated and around 20 per cent are undereducated, which results in a total mismatch of between 30 per cent and 50 per cent of the employed in European countries” (ILO, 2014, p.8). A balanced perception needs to assess together over- and under-education. Education mismatches could distort the returns of the educational attainment. There exists a diversity of measurement methods, summarized by the ILO paper (table 3). The ILO paper mobilizes the normative and the statistical approaches: the first one by crossing ISCO groups and ISCED levels⁴⁵; the second one by assimilating the mean number of education years in a 2-digit ISCO group to the job requirement of this occupation.

Table 3. Methods of measurement of over-education

Name	Idea	Advantages	Disadvantages	Examples of Studies
Normative	Use a pre-determined mapping between the job and the required education level ^a	<ul style="list-style-type: none"> Relatively easily measurable Objective 	<ul style="list-style-type: none"> Assumes constant mappings over all jobs of a given occupation A thorough mapping is costly to create and update 	Chevalier (2003) Sutherland (2012) Tarvid (2012b)
Statistical	The overeducated are those with education level higher by some ad-hoc value than the mean or mode of the sample within a given occupation ^b	<ul style="list-style-type: none"> Relatively easily measurable Objective No updating needed: always corresponds to the sample 	<ul style="list-style-type: none"> Assumes constant mappings over all jobs of a given occupation Sensitive to cohort effects Results depend on the level of aggregation of occupations 	Fernández and Ortega (2008) Jauhainen (2011) Ortiz and Kucel (2008)
Self-assessment	The respondents are asked about their perceptions of the extent their education or skills are used in their job ^c	<ul style="list-style-type: none"> Always up-to-date Corresponds with requirements in the individual firm 	<ul style="list-style-type: none"> Subjective bias: respondents may overstate job requirements, inflate their status, or reproduce actual hiring standards 	Di Pietro (2002) Frenette (2004) Støren and Wiers-Jøensen (2010) Wirz and Atukeren (2005)
Income-ratio	Overeducation is a continuous variable measured by comparing actual and potential income ^d	<ul style="list-style-type: none"> Reflects that one of the goals of investment in education is maximising income 	<ul style="list-style-type: none"> An indirect measure, can be influenced by many other factors 	Jensen et al. (2010) Guiromnet and Peypoch (2007)

Source: ILO elaboration; Hartog (2000); Quintini (2011).

Notes:

^a In the United States, the Dictionary of Occupational Titles is often used; alternatively, ISCO-based measures are employed.

^b Usually, the ad-hoc value is one standard deviation, but studies also use 80th percentile of the distribution as a cut-off value.

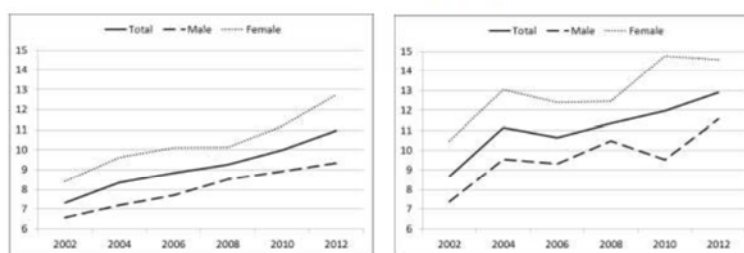
^c These measures are based not only on a single question about perceived overeducation or skill underutilisation, but also on indices comprised of several such questions (see, e.g., Barone and Ortiz, 2010).

^d This approach connects overeducation to another labour market failure - underpayment.

⁴⁵ ISCO: International Standard Classification of Occupations; ISCED: International Standard Classification of Education.

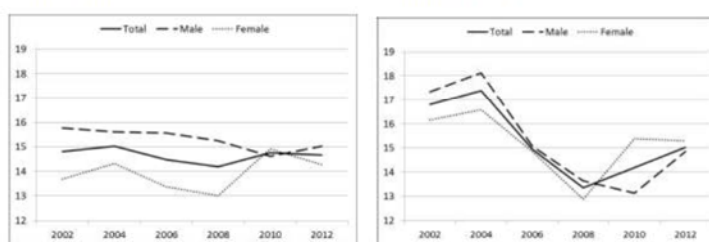
The application of the normative measure produces clearly an increasing trend for the average incidence of over-education, from 2002 to 2012, especially for the women. Logically, there is a decreasing trend for the under-education. Such trends are not tangible with the mean-based method, especially for the men. Probably the crisis is the source of the recent revival of the over-education incidence, according to the statistical method (see graphs 50a and 50b). The contrast between the two methods underlines their common conceptual fragility.

Graph 50a. Average incidence of overeducation (normative method, %)
a. All workers **b. Age group 15-29**



Source: ILO calculations based on the European Social Survey (Norwegian Social Science Data Services, 2002; 2004; 2006; 2008; 2010; 2012).
 Note: The figures show unweighted averages based on data from the following countries: Belgium, Denmark, Finland, Germany, Hungary, the Netherlands, Norway, Poland, Slovenia, Spain, Sweden and the United Kingdom.

Graph 50b. Average incidence of overeducation (statistical method, %)
a. All workers **b. Age group 15-29**



Source: ILO calculations based on the European Social Survey (Norwegian Social Science Data Services, 2002; 2004; 2006; 2008; 2010; 2012).
 Note: The figures show unweighted averages based on data from the following countries: Belgium, Denmark, Finland, Germany, Hungary, the Netherlands, Norway, Poland, Slovenia, Spain, Sweden and the United Kingdom.

The Joint Research Center approach of over-education and over-skilling

The paper of Flisi and *alii* (2014) from the Joint Research Center (JRC) from the European commission enlarges the field of the analysed mismatches: beyond educational attainment, it explores the possible occupational mismatches based on the level of proficiency (term used by the authors) in specific skills (basic and/or high, such as cognitive skills, information processing...): “Education and skill mismatch do not seem measure the same thing” (p.4), as “more education does not automatically translate into better skills” (p.8). The variable mix of education and skill mismatches could be an indicator of the inefficiencies of the relationship between educational system and labour market. For the authors, referring to the literature, “education and skills mismatch in Europe is pervasive, widespread and persistent, suggesting some structural causation with the labour market structure” (p.8). The *OECD Survey of Adult Skills* (PIAAC) allows the simultaneous measure, at individual level, of education and skill mismatch.

