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NEET Youth in the Aftermath of the Crisis: Challenges and Policies

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NEET YOUTH IN THE AFTERMATH OF THE CRISIS CHALLENGES AND POLICIES

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ABSTRACT

This paper presents an overview of the situation of youth in OECD countries since the onset of the financial crisis focusing primarily on describing the characteristics and living conditions of youth not in employment, education or training (the 'NEETs'). It also provides data on the availability, coverage and effectiveness of income-support policies for young people, and summarises available evidence on the impact of interventions that aim at improving the social, education and employment situation of the most disadvantaged youth. Due to the paper's explicit focus on the hardest-to-place, most disadvantaged youth, the range of policies covered is broader than in earlier studies on the same topic, including various social benefits and in-kind services targeted at this group. The paper shows that NEET rates have not yet recovered from the crisis. There are large differences in youth unemployment and inactivity across countries, and these differences were further exacerbated by the recession. Reducing NEET rates is a great challenge for governments, as youth who remain jobless for long periods typically come from more disadvantaged backgrounds, have low levels of educational attainment, and are in many cases inactive. There is substantial evidence, however, that even the most disadvantaged youth can benefit from a variety of targeted interventions, including for instance special education programmes and mentoring.

RÉSUMÉ

Cet article présente un aperçu de la situation des jeunes dans les pays de l'OCDE depuis le début de la crise financière, en se concentrant principalement sur les conditions de vie et les caractéristiques des jeunes ni en emploi, ni scolarisés, ni en formation (les 'NEETs'). Il fournit également des données sur la disponibilité, la couverture et l'efficacité des prestations sociales, et fait une synthèse de l'efficacité des interventions qui visent à améliorer la situation sociale, l'éducation et l'emploi des jeunes les plus défavorisés. Il se concentre sur les jeunes les plus défavorisés et les plus difficiles à placer. À ce titre, l'éventail des politiques visées est plus élargi que dans les études précédentes sur le même sujet, comprenant tout l'éventail des prestations sociales et un large panorama des interventions possibles, allant des services sociaux à l'emploi, en passant par l'éducation et la santé. Nous montrons que les taux de NEET n'ont pas encore retrouvé leurs niveaux d'avant la crise. Il existe cependant de grandes différences entre pays dans le chômage et l'inactivité des jeunes, qui ont été exacerbées par la récession. Réduire le taux de NEET est difficile pour les gouvernements. Les jeunes qui contribuent le plus au chômage et à l'inactivité restent sans emploi pendant de longues périodes et viennent généralement de milieux les plus défavorisés. Dans de nombreux cas ils ne recherchent pas d'emploi et ont des niveaux d'éducation faibles ou pas d'éducation du tout. Il existe pourtant des preuves que ces jeunes peuvent bénéficier d'un large éventail d'interventions ciblées, allant de programmes d'éducation spécialisée au mentorat.

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INTRODUCTION

1. The recent crisis has hit youth harder than any other group.[1] The number of employed youth in OECD countries fell by more than 7.5 million between 2007 and 2012.[2] This corresponds to a decline in the employment rate by 4.6 percentage points. Among those employed, the incidence of part-time employment has strongly risen and temporary employment is much more frequent among youth than among other working-age persons (OECD, 2014*a*). In this grim picture, low-educated youth perform even worse: they are much more likely to be out of employment and to have non-standard jobs than other youth.[3] They also have the largest difficulties to keep the jobs they are holding (OECD, 2014*c*). The number of youth aged between 16 and 29 years not in employment, education, or training (NEETs) has increased by 2.5 million (+7%), to 38.4 million in the OECD (or 18% of the youth population). Nearly two-thirds of them are not looking for a job (66%, see Table 1) and 85% of them have not gone beyond upper-secondary education. This jobless youth adds to the pool of those working in bad conditions, and as a result, 44.7 million people aged 16-29, or 26% of the youth population now live in poverty.[4]

2. The challenge faced by OECD country governments is enormous. Improving employment and social integration among youth has become a prime policy concern. Yet, in the aftermath of the financial crisis, countries face high and often growing needs for social policies from all sides, while shrinking fiscal space is restricting the capacity for an effective response. In many countries the fiscal stance is shifting to tackle unprecedented deficits and rising debt-to-GDP ratios. Cuts in social spending are part of many fiscal consolidation plans, and pressure on social spending is set to increase further.

3. In this context, careful attention must be paid to supporting the most vulnerable, who often also have the most difficulties to enter the labour market. Yet, little is currently known on who are the young most at risk of long-term poverty, what their main barriers to stable employment are, and how they can be helped in attaining financial independence.

---

1 When using the term *youth*, this report generally refers to individuals aged 15/16-29 years. The benefit of looking at this broad age range is that it includes the growing share of individuals who remain in education for longer and only enter the labour market in their late 20s. Where findings refer to a different age range or a subset of youth (*e.g.* only the 25-29 year-olds) this is explicitly noted.

2 The population of young people aged 15-29 years remained relatively stable over the same horizon at around 251 million.

3 The term non-standard employment is used to describe work that is either part-time or temporary. Evidence on its incidence among youth is provided in Section 2.

4 This study is largely based on the data from labour force and household income surveys. Due to limited data availability or a lack of data homogeneity, a number of OECD countries could unfortunately not be included in all parts of this study at the current stage: Israel, Japan, Korea, Switzerland, and Turkey. For the majority of countries the time period covered in this report is 2007-2012.

Table 1. Poverty and NEET status among Youth in 2012

	total number of youth	poor youth	NEETs	inactive NEETs
		in thousands		
Australia	4 779	617	559	379
Austria	1 564	258	142	78
Belgium	2 021	264	306	175
Canada	6 832	1 523	972	585
Chile	4 336	962	943	711
Czech Republic	1 921	179	256	147
Denmark	1 021	291	125	77
Estonia	276	46	44	25
Finland	989	174	107	62
France	11 209	1 755	1 889	885
Germany	14 382	2 566	1 380	863
Greece	1 766	461	490	131
Hungary	1 822	281	353	202
Iceland	61	8	5	2
Ireland	892	109	193	91
Israel	1 670	--	460	406
Italy	9 439	1 917	2 340	1 397
Japan	11 960	--	1 190	820
Korea	9 589	--	1 802	1 534
Luxembourg	99	15	8	4
Mexico	30 368	6 530	7 054	5 889
Netherlands	3 030	466	214	142
New Zealand	933	143	161	109
Norway	971	226	79	56
Poland	7 529	1 139	1 203	614
Portugal	1 798	288	318	94
Slovak Republic	1 163	145	220	84
Slovenia	362	38	45	18
Spain	7 426	1 778	1 913	519
Sweden	1 840	363	203	93
Switzerland	1 453	--	134	75
Turkey	17 130	--	5 931	4 720
United Kingdom	12 463	2 182	2 011	1 019
United States	38 959	19 933	5 352	3 244
OECD - Total	**212 049**	--	**38 400**	**25 250**

1. Data are for individuals aged 16-29 years except for Israel, Korea, New Zealand and Turkey (all 15-29), Japan (15-24) and the United States (16-24).