The focus of the paper is on “over” mismatch (education or skill related): “over”-mismatch is considered to have the most negative consequences, compared to “downward” mismatch, as it is a cause of productivity loss, psychological discontent and distortion of the education’s returns.

Methodology

For education mismatch, the paper lists, as the ILO paper, the available methods of measurement: normative (based on job analysis); statistical (by comparison with the people in the same occupation); self-assessment (direct or indirect, by the way of questions “to get the job” or “to do the job”); mixed methods. In all cases the measure of the level of education and/or experience required by a job is a delicate exercise.

For the measurement of skill mismatch, a similar taxonomy is available. The statistical approach is based on the distribution of skill levels in each occupation; a variant consists in the measurement of the actual engagement of skills in tasks and the comparison with the skills owned by an individual: as “skills engagement is generally measured in terms of incidence and frequency of activities involving specific skills”, this method can have difficulties for taking into account “important factors like criticality and complexity”. And “engaged skills” could be different from “required skills”. The OECD proposes an interesting mixed method (self-assessment and statistical), which seems more robust to subjective bias and to the difficulty of comparing skills proficiency and skills use (see OECD 2013b).

Finally, the JRC paper uses the different measurement methods and the PIAAC dataset to build 21 education and skill mismatch indicators. To use efficiently such prolific information, a principal component analysis is applied in order to reduce the information to a smaller group of synthetic indicators:

1. Objective Education mismatch
2. Skill mismatch (numeracy and literacy) based on distribution of skills in the population.
3. Skill mismatch (numeracy) based on the comparison of skills used and skills owned.
4. Skill mismatch (literacy) based on the comparison of skills used and skills owned.
5. Subjective Education mismatch.

Typology of countries

A correlation analysis shows that the ranking of the countries are not the same according to these components (except for the third and the fourth, which are highly correlated): they express different dimensions of the reality. The results of the PCA are used to apply a cluster analysis, which produces a classification of the countries into 4 groups:

- **Cluster A** (Austria, Belgium, Cyprus, Denmark, Finland, Germany, Netherlands, Sweden): Countries with **low education mismatch**, but **higher level of skill mismatch**.
- **Cluster D** (Estonia, France, Ireland, Spain, UK): Countries in the inverse situation, with **high levels of education mismatch** and **low levels of skill mismatch**.
- **Cluster B** (Czech Republic, Poland, Slovak Republic): Countries with **medium levels of mismatch in both skills and education**.
- **Cluster C** (Italy) : Italy has relatively **low levels of mismatch** in all the five components, especially in terms of skill mismatch.

The interpretation of this empirical clustering is not completely obvious. The authors mobilize the reference to the literature on the standardization (degree of national homogeneity) and the stratification (degree of internal differentiation between general, academic, vocational tracks) of the educational system: high degrees of standardization and stratification would provide better matching opportunities between supply and demand on the labour market. Countries with such high degrees are expected to suffer less from over-education: it would be the case of the cluster A, for which the return would be (perhaps too) high-skilled workers. What is not a problem if the possibilities of upwards mobility are frequent but what is a problem if high specific skills are not easily transferable. The countries of cluster D suffer from over-education but it does not mean that the vocational skills of the over-educated people are over the skills required by their job. The educational system of these countries is suspected of a lack of efficient vocational training. Italy would be a country typical of a

low-skill equilibrium, without high degree of mismatch. This interpretation seems to have the fragility of an *a posteriori* reconstruction.

Analysis at the individual level

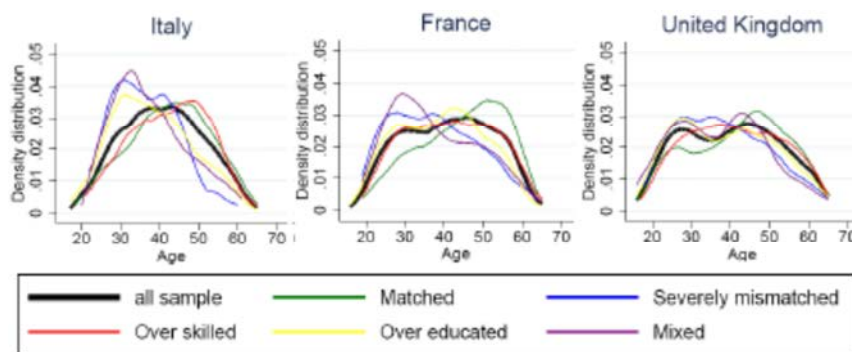
Further, the analysis is applied to the individuals, in order to characterize their personal degree of mismatch, according to the five components (reduced to four, by merging the third and the fourth ones, highly correlated). Five groups of individuals are identified on the basis of the type and intensity of mismatch:

- **Matched individuals** (no mismatch in any of the four indicators).
- **Severely mismatched individuals** (mismatch in at least 3 of the 4 indicators).
- **Skill mismatched individuals** (mismatch in dimensions attached to skills only).
- **Education mismatched individuals** (mismatch in only education dimension).
- **Mixed individuals** (mismatch in one education dimension and in one skill dimension).

Clearly, the largest group is the one of educational mismatch (30% of over-educated people in EU17). The share of people mismatched both in education and skill ('severely' and 'mixed') is pretty low (15%). So, there is a relevant part of people which is over-educated but not over-skilled (as in the specific case of cluster D).

The paper examines, at individual level, the socio-economic determinants responsible for the different types of occupational mismatch. Clearly, the mismatch is more probable for the young people, but with strong differences according to the countries: the graph 51 below presents the three cases of Italy (where the young people are highly mismatched), France (intermediary case, where the matching progresses with the age), UK (where the disadvantage for the young is low).

Graph 51. Age distribution in the different groups of mismatched individuals



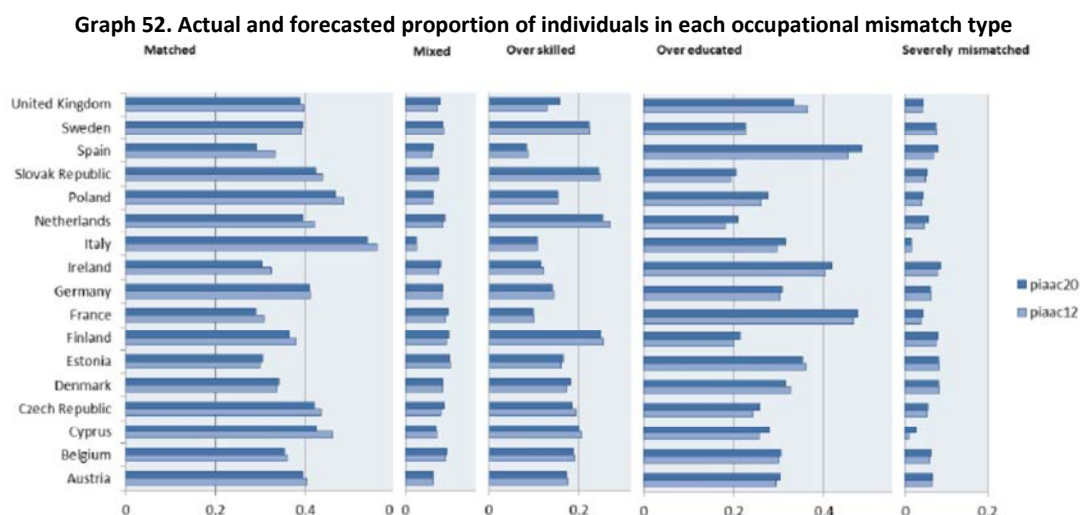
An important factor of difference between individuals belonging to different countries is the role of the vocational education and training. In countries where the VET system is well structured, individuals with a VET background are more matched compared to the other. But it is not the same in the other countries: the opposition between Germany and France is clear from this point of view (cf. the column "matched" in table 4 below).

Table 4. Distribution of typologies of occupational mismatch by VET (France and Germany)

	vet	matched	severely mismatch	skill mismatch	educational mismatch	mixed
France	NON-VET (ISCED3-4)	0.402	0.034	0.201	0.252	0.111
	VET (ISCED3-4)	0.239	0.020	0.065	0.585	0.091
Germany	NON-VET (ISCED3-4)	0.110	0.123	0.106	0.406	0.254
	VET (ISCED3-4)	0.478	0.061	0.143	0.260	0.057

Forecasts: the risk of increasing over-education trend

The JRC paper presents a forecast of mismatch realized up to 2020, using the population (by age cohorts) and employment (by sectors, occupations, and qualifications) forecasts of Eurostat and Cedefop (see graph 52). The main interest of this exercise is to show **a trend of increasing over-education in many countries**. The rate of over-educated people is particularly high (more than 40%) in France, Ireland and Spain.



A paradox of the European situation, especially in this crisis period, is to combine depressed rates of employment and high level of mismatches in several countries. However, the analysis of the mismatches is difficult and not yet definitive: it is a work in progress. But the available studies send out an important warning: over the next years, there is the risk of an increasing trend of over-educated people, what raises the question of the own and joint responsibility of the educational system and of the labour market. On the one hand, the effectiveness of the vocational training is a challenge; on the other hand, however the level of the jobs' offer is crucial, but also the jobs' polarization trend, if it leads highly educated persons to accept elementary jobs.

3.2. Core issues of investment in E&T in perspective of the Juncker Plan: What outlook for European investment in Education?

In order to assess the challenges of the “Juncker Plan” for the investment in E&T, it is useful to extract some outlook information from the studies which estimate the probability of European strategy to reach its targets.

3.2.1. Lessons from a forecasting exercise at horizon 2020

The paper of Dragomirescu-Gaina and Weber (2013) proposes explanatory models of the dynamics of the two variables corresponding to the two EU headline targets on early leavers from education

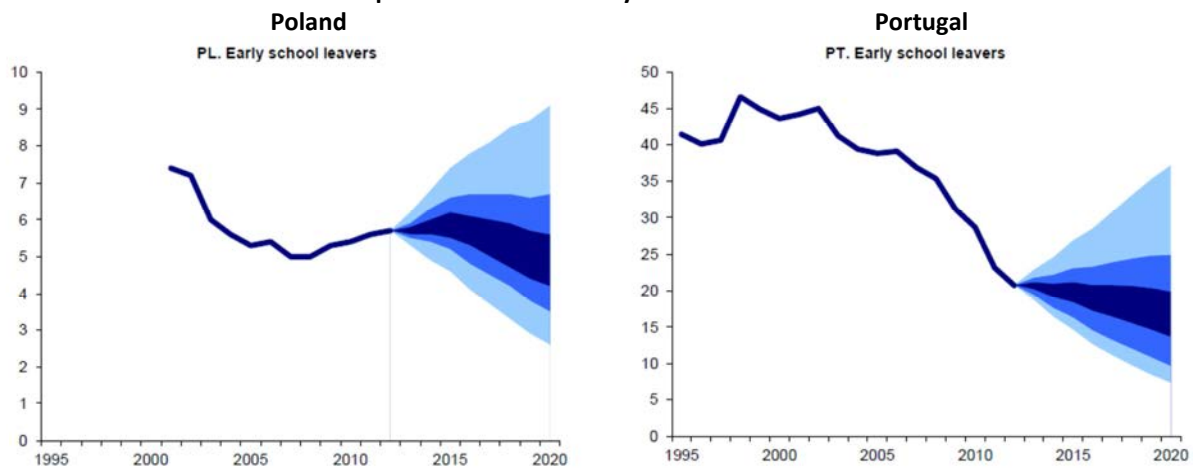
and tertiary education attainment (see section 1.2., box 2). The two models are used to produce forecasts by country up to 2020, under some hypothesis:

- Specific projections or extrapolations for exogenous variables (as the proxies of family background).
- **A “no policy change” scenario:** the only reforms taken into account are those that have already produced effects observable in the data used (i.e. up to 2012).

Under these hypotheses, it is possible to estimate the probability, for each country, of reaching each target (**so, without new reform**). A general qualitative table of the results “paints a quite optimistic picture for the majority of the Member states”. Perhaps because the targets are not very ambitious and correspond mainly to cautious extrapolation of past trends?