2. The poverty threshold used is 60% of equivalised median household income. Information on youth poverty is missing for Israel, Japan, Korea and Turkey.

3. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada, Chile, Israel, Japan, Korea and Turkey (all 2011).

Source: OECD calculations based on EU-LFS, EU-SILC and national labour force and household surveys except for Israel, Japan, Korea, and Turkey (OECD Education Database).

4. This paper presents an overview of the situation of youth in OECD countries focusing primarily on the describing the characteristics and living conditions of young NEETs. It also provides data on the availability, coverage and efficiency of income-support policies for young people, and summarises the available evidence on the effectiveness of interventions that aim at improving the social, education and employment situation of the most disadvantaged youth. The paper builds up on and extends existing OECD work on the labour market and educational situation of youth, notably the OECD *Jobs for Youth* reviews (OECD, 2010*c*), and the OECD *Learning for Job* project with its reviews of vocational education and training (OECD, 2010*b*, 2014*b*). It differs from these earlier reports in its explicit focus on the hardest-to-place, most disadvantaged youth. As such, the range of policies covered is larger than in previous studies, including various social benefits and in-kind services targeted at this group.

5. This document is organised as follows: **Section 2** gives a brief overview of the labour market situation of youth in the aftermath of the crisis and tracks the development of the most important indicators since the start of the crisis in 2007. Its main findings are:

- There are large differences in labour force participation rates of the youth aged 16-29 across OECD countries, ranging from 40% in Japan to 74% in Switzerland. These disparities reflect *(i)* differences in the share of youth in education, *(ii)* differences in the proportion of youth who are NEET, and *(iii)* differences in (part-time) employment among students. On average, in OECD countries in 2012, 36% of youth are in education, 13% combine employment and education and 16% are NEET.[5]

- Labour force participation among youth has declined over the period 2007-12 in nearly all OECD countries: The drop was strongest in Ireland (-11 percentage points), Spain (-10 percentage points) and Denmark (-8 percentage points).

- NEET rates rose during the crisis in nearly all OECD countries (+2.3 points over the 2007-12 period); in a number of countries this rise was considerable: above +10 percentage points in Greece, Ireland, and Spain, +5 percentage points in Denmark and Italy.

- The rise in NEET rates was nearly entirely due to an increase in the rate of unemployed NEETs among youth; rates of inactive NEETs often remained stable or declined, even in countries that were strongly affected by the economic crisis. This suggests that policy should treat inactive NEETs and unemployed NEETs as two separate groups, as only the share of unemployed reacts strongly to economic fluctuations. However, more than half of all NEETs are currently inactive and likely to remain so in the absence of targeted policy interventions.

6. Declining youth labour force participation and growing numbers of NEETs are highly problematic for a range of reasons: In the short run, spells of NEETs status imply a stagnation or decline in human capital, which is particularly worrying if it affects low-educated youth with little or no work experience. Young people moreover typically lack the financial cushion in the form of savings or benefit entitlements to cope with temporary spells of low income or unemployment. Periods out of employment or education can moreover have negative long-term consequences by giving rise to potentially 'scarring' effects, *i.e.* by permanently reducing a young person's future employment and earnings potential.

7. **Section 3** presents results from a detailed profiling of young NEETs by describing their personal characteristics and living conditions. The principal findings are:

[5] The average figures given in Sections 2 and 4 slightly differ from the numbers reported above: the latter have been calculated based on the absolute numbers provided in Table 1 and thus account for population size; average figures provided in the remainder of the document are non-weighted cross-country averages.

- NEET status is strongly related to low educational attainment: 85% of all NEETs have no tertiary education and 36% not more than lower-secondary education. Since the beginning of the crisis, the share of highly-educated youth among NEETs has, however, risen in nearly all countries, sometimes substantially: over +7 percentage points in Greece, Mexico and the Slovak Republic, +6 percentage points in the Netherlands, Poland and the United Kingdom.

- More than half of all NEETs are younger than 25 years and teenagers account for about 16% of all NEETs. The group of NEETs has however become older since 2007, with the share of 15-19 year-olds among NEETs having declined in nearly all countries. There is no evidence however that the change in the age distribution among NEETs was stronger in countries most affected by the crisis.

- NEET rates are systematically higher for young women than for young men. The average gender gap in NEET rates is 5 percentage points, but the difference is much larger in Turkey (30 percentage points), Mexico (27 percentage points), Chile (16 percentage points) and the Czech Republic (10 percentage points).

- The incidence of poor health (5% of all NEETs) and single parenthood (3% of all NEETs) is much higher among NEETs than among youth more generally. This confirms that some NEETs face important additional barriers to labour market entry.

8. The analyses of labour market participation in Section 1 and of NEETs' characteristics in Section 2 are based entirely on *cross-sectional* data, *i.e.* on data for a sample of individuals observed at one single point in time. Such data are not suited for studying *for how long* a young person remains NEET or whether NEETs typically have a previous spell in the labour market.

9. **Section 4** complements the earlier cross-sectional analysis by taking a *longitudinal* perspective on schooling and labour market participation of youth. Using individual-level panel data with monthly observations, the analysis describes school-to-labour-market transitions of three cohorts of 16-year-olds in a selection of European OECD countries. Young people's trajectories over a period of 48 months are clustered into 7 typical 'pathways' based on their transition patterns and the initial and final labour market status. Descriptive analysis is then used to determine what factors are associated with specific pathways. The key findings are:

- The 7 pathways identified as the most important ones for young people are as follows: The majority of 16 year-olds remain in schooling for (more or less) the entire 48-month observation period (the '*students*' pathway); three pathways describe young people who make a transition from school into employment (the '*school-to-employment*' pathway), into unemployment (the '*school-to-unemployment*' pathway) or into inactivity (the '*school-to-inactivity*' pathway). The final three pathways are characterised by already starting outside of school in employment (the '*early employed*' pathway), unemployment (the '*early unemployed*' pathway) or inactivity (the '*early inactives*' pathway).