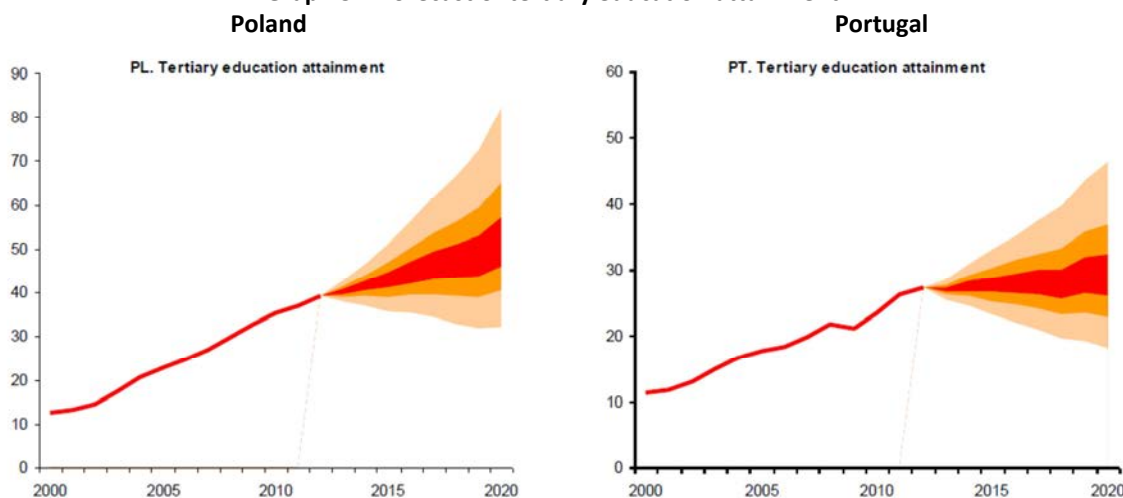
But the comparison of national forecasts delivers interesting information. For example, we can consider the results for Poland and Portugal, two countries which have similar development levels (measured by the GDP by inhabitant) but different growth trends (graph 53 and 54).

Graph 53. Forecast of early school leavers rate



Note: The shaded areas in the figures above plot the 30% (dark blue), 60% (blue) and 90% (light blue) confidence intervals for early school leavers forecast constructed using the best econometric specification. More certainty would mean wider forecast range. The scale of the vertical axis might be different depending on the country.
Source: Dragomirescu-Gaina and Weber (2013)

Graph 54. Forecast of tertiary education attainment



Note: The shaded areas in the figures above plot the 30% (dark red), 60% (red) and 90% (light red) confidence intervals for tertiary education attainment forecast constructed using the best econometric specification. More

certainty would mean wider forecast range. The scale of the vertical axis might be different depending on the country.

Source: Dragomirescu-Gaina and Weber (2013)

Poland shows good performances for ESL and ETA and has high chances to confirm or to improve these performances. It is not the same outlook in Portugal: the present performances are mediocre and their future improvement will not be spontaneously significant, without sufficient adaptation of the policies. There is a high risk, in the case of Portugal, that the improvement of the last decade will be not pursued. It is interesting to note that a similar worry is expressed by the point of view of the Portuguese trade union CGTP.

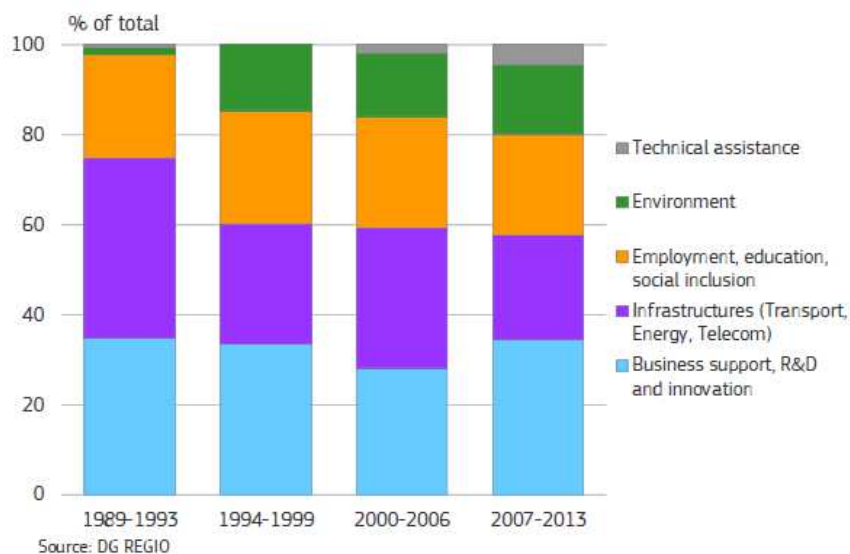
What main ideas could we summarize from this forecasting exercise?

1. The two Europe 2020 headline targets are relevant, by referring implicitly to the polarization forces which segment the labour markets: early school leavers from one side; highly educated individual from the other. To reach simultaneously the two targets is an indicator of social cohesion.
2. The uniform definition of the two targets takes into account the national contexts too weakly. For several countries, the two targets seem as an easy extrapolation of the current trends and do not supply relevant incitation to these countries for determining their policies and reforms. Perhaps it would be more relevant to give more importance, in the European strategy, to the national targets defined by the states themselves (with eventually more ambition for the ends and the means).
3. For some other countries (rather a minority), the targets seem more difficult to reach. In this case, it is an indicator of specific national difficulties: national reforms and European policies (particularly by the way of structural funds) should converge in order to overpass these difficulties.

3.2.2. What adaptation of the European policies and structural funds ?

The *Sixth report of European Commission on economic, social and territorial cohesion (Investment for jobs and growth, July 2014)* states that investment in people (education, employment, and social inclusion) has declined slightly over the last programming period 2007-2013, as proportion of the Cohesion Policy investment (see graph 55). However, the economic crisis has driven to reinforce the role of the European Social Fund as an instrument for investing in human capital: the EC report indicates that “after receiving ESF support, 5.7 million unemployed or inactive people entered employment, and almost 8.6 million qualifications were gained through support from the ESF.” The regulatory framework for 2014–2020 guarantees a minimum share (23.1%) of the Cohesion Policy budget for the ESF, as condition for working towards the objectives of the Europe 2020 strategy. As Cohesion Policy will be a major investment tool of the EU (a total budget of over EUR 450 billion, including national co-financing, for the 2014–2020 programming period), it is particularly important to secure the part of the investment in education and training as key priority. The Commission emphasizes that “*Cohesion Policy objectives have been brought into line with the Europe 2020 strategy and relevant Country-specific Recommendations are systematically being taken into account when planning investments*”. It underlines that “*Cohesion Policy programmes need to concentrate resources on a small number of priorities and maximise their added value*”. Taking into account the unequal national capacities to reach the common targets, these orientations are welcome but it is necessary to monitor seriously their effective implementation.

Graph 55. Composition of Cohesion Policy investment in less developed regions, 1989-2013

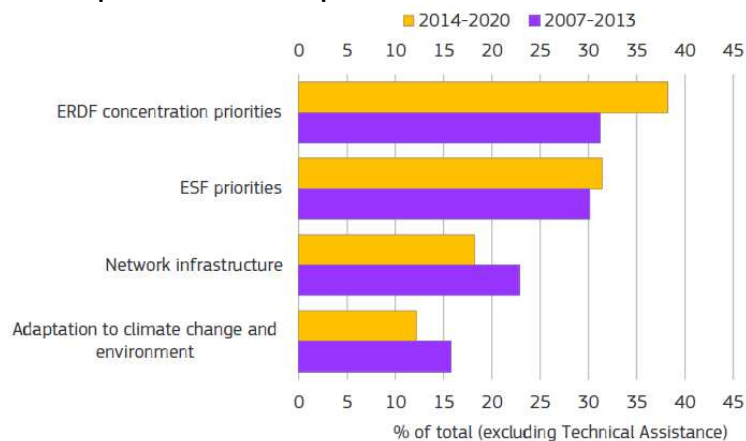


Source: European Commission (2014b)

The Youth Employment Initiative (YEI), providing 6 billion euros to funding the implementation of the youth guarantee, is a good and key example of concentration of the efforts. The principle of this guarantee is to ensure that every young person is offered appropriate employment or training within four months of leaving school or becoming unemployed. YEI funding will be focused on regions with high youth unemployment rates (regions with rate superior to 25% in 2012 or regions with rates of over 20% which are in countries where the rate increased by more than 30% in 2012). Indeed, the map of regional early leavers (map 1) rate shows the strong territorial concentration of the phenomenon.

More generally, the ESF priorities will receive a bigger part of the European resources during the programming period 2014-2020 (graph 56). About a third of the ESF resources would be allocated to education (the other parts to employment and social inclusion). As the lifelong learning is stagnating far away from the target (in 2013, 10,5% of 25-64 olds have participated to lifelong learning, while the 2020 target is 15%), with strong territorial inequalities (map 2), it is also a key priority to promote and implement, by correcting conveniently these inequalities.

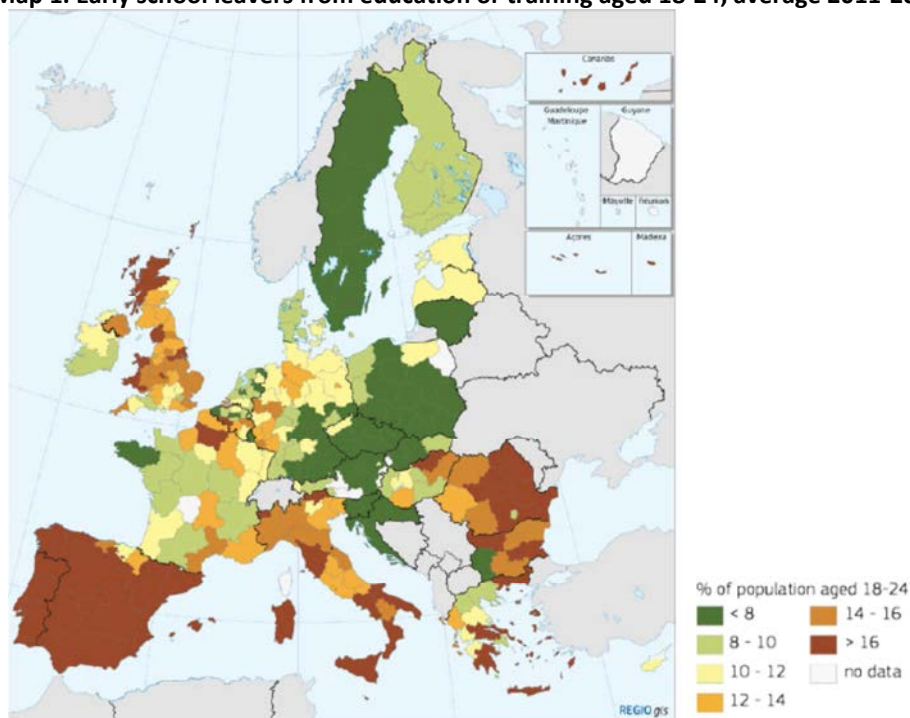
Graph 56. Allocation to priorities 2014-2020 and 2007-2013