- For the studied age span from 16-20 years, the experience of NEET status concerns only a minority of youth, in particular those who transition from school into unemployment or inactivity (12-14 months of NEET status) and those who already start off as *early unemployed* or *early inactives* at the age of 16 years (22-33 months of NEET status). Young dropouts consequently account for a substantial share of the total observed time spent in NEET status (and thus possibly also for the implied public expenditures): Even though the *early inactives* and *early unemployed* together make up only 3% of all youth, they are responsible for 27% of the total time spent

NEET by all youth. The largest share of all NEET months is accumulated by the 9% of youth transitioning from school to unemployment, who are responsible for 38% of all NEET months.

- Most NEETs only have a single spell during the 48-month observation period, and only 12% of all youth have a spell that lasts longer than 6 months. The calculations are however likely affected by the relatively short observation period and the fact that many spells are not observed until their end. Individuals with poor health at age 16 are much more likely to become NEETs and on average have much longer spells.

10. Income support, in the form of unemployment benefits, social assistance, family benefits or housing benefits, plays a key role in reducing poverty, notably in bad times (OECD, 2008, 2012*b*). In the current context of on-going fiscal consolidation in a number of countries, and in light of the large and growing number of NEETs, income support needs to target the most vulnerable groups. **Section 5** provides a detailed analysis of the availability and coverage of income-support programmes for youth. It suggests that a better design of benefit systems, *e.g.* unemployment or social assistance schemes, could help reach a larger share of the neediest youth in a number of countries, notably when economic conditions worsen. Its main results are:

- For a youth with work experience, 12 months of employment / contribution records are in most countries enough to be eligible to unemployment insurance benefits. Often, one year of work only will however provide benefits for less than a year, and many young people, and in particular the NEETs, may not even have these 12 months of work experience. For those who have no or short employment records, unemployment benefits are only paid in one-third of the countries.

- Social assistance makes up the bulk of income support provided to youth in need. Benefits of last resort such as general social assistance are available for youth without prior work experience, except in Chile, France, Italy, Luxembourg and Spain. In most countries, housing benefits can also be paid to youth living alone. In addition, family benefits can be paid to those living with their parents until they are age 17 years, or even 20 years for students.

- Benefit receipt rates can provide a more precise picture of the coverage of income-support benefits. From household survey data, it appears that as implied by the eligibility criteria, much fewer youth are covered by unemployment benefits than by the household-level social assistance, housing benefits and family allowances. OECD-wide, close to 50% of all youth are covered by one of these benefit programmes. Receipt rates vary however substantially across countries.

- Poverty rates among NEETs (34%) are about 15 percentage points higher than for youth more generally (19%). This reflects a lack of earned income, but likely also the differences in living conditions documented in Section 3, notably the lower levels of parental education (and hence income) for those still living at home. In most countries, the large majority of NEETs are coved by income-support benefits. The generosity of these benefits is however often not sufficient to make that NEETs have an income above the poverty line.

11. Income support is essential to help young people avoid extreme poverty during periods of hardship. The most disadvantaged youth however need complementary specialised programmes that enhance the skills necessary for educational attainment, health, and labour market integration. **Section 6** gathers evidence on these skills and on strategies to improve them. While a full account of existing interventions in this area is clearly beyond the scope of this paper, the section gives an overview of existing evidence from programmes that have been evaluated and highlights the scope for further research:

- Non-cognitive skills (*i.e.* personality traits such as conscientiousness, emotional stability or

openness) are just as predictive as cognitive ability measures (captured by the IQ and other tests) for a range of outcomes: educational attainment, labour market performance and health outcomes (mental health, substance abuse, risky sexual behaviours) or even crime. There is also evidence that non-cognitive skills are as malleable as cognition and can be influenced by education: half of measured personality traits are inherited, the remainder is determined by environmental factors. Personality traits can be changed by experience and specialised interventions, including for teenagers and young adults, whereas cognitive abilities are set rather early in life. This means that targeted interventions for the most disadvantaged youth can gain from addressing both cognitive and non-cognitive skills.

- Many successful interventions targeted at disadvantaged students aim at improving personality traits, often together with measures to enhance cognitive skills: innovative school programmes, after-school support, mentoring, apprenticeship schemes and second-chance programmes. Good mentoring programmes, for instance, can significantly improve the self-esteem and self-confidence of youth who lack a role model at home. Apprenticeship and other work-study programmes are probably even more effective for the most disadvantaged youth. Even small after-school interventions can achieve a significant and durable impact on skills and educational attainment if targeted at those most in need. However, in each category, some interventions are more successful than others, and it is important to study the success factors of an effective programme in detail.

- Instead of increasing skills outside or at the margin of the labour market, other programmes aim at creating job experience opportunities, notably for the least-skilled youth or those with health problems. Targeted hiring subsidies in the private sector can significantly increase employment opportunities for the least-skilled, especially when there is a high minimum wage; temporary public-employment programmes usually fail to do so. However, more research is needed to understand the social impact of public-work programmes on non-employment outcomes such as parenthood, health, crime, or benefit receipt for those furthest away from the regular labour market or those facing permanent barriers to employment.

- One of the main challenges for youth programmes is to reach those in need. Identifying those likely to drop out of school, those at-risk of mental health problems or substance abuse, or those who are neither in school nor in employment requires important resources to enable frequent contacts between youth and social services. One-stop centres might facilitate the access to and identification of services. Involving families in programmes, either through better information or incentives, can also improve the motivation and participation of youth. Overall, the organization and governance of employment and youth services and their coordination with other stakeholders appears key to the success of ambitious objectives such as the *Youth Guarantees*.

12. In sum, this paper reveals wide diversity in the situation of youth both across and within OECD countries. It also shows that, in the aftermath of the recent crisis, there is much scope for policy measures that help avoid lasting consequences for NEETs and that bring troubled youth back on the path to independence.

1. THE LABOUR MARKET SITUATION OF YOUNG PEOPLE

13. Participation of youth in the labour market is an important driver of social outcomes. The transition from education into employment is typically associated with a rise in income and a gain of independence. Labour market entry is an important factor in a young person's decision to leave the parents' home, and also typically a prerequisite for family formation. At the same time, the choice between seeking full-time employment or continuing education (possibly combined with part-time work) depends again on a range of social factors, notably the young person's financial situation, support from parents and other family members, and the availability of public funding for studies and during the transition from school to work.

14. Youth were hit particularly hard by the Great Recession as labour market prospects for young people in many OECD countries worsened dramatically. Soaring unemployment rates raised the uncertainty young people are facing when entering the labour market. Labour market segmentation means that particularly young people with little or no work experience have low chances of finding a job. As a result, the numbers of youth not in employment, education, or training (NEET) have been rising.

15. High shares of NEET youth are an important concern not least because of the risk of 'scarring effects' as spells of unemployment or benefit receipt early in the career may have an adverse impact on future labour market outcomes for an individual. For instance, youth who experience a spell of unemployment are later in their careers more likely to be affected by unemployment (Gregg, 2001; Doiron & Gørgens, 2008; Schmillen & Umkehrer, 2013; Möller & Umkehrer, 2014) or lower earnings (Gregg & Tominey, 2005; Mroz & Savage, 2006). This effect is 'structural' in the sense that it persists even when individual characteristics like sex, family status, the level of education, or even unobserved ability are taken into account.[6] An implication of scarring is that the costs of high youth unemployment may accumulate over time and hence exceed the immediate consequences in the form of foregone earnings and decreased well-being.

16. This section provides an overview of the labour market situation of youth in OECD countries, looking at labour force participation, NEET and employment rates and their development over the crisis. These results serve as a background to the analyses provided in the following sections, which focus more specifically on the characteristics of NEETs (Section 3), on the pathways young people take from school into the labour market (Section 4), and on the receipt of income-support payments among young people (Section 5).

Labour force participation of youth

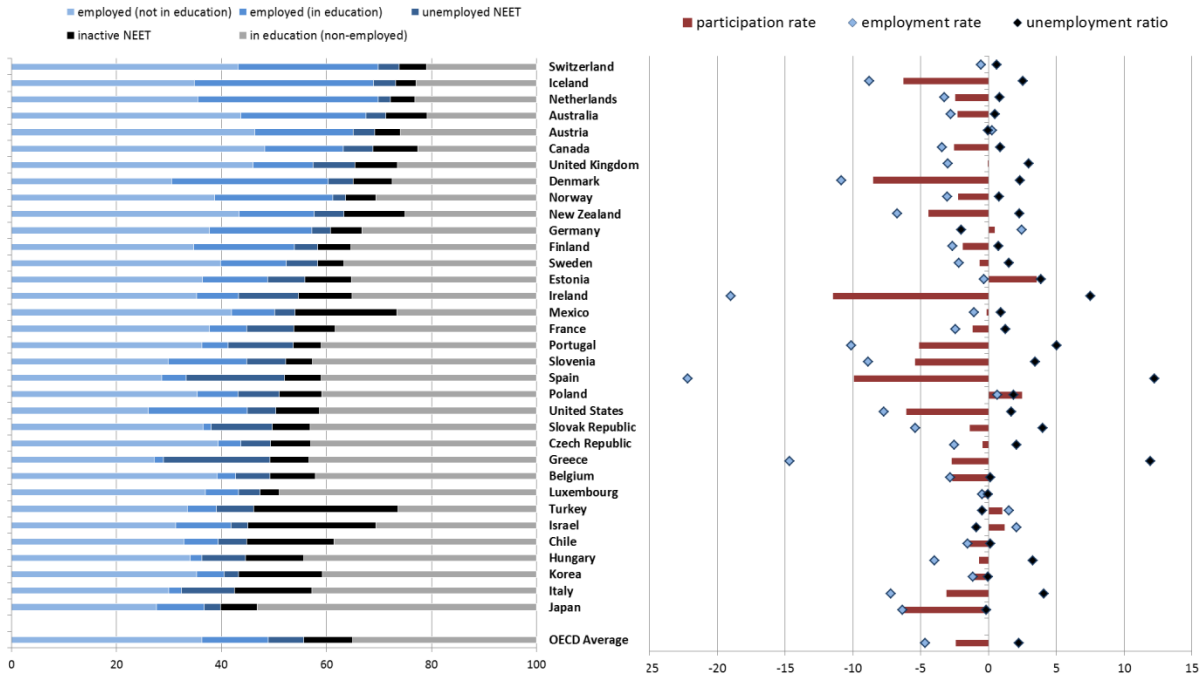
17. Labour market outcomes of youth vary substantially, both within and across countries. In nearly all OECD countries, the majority of individuals aged 15-29 years participated actively in the labour market in 2012. The share of youth who were either employed or seeking employment ranges from over 70% in

[6] Potential drivers of 'scarring effects' are the depreciation of human capital or the loss of professional networks due to unemployment, the fact that potential employers might interpret unemployment spells as negative signals about an applicant's productivity, or a behavioural effect if unemployment changes the recipient's preferences for work (Heckman & Borjas, 1980; Ellwood, 1982).

Switzerland, Iceland, the Netherlands and Australia to below 45% in Korea, Italy and Japan (left panel of Figure 1). The OECD average lies at 56%.

Figure 1. Labour market participation among young people has fallen in nearly all OECD countries

Left panel: labour market status of youth, 2012.
Right panel: percentage-point change in the labour participation rate, employment rate and unemployment ratio of youth, 2007-12



1. Numbers are for individuals aged 15-29 years, except for Japan (15-24) and the United States (16-24).
2. For Chile, Israel, Japan, Korea and Turkey, the numbers presented in the left panel are for 2011. The time variation presented in the right panel is for the period 2006-11 for Chile, for the period 2007-11 for Israel, Japan, and Turkey, and for 2008-11 for Korea.
3. The labour market status is the principal activity of an individual at the time of the interview. The participation rate is calculated as the share of individuals who report being employed (in education or not) or unemployed.
4. Countries are sorted by the labour force participation rate in descending order.
5. The OECD average is non-weighted.

Source: OECD calculations based on EU-LFS, SEW (Australia), LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Israel, Japan, Korea, Turkey).

18. The composition of those who are active in the labour market however differs strongly across countries. First, in a number of countries, employed youth often **combine studies and work**. In Denmark, Iceland and the Netherlands, around half of employed youth are in education (30-34% of all youth). More generally, in nearly all countries where labour force participation rates are high, a significant share of employed youth combine studies and work. High shares of students who work are thus an important determinant of high labour force participation rates among youth. Second, in a number of countries, a significant proportion of active youth are seeking employment (the '**unemployed NEETs**'). The *unemployment ratio*, *i.e.* the share of unemployed among all youth, is highest in countries that were severely hit by the economic crisis, notably in Greece (20% of all youth) and Spain (19%). By contrast,

only 2% of youth are actively looking for work in the Netherlands and Norway, and 3% in Israel and Korea (see Annex I).[7]

19. The group of inactive youth is primarily made up of students. However, in a number of countries, there is a sizeable minority of '**inactive NEETs**', *i.e.* youth who are neither in employment, education or training nor seeking work. The share of inactive NEETs is highest in Turkey (28% of all youth) and Israel (24%), but important also in Chile, Italy, Mexico and Korea (all around or above 16%). As inactive NEETs are not necessarily registered with the public employment services or even with local welfare offices, they may be particularly hard to reach. Their weak labour market attachment, however, means that they deserve special attention. Section 3 illustrates that the group of NEETs is highly heterogeneous, consisting of single parents, individuals with health problems, but likely also discouraged workers who have given up job search. The analysis of school-to-labour-market trajectories presented in Section 4 moreover shows that being NEET is not merely a temporary state during young persons' transitions into the labour market but that some youth remain NEET for long periods.