Source: Final and draft partnership agreements as of 1 June 2014 and DG REGIO

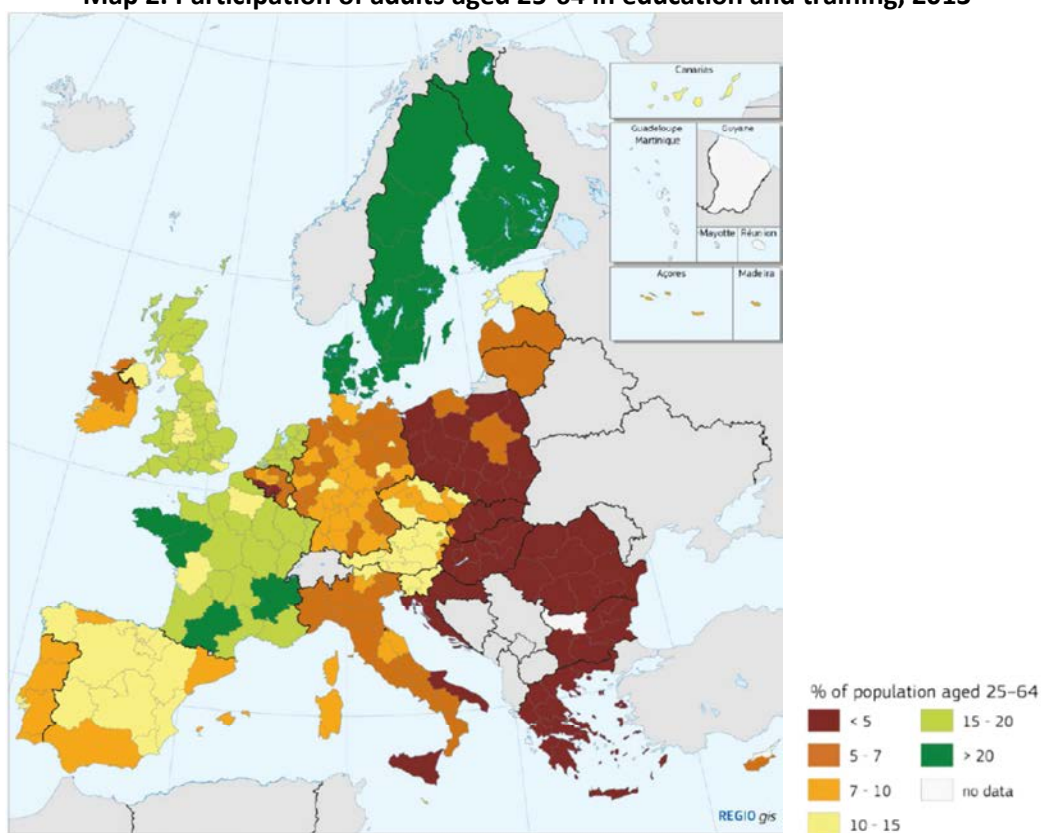
Source: European Commission (2014b)

Map 1. Early school leavers from education or training aged 18-24, average 2011-2013



Source: European Commission (2014b)

Map 2. Participation of adults aged 25-64 in education and training, 2013



Source: European Commission (2014b)

Note: the data for France (2013) is very likely to be *false* (Eurostat only underlines a 'break in the serie'). Indeed, as stressed in section 3.1., the displayed statistics at the national level are 5.7% for the rate of participation to LLL in 2012, and 17.7% in 2013!

The EC report on cohesion underlines the necessity to promote a sufficient level of “growth enhancing” public expenditure, more oriented towards the quality and the development of human capital. Such public investment in human capital comes under the “investment clause” which allows a government, under some conditions and in specific adverse circumstances, to temporarily deviate from its adjustment path towards its medium-term fiscal objective. The recent communication of the Commission (*Making the best use of the flexibility within the existing rules of the Stability and Growth Pact*, January 2015) formalises and specifies the conditions of application of this clause (see box 5).

Box 5. Summary for the “investment clause” under the preventive arm of the Pact

Member States in the preventive arm of the Pact can deviate temporarily from their Medium Term Objective or adjustment path towards it to accommodate investment, provided that: their GDP growth is negative or GDP remains well below its potential; the deviation does not lead to an excess over the 3 % deficit reference value and an appropriate safety margin is preserved; investment levels are effectively increased as a result; the deviation is compensated within the timeframe of the Member State’s Stability or Convergence Programme. Eligible investments are national expenditures on projects co-funded by the EU under the Structural and Cohesion policy, Trans-European Networks and the Connecting Europe Facility, as well as national co-financing of projects also co-financed by the European Fund for Strategic Investments.

Source: European Commission (2015).

The investment clause is all the more important since European funding of local investment projects has to be completed by national co-financing. The effective availability of such co-financing is necessary to the good absorption of the European funds: it is the core principle of additionality. But additionality does not mean simply that national public investments are subsidized by European non-refundable grants: now, the Cohesion Policy is able to use a set of repayable supports (loans, guarantees, equity and other risk-bearing instruments).

However, the “investment clause” is biased towards the countries which respect the 3% deficit reference value. So, this clause is neither really adapted to countries in the greatest fiscal and economic difficulties, nor sufficient to foster their catching-up in investment⁴⁶. It would be necessary to extend the clause to all public expenditure used to co-finance a project approved by the new EFSI.

3.2.3. Securing the place of investment in education in the Juncker Plan

The objective of the investment plan launched by the new Commission (the “Juncker Plan”) is to accelerate and amplify the recent movement towards the reactivation of public and private investment, by using a set of financial tools (without new public debt !), by implementing a regulatory framework more investment-friendly and by mobilizing under-used resources of the Community budget: the planned amount of investment (315 billion euros for the three years 2015-2017) corresponds to doubling the usual investment capacity of the Community budget. The new European Fund for Strategic Investments will be able to provide support for risks attached to the selected long-term projects, in order to maximise the investment multiplier effect on the basis of the initial grants to the Fund. The leverage effect of the European structural funds should be reinforced.

⁴⁶ This important point is analyzed by Myant (2015).

A reserve of eligible projects will be identified and managed by a dedicated “advisory hub”: projects with high European added value and able to start in the three next years. Education is a priority field for such projects, as the European education systems are considered as “under-equipped and under-funded”, comparatively to world key competitors. A program of modernization of schools in countries concerned by implementation and financing difficulties would be implemented.

Are we going to entry in the best of the worlds? Caution is necessary, as risks exist to reduce the *Juncker Plan* to a sum of heterogeneous projects, easy to implement rapidly at short term, thanks to convenient financial tools and to profitability well perceived by the investors. Do the educational investments belong to this category? It is not obvious that these educational investments are boosted spontaneously by the use of sophisticated financial technology. The place of education in the investment plan needs specific methods and tools, in order to start a genuine development and catching-up strategy in this field.

In its proposal of March 2015 for a Regulation on the European Fund for Strategic Investments, the EU Council considers Investment in E&T as eligible but is no sure that this investment will be encouraged by the precise clauses of the regulation. For example, the clause (16) indicates: “*The EFSI should target investments that are expected to be economically and technically viable and that are expected to repay creditors. Such investments should entail a degree of appropriate risk, whilst still meeting the particular requirements for EFSI financing*”. The conditions of application of this clause and some others to the E&T field should be assessed, in order not to exclude practically the investment in E&T.

If the real priority of the Juncker plan was the funding of projects offering quick financial returns in the countries facing the least fiscal difficulties⁴⁷, the opportunity to raise funds for correcting the inequalities in E&T investment would have been wasted.

⁴⁷ This risk is well underlined in Myant (2015).

Synthesis: major needs and main recommendations for investment in E&T

The stylized facts on the systems and investment in E&T (part 1), the national realities and Trade Unions testimonies (part 2), and the major transversal issues in E&T and main questions on E&T related to the *Juncker investment Plan* (part 3) presented in this document allows highlighting some specific point that we synthesize hereafter. We consider these points as being of primary relevance regarding investment in E&T, and as essential to discuss for the renewal of the *Education and Training 2020 Strategy*:

1. *OECD data and surveys (PISA, PIAAC, TALIS) provide very useful sources of information. Yet, distance and caution should be taken with the OECD models and the policy recommendations made by the organization. It is clear that the EU member states present a large heterogeneity; convergence in terms of E&T indicators is only partial according to the existing data. But convergence towards similar and demanding performances in E&T should not pass necessarily through the same policies: institutional contexts, ground realities or societal preferences are very diverse in the EU countries and appeal for actions adapted to each national situation.*

2. *With some rare exceptions⁴⁸, the budgetary constraints reinforced by the post-2008 crisis have favored a genuine austerity in the education expenses, which has in general practical negative consequences underlined by the actors of the E&T system. The restriction of public resources for education and training jeopardizes the long term catching-up of countries lagging behind for educational attainment and skills level: such catching-up was a reality until the crisis opened in 2008.*

3. *Focusing a large part of E&T efforts on higher education is very important to up-skill and enhance the general education level of the labour force. Yet, it should not be detrimental to primary and secondary education: trivially, the future graduated for the higher education systems have to be qualified through the precedent levels of education. Hence, the effort of development of tertiary education should be provided while also fostering a very important educational investment on the young generations in the first parts of the education system. A convenient balance of the funds allocated to the successive steps of the education and training system, from childhood education until lifelong learning for adults, is necessary from global and individual points of view: in order to reach the European common targets and to promote equity among individuals.*

4. *Youth unemployment is high in Europe in average or in the member countries, and significantly higher than that of the older generations. A real and massive involvement in policies targeted toward the European youth should be activated. Furthermore, high educational attainment and high vocational skills are complementary advantages at the moment of entry into the labour market. Hence, specific policies and programmes are necessary to help the most vulnerable young people (early school leavers, NEETs): the revival of growth is not sufficient to solve these difficulties concentrated on some groups of young people.*

⁴⁸ For instance, Sweden in our sample countries.

5. *There is a large gap between the universality of Lifelong learning advocated by the European Union and the practical reality. Indeed, even in countries where some very structured systems of education and training (formal but also non-formal) have been implemented and developed, there exist some large inequality inside the population in the access (related to the education level or to the socio-professional category for instance).*

6. *Important individual mismatches between education/skills and occupations are a reality in all national economies and these mismatches accompany long-run demographic changes of the countries: these challenges of rising education and skills for all need to be addressed more clearly. Over the next years, there is the risk of an increasing trend of over-educated people, what raises the question of the joint responsibility of the educational system and of the labour market. On the one hand, the effectiveness of the vocational education and training is a challenge; on the other hand, the level of the jobs' offer is crucial, but also the jobs' polarization trend, if it leads highly educated persons to accept elementary jobs.*

7. *The Trade Union concerns are particularly very close to the ground, to the labour world. This is notably illustrated by their own proposals of reforms and public policies in education that quite often mix very clearly labour and educational concerns. These considerations have to be taken seriously into account in the general guidance for E&T policies and in their 'on the ground' implementation, notably by an enhanced tripartite dialogue in policy-making.*

8. *The Juncker Plan underlines the interest of the European Union in adapting its policies and specific funds to the current social cohesion and economic situation, but there is a large uncertainty on the E&T content of the future projects fostered by the plan, notably because of the criteria and tools being implemented to raise and orientate the private funds, beyond the initial public grants and guarantees. A much stronger guidance and targeting of educational projects among those proposed is highly necessary to correctly address the major challenges of the Union member in E&T.*

Appendix: List of Trade Unions having participated to the survey for the national case studies

Czech Republic

(no answers to the survey)

England

(no answers to the survey)

Finland

The Confederation of Trade Unions SAK (*Suomen Ammattiliittojen Keskusjärjestö*, Central Organisation of Finnish Trade Unions)

France

(no answers to the survey)

Germany

The Confederation of Trade Unions *Deutscher Gewerkschaftsbund* (DGB)

Italy

The Confederation of Trade Unions UIL (*Unione Italiana del Lavoro*) and the sectoral Union *UIL Scuola*

Poland

(no answers to the survey)

Portugal

The Confederation of Trade Union CGTP (*Confederação Geral dos Trabalhadores Portugueses*)

Spain

(no answers to the survey)

Sweden

The confederations of Trade Unions LO (*Landsorganisationen i Sverige*), SACO (*Sveriges Akademikers Centralorganisation*) and TCO (*Tjänstemännens Centralorganisation*)

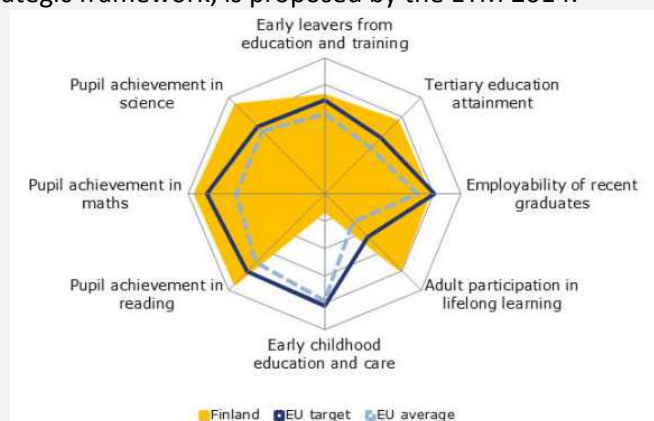
Appendix: Questionnaire sent to the Trade Unions, example for Finland

Investment in education and training project for ETUC Draft Questionnaire for national referees

Introduction: overview of the country in terms of education benchmarks

The European Training Monitor (ETM), published by the European Commission, presents the position of your country in relation to EU average, highest and lowest performers and to EU 2020 targets for the range of indicators selected in the strategic framework for education and training.