20. **Labour force participation** among youth declined from 2007 to 2012 in nearly all OECD countries, on average by 2 percentage points across OECD countries (right panel of Figure 1). The drop is highest in the countries that were most severely struck by the economic crisis, in particular in Ireland (a decrease of 11 percentage points) and Spain (minus 10 percentage points), but also in Denmark (minus 8 percentage points), Iceland, Japan and the United States (all minus 6 percentage points). The variation in **employment rates** over the same time horizon is much stronger still, with declines as high as 22 percentage points in Spain, 19 percentage points in Ireland and 15 percentage points in Greece. The gap between the drop in labour force participation and employment rates is reflected in rising unemployment ratios.

Unemployed and inactive NEETs

21. Falling participation rates and a net loss of employment for young people countries are reflected in rising numbers of youth not in employment, education or training in many OECD. NEET rates are strikingly high among the countries that were hit most severely by the crisis (left panel of Figure 2). In Greece, 28% of all youth aged 16-29 years are NEETs, and the shares of youth out of employment or education are above 20% also Italy, Ireland and Spain. Very high NEET rates are however also observed in Turkey (35%), Israel (28%), Mexico (23%) and Chile (22%).[8]

22. A breakdown of NEETs into *unemployed* and *inactive* shows that in most countries, the majority of NEETs are not looking for work. The share of inactive NEETs among all NEETs is highest in Israel, Korea, Mexico and Turkey, where more than four out of five NEETs are not looking for work. Averaged across OECD countries, 58% of all NEETs are inactive.[9]

23. The rise in NEET rates since the beginning of the crisis by contrast was primarily driven by an increase in the share of *unemployed* NEETs, while shares of *inactive* NEETs typically remained stable or even declined (right panel of Figure 2). In Greece and Spain for instance, two of the countries with the

7 The unemployment ratio for Japan is also 3%, it has however been calculated for the younger group of 15-24 year-olds.

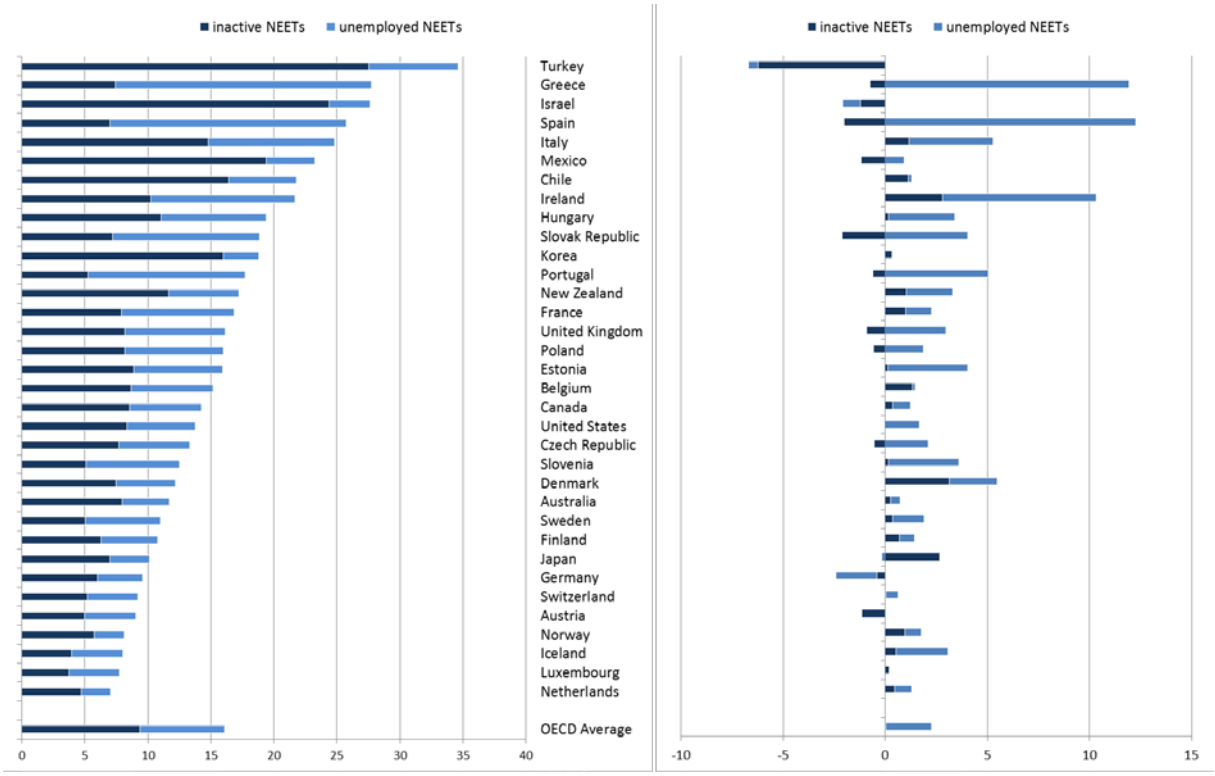
8 Throughout this paper, NEETs are defined as youth aged 15/16-29 years who are inactive or unemployed and not enrolled in formal education. Participation in non-formal education like conferences, seminars or private lessons outside the regular education system is not considered.

9 The number even rises to 66% once countries are weighted by the size of their youth population (see Table 1).

largest increase in NEET youth, the rise in NEET rates during this period was entirely due to an increase in the share of unemployed NEETs, while the rate of inactive NEETs fell. The only countries for which the opposite development is observed, *i.e.* where an increase in NEET rates was primarily due to a rise in the share of inactive NEETs, are Denmark and Japan (3 percentage-point increase for both).

Figure 2. Rising NEET rates mostly reflect higher unemployment among youth

Left panel: share of youth not in employment, education or training (NEET) in % of all youth;
Right panel: percentage-point change in the rates of inactive and unemployed NEETs, 2007-12



1. Numbers are for individuals aged 15-29 years, except for Japan (15-24) and the United States (16-24).
2. For Chile, Israel, Japan, Korea and Turkey, the numbers presented in the left panel are for 2011. The time variation presented in the right panel is for the period 2006-11 for Chile, for the period 2007-11 for Israel, Japan, and Turkey, and for 2008-11 for Korea.
3. Countries are sorted by the total NEET rate in descending order.
4. The OECD average is non-weighted.

Source: OECD calculations based on EU-LFS, SEW (Australia), LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Israel, Japan, Korea, Turkey).

24. Declines in NEET rates are observed for Turkey (-7 percentage points), Germany and Israel (-2 percentage points) and Austria (-1 percentage point).

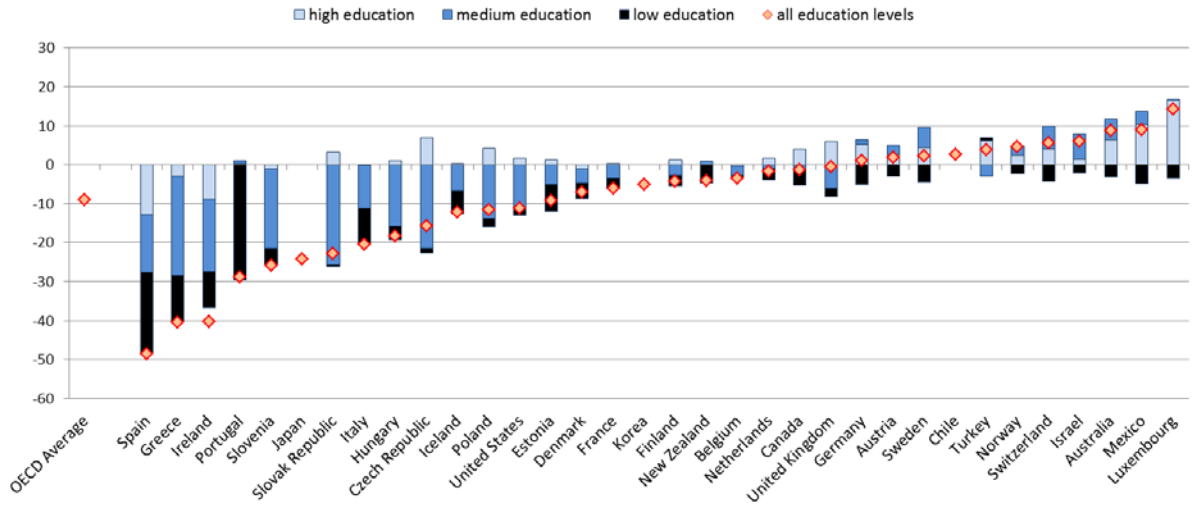
Changes in youth employment during the crisis

25. The decline in youth employment affected most severely individuals with low educational qualifications. As illustrated in Figure 3, the number of youth in employment was lower in 2012 than in 2007 in most OECD countries, declining by 9% on average. Job losses in these countries affected almost

exclusively low- and medium-educated[10] youth; employment of highly-educated youth was stable or even rose. In the Slovak Republic for instance, overall youth employment in 2012 had declined by 23% compared to 2007 while employment among highly-educated youth rose by 3 percentage points. In Portugal, the decline in youth employment was 29% with employment of highly-educated youth remaining stable. Only in Ireland, Greece and Spain, where the decline in youth employment was strongest, the number of jobs for highly-educated youth also fell.

Figure 3. Youth employment declined in many countries and low-educated youth were most affected

% change in the number of employed youth between 2007 and 2012, by level of education



1. Numbers are for individuals aged 15-29 years, except for Japan (15-24) and the United States (16-24).
2. The numbers presented are for the period 2006-11 for Chile, for the period 2007-11 for Israel, Japan, and Turkey, and for 2008-11 for Korea.
3. Education levels are defined as follows: 'low-educated': at most lower-secondary education (ISCED levels 0-2); 'medium-educated': upper- or post-secondary education (3-4); 'highly-educated': tertiary education (5-6).
4. Due to missing information on educational attainment for some individuals, there are disparities between the total change in the number of employed youth (diamonds) and the variation aggregated across levels of education for Denmark, Estonia, Finland, Ireland, New Zealand, Norway and Turkey. Information on the level of education of employed youth is missing or incomplete for Chile, Japan and Korea. For this reason, no breakdown by level of education is reported for the OECD average.
5. Countries are sorted by the relative increase in the employment rate in ascending order.
6. The OECD average is non-weighted.

Source: OECD calculations based on EU-LFS, LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Australia, Israel, Japan, Korea, Turkey).

26. The development was similar in countries where youth employment increased over the five-year period. In Australia, the 13% rise in the number of youth in employment was driven entirely and in about equal shares by increases in medium- and high-educated employment, while the number of low-educated youth in employment fell by 2 percentage points. The trend was particularly strong for Luxembourg, which saw an increase in employment by 13%, but a fall in the number of low-educated youths among the employed youth by 4%, and in Mexico, where the youth employment increased by 9% with the number of low-educated youth falling by 5%. While these developments certainly reflect partly a general rise in the

[10] The term 'low-educated' is used to describe individuals with at most lower-secondary education (ISCED levels 0-2); 'medium-educated' refers to upper- or post-secondary education (3-4), and 'highly-educated' is used to describe individuals with tertiary education (5-6).

skill level among young people (and therefore also among employed youth), the figures also indicate that the burden of the economic adjustment during the crisis fell disproportionately on low-educated youth.

2. WHO ARE THE NEETS?

27. Understanding the situation and the background of the NEETs is essential for designing well-targeted policies to address barriers to independence. NEETs are far from a homogeneous group both within and across countries: younger NEETs do not have the same needs and expectations as older ones; NEETs from low-educated families face specific educational challenges; young parents often need additional child care; those with health problems need specific interventions that combine medical and employment support; those living alone do not have the same motivations as those living with their parents. This diversity of situations is a challenge for policy makers and case workers. This section presents a characterization of the growing share of NEET youth in OECD countries.[11]

28. In a world of rising skill demand, a young person's **level of education** is clearly an important determinant of NEET status. Indeed, in nearly all OECD countries, youth with low education (*i.e.* at most lower-secondary school level) are strongly overrepresented among NEETs (left panel of Figure 4). OECD-wide, the low skilled account for 36% of all NEETs; in Iceland, Norway and Spain, even more than half of all NEETs do not have more than lower-secondary education. A good education is consequently the best safeguard against becoming NEET: highly-educated youth (*i.e.* those with at least some tertiary education) make up only 15% of all NEETs OECD-wide, with the highest shares being reached in Greece and Canada (26% and 30% of all NEETs).