A chart summarizes this comparison: it compares, for each indicator, the national score to the best performer (the outer ring), the lowest one (the centre of the chart), the EU average score (dotted line) and the EU 2020 target (bold line). So, a synthetic view of the relative national performances, consistent with the strategic framework, is proposed by the ETM 2014:



The chart mainly underlines the relative low performance of Finland regarding early childhood education and care. For the other indicators, Finland exhibit high performance both relatively to the EU benchmark and to the EU average.

- 1- **How do you assess the relevancy of the EU strategic framework and of the attached benchmarks?**
- 2- **What own conclusions do you extract of this comparison?**

1. Level of education and systems of education and training

1.1. **What is your own assessment:**

- a. *Of the educational attainment of the adult population in your country ?*
- b. *Of the changes of this attainment between old and new generations ?*

1.2. How do you assess the specific strengths and weaknesses of the Education and Training system in your country?

- a. Between pre-primary, primary, secondary, tertiary education?
- b. Between general and vocational education and training?
- c. Between initial and continuing education and training?
- d. From the point of view of equity between students?

1.3. Expenditures on education and fiscal constraints and policies

- a. What is your appreciation of the level and the effectiveness of expenditure on education in your country?
- b. How do you assess the impact of the present fiscal constraints and policies on the education and training system in your country:
 - i. An impact localized in some parts of the system or a more general and structural impact?
 - ii. Ways of adaptation:
 - Do you consider there is an on-going rationalization leading to better efficiency or, rather, a regression of the system with degradation of the quality of the educational service?
 - Is there any ongoing increasing cost-sharing with private financing (especially in VET and higher education)?
 - iii. What are the main implications for the future of the system?

1.4. About the teachers' profession:

- a. How do you assess the teachers' status in your country? Do you consider that their educational and social status match with their remuneration?
- b. How did evolve the teachers' income during the crisis?
- c. How do you consider the current teaching conditions (teaching hours, number of students per class)?
- d. How does your country implement teaching quality policies in a context of restrained educational expenditures?
- e. Do you feel that a possible structural change of teaching conditions (as the development of online education) is taken into account in your country's education policies?

2. Acquisition and relevance of skills

2.1. Early childhood education (ECEC)

- a. Is ECEC explicitly considered as one priority of education policies in your country (for instance through increasing the share of pupils having access to this pre-primary education)?
- b. Do you think that participation to ECEC strongly depends on parents' social background?
- c. Do you consider the funds are sufficient for the proclaimed objective?
- d. What is supposed to be learnt during ECEC? What orientations to improve the quality of the childhood education?

2.2. The learning of skills in instruction time:

- a. How do you assess the share of instruction time dedicated to basic skills (reading, mathematics, science...) in your country?
- b. How do you assess the share dedicated to other skills like digital competences and foreign languages?

- c. Do you think your country balances the shares of instruction time dedicated to basic skills and other skills in a way allowing the students to face personal and professional challenges in the course of their life?
- d. Do you consider that tests of the OECD PISA survey supplies reliable information on the performance of your country for the learning of basic skills?
- e. Do you think that there is any strong effect of social and parental background on the acquisition of skills?

2.3. Adults' skills

- a. What is your assessment of the adult population performance in reading, writing, counting in your country?
- b. Do you consider that the OECD PIAAC survey (Programme for the International Assessment of Adult Competencies) is a reliable tool for the assessment of 'literacy' and 'numeracy'?
- c. How do you assess the role and relevance of the continuing vocational training system of your country to raise adult's skills?
- d. Do you consider that the Lifelong Learning approach, mixing continuing training and recognition of prior experience, is becoming a reality in your country?
- e. How does your country target the least skilled adults to increase their skills in literacy and numeracy? Which kind of program is implemented to reach this goal?
- f. How do you assess the programs aiming to raise the skills for the unemployed people?

3. Insertion and transition on the labour market

3.1. Systems of learning

- a. Do you consider that the initial education system in your country supplies the right skills for the insertion and the employability on the labour market?
- b. Do you consider that a dual system (combining apprenticeships in a company and vocational education at a vocational school in one course) is a good way to manage smooth and successful access to the labour market?
- c. Do you consider that some specific (other) training policies would be necessary to implement in order to improve transitions on the labour market?

3.2. Young people

- a. How do you assess the insertion of young people on the labour market in your country?
- b. What is your analysis of the specific problem of the NEETs (young people not in education, employment or training) and the implemented targeted policies?

3.3. Mismatches

- a. Do you consider that there are important mismatches⁴⁹ on the national labour market?
- b. What are the main mismatches in your country?
- c. Do some specific categories of population suffer from particular mismatches?
- d. What kind of actions/policies is or should be implemented to address this problem?

⁴⁹ Mismatches correspond to inadequacy between supply and demand of skills in an economy. These mismatches may in practice take the form of unbalances in terms of education levels, specific skills, etc. Mismatches can be horizontal (between the personal fields of education and of work) or vertical (between the educational level of the individual and the skills level of a job) or both.

4. Public policies of education: what reforms?

An overview of Policies and proposals of reforms in education and training

- *An overview of the main educational policies (recent or in progress reforms) in Finland*

* The *Youth Guarantee package*, a social device for young people introduced in 2006 and enhanced in 2013 (including a guarantee of employment, education or training, an enlargement of study places in VET, a young adult skills programme, a youth workshop, an outreach youth work).

* The Finnish Parliament is due to examine in 2014 an *Act establishing and National Qualification Framework* "for Exam-based and other Competences".

* The reinforcement of student guidance and after the end of compulsory education.

- *European policy recommendations*

The European Council in its recommendation of July 2014 regarding the National Reform Programme 2014 underlines the necessity to *"improve the labour-market prospects of young people and the long-term unemployed, with a particular focus on vocational education and targeted measures"*.

4.1. How do you consider these policies and these proposals of reforms?

a. *How do you assess the past and present policies and the proposals coming from the European institutions?*

b. *Do you consider these reforms relevantly address the challenge of equity in your country (to offer to all young people chances of upward educational mobility comparatively to their parents)?*

c. *Do you think that the social and tripartite dialogue (government, unions, and employers) is able to supply significant contributions to these policies and reforms? In what fields?*

c. *What would you propose as important or urgent reforms to implement in terms of education and training in your country?*

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