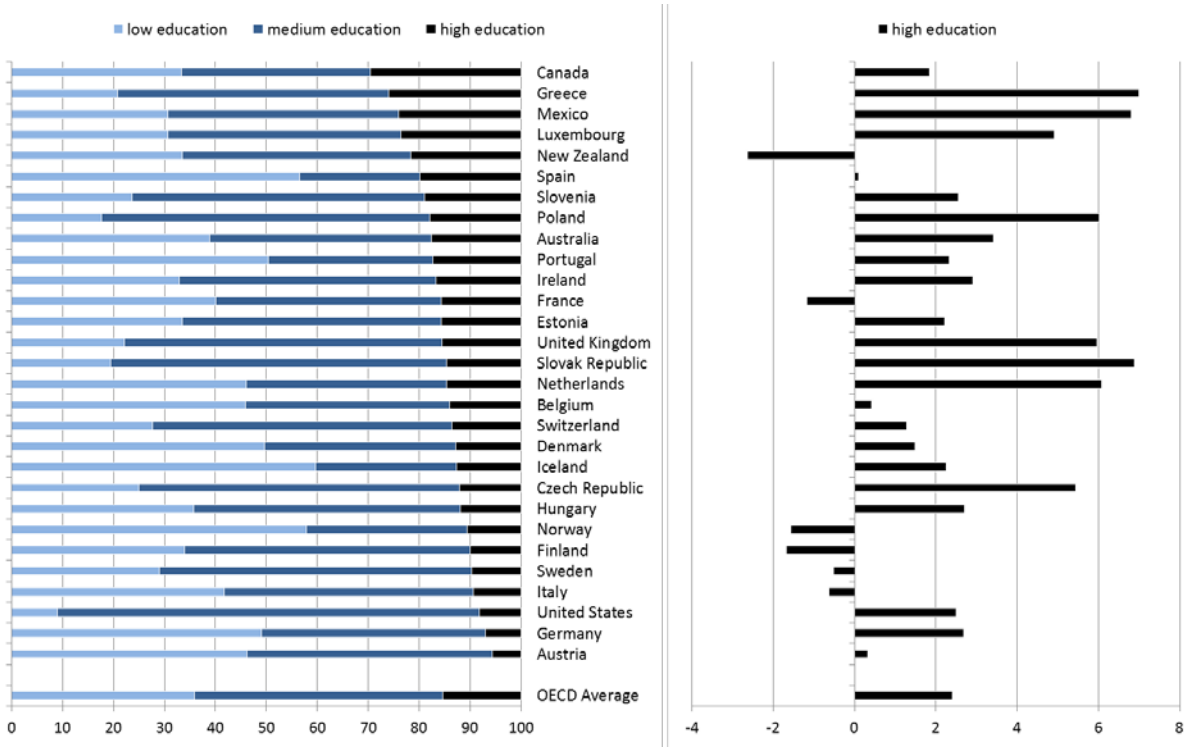
29. These figures clearly point to the importance of equipping young people with a good professional education for reducing NEET rates. They also imply, however, that for an important group of young NEET, low-intensity short-term interventions – like job-search assistance workshops – are unlikely to be sufficient to increase the chances of employment. To the extent that a lack of professional training or even basic numeracy and literacy skills is the reason for a young person's NEET status, more intensive – and likely more expensive – programmes may be needed to bring a young person back into education or employment. A range of different such interventions that have proven successful are discussed in Section 6.

30. Along with rising NEET rates – and in particular rising rates of NEET unemployment – since the start of the economic crisis, NEET status is more and more affecting well-educated young people. Across countries, the share of NEETs with at least some tertiary education has risen by 2.4 percentage points from 13.0% in 2007 to 15.4% in 2012 (right panel of Figure 4). A number of countries even saw much larger increases of 6 to 7 percentage points, including Greece, the Slovak Republic, Mexico, the Netherlands, Poland and the United Kingdom. Substantial declines in the share of highly-educated youth among NEETs are observed only for New Zealand (-2.6 percentage points), Finland (-1.7) and Norway (-1.6). From these figures, it is not apparent however that the trend to a more highly-educated NEET population is particularly strong in the countries most affected by the crisis. (For instance, the change is relatively moderate in Italy, Ireland or Portugal).

[11] For other recent studies of the situation of NEETs see also Eurofound (2012) and Chzhen and Richardson (2014).

Figure 4. The share of well-educated youth among NEETs is low but rising…

Left panel: breakdown in % of NEET by level of education in 2012.
Right panel: percentage-point change in the share of highly-educated youth among NEETs, 2007-12



1. Numbers are for individuals aged 15-29 years, except for the United States (16-24). Information for Chile, Israel, Japan, Korea and Turkey is unreliable or missing.
2. The term 'low-educated' is used to describe individuals with at most lower-secondary education (ISCED levels 0-2); 'medium-educated' refers to individuals with upper- or post-secondary education (3-4), and 'highly-educated' is used to describe individuals with tertiary education (5-6).
3. Countries are sorted by the share of highly-educated youth among NEETs in descending order.
4. The OECD average is non-weighted.

Source: OECD calculations based on EU-LFS, SEW (Australia), LFS (Canada), ENOE (Mexico), HLFS (New Zealand), CPS (United States).

31. A breakdown of the NEET population **by age** shows that the majority of NEETs are in their 20s (left panel of Figure 5). The 25-29 year-olds are the most important group accounting for 45% of the NEET population across OECD countries; youth aged 16-19 years make up only 16% of all NEETs.

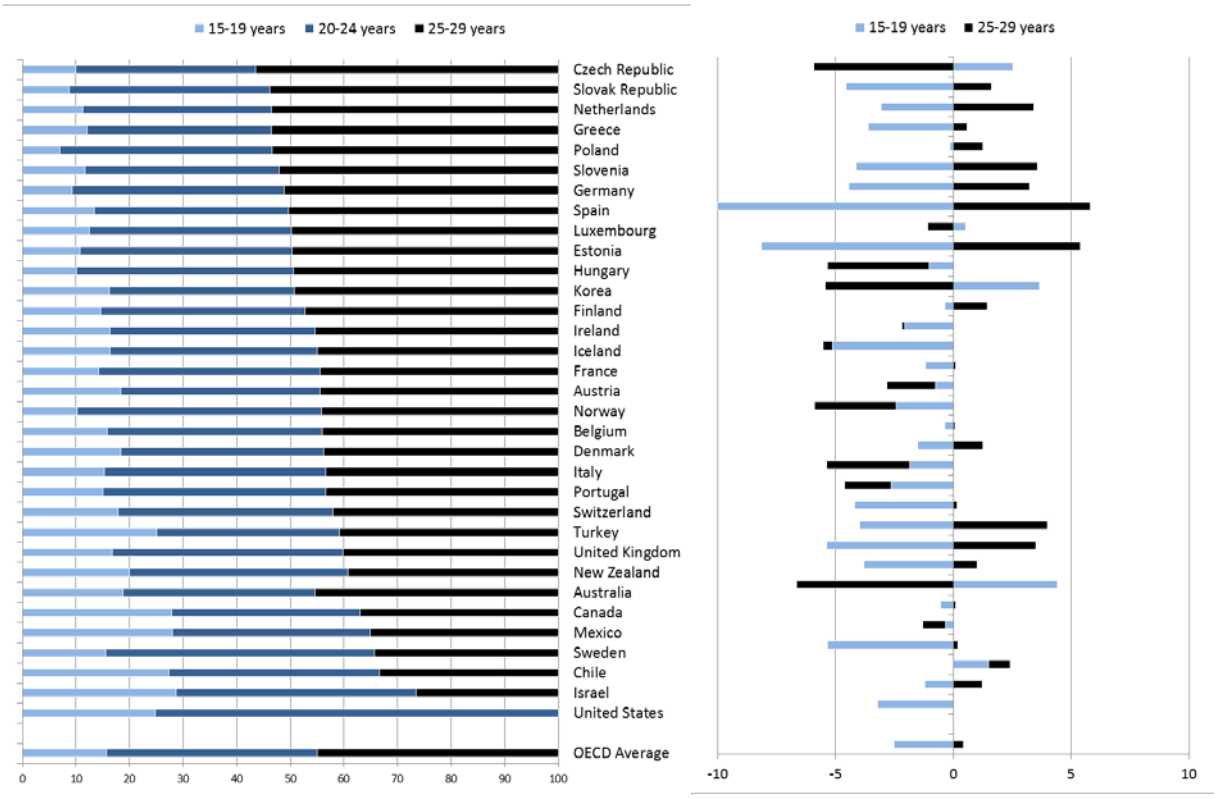
32. This smaller group of teenage NEETs however deserves special attention by policy makers. Younger NEETs often lack a professional qualification and relevant labour market experience. The longitudinal analysis presented in Section 4 moreover shows that early drop-out tends to be associated with relatively long NEET spells, and that this relatively small group is responsible for a large share of the total observed months in NEET status.

33. The proportion of youth in their 20s among NEETs has further increased during the crisis in line with the rise in the share of highly-educated youth among NEETs documented in Table 4. Again, there is however no clear sign that this trend particularly affected countries where the NEET rate grew the most. The ageing of the NEET population was strongest in Spain and Estonia, where the share of teenagers

among NEETs declined by 10 and 8 percentage points, respectively, while the share of 25-29 year-olds rose by around 5.5 percentage points. Other countries with stronger declines in the teenage NEET population are the United Kingdom, Sweden, Iceland and the Slovak Republic.

Figure 5. The share of teenagers among NEETs is small and falling

Left panel: breakdown of NEETs by age group in %, 2012
Right panel: percentage-point change in the share of 15-19 and 25-29 year-olds among NEETs, 2007-12



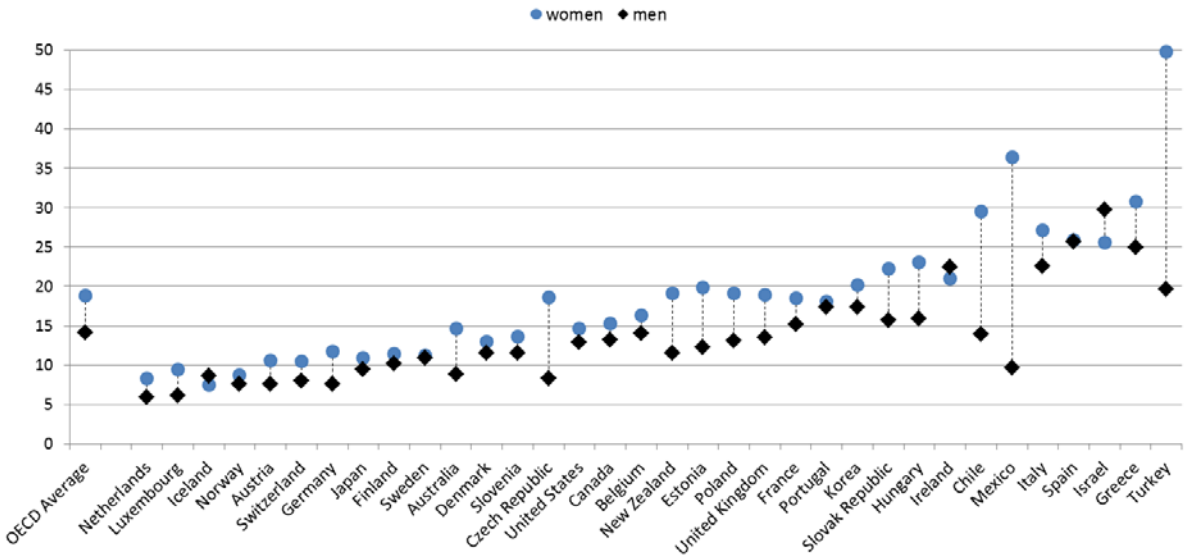
1. Numbers are for individuals aged 15-29 years; For the United States, the age range considered is 16-24 because no information on student status is available for individuals aged 25 years and above. The age breakdown is missing for Japan.
2. For Chile, Israel, Korea and Turkey, the numbers presented in the left panel are for 2011. The time variation presented in the right panel is for the period 2006-11 for Chile, for the period 2007-11 for Israel, and Turkey, and for 2008-11 for Korea.
3. Countries are sorted by the share of 25-29 year-olds among NEETs in descending order.
4. The OECD average is non-weighted and does not include the United States, for which data are incomplete.

Source: OECD calculations based on EU-LFS, SEW (Australia), LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Israel, Korea, Turkey).

34. A standard result in the literature on NEETs, which is reproduced in Figure 6, is that NEET rates differ strongly **by sex**, being typically much higher for women than for men. The difference is largest for Turkey, Mexico and Chile, where the NEET rate for women is 2-3 times as high for women as for men. The female-male gap in NEET rates is considerable however also in a number of other countries, reaching for instance nearly 10 percentage points in the Czech Republic, and averages nearly 5 percentage points across OECD countries.

Figure 6. Women are more likely to be NEET than men

NEET rates for women and men in % of the respective population shares, 2012



1. Numbers are for individuals aged 15-29 years, except for Japan (15-24) and the United States (16-24).
2. For Chile, Israel, Japan, Korea and Turkey, the numbers presented are for 2011.
3. Countries are sorted by the overall NEET rate in ascending order.
4. The OECD average is non-weighted.

Source: OECD calculations based on EU-LFS, SEW (Australia), LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Israel, Korea, Turkey).

35. From the data available for this analysis, it is difficult to establish the likely reasons for this result. One likely determinant of the large difference in NEET rates between women and men is a more traditional role-sharing among young women and men in countries like Turkey, Mexico and Chile, with women being more likely than men to stay at home to do unpaid domestic work. These patterns are strongest in the period after child birth, especially if availability of part-time work opportunities and affordable childcare is limited (OECD, 2012*a*).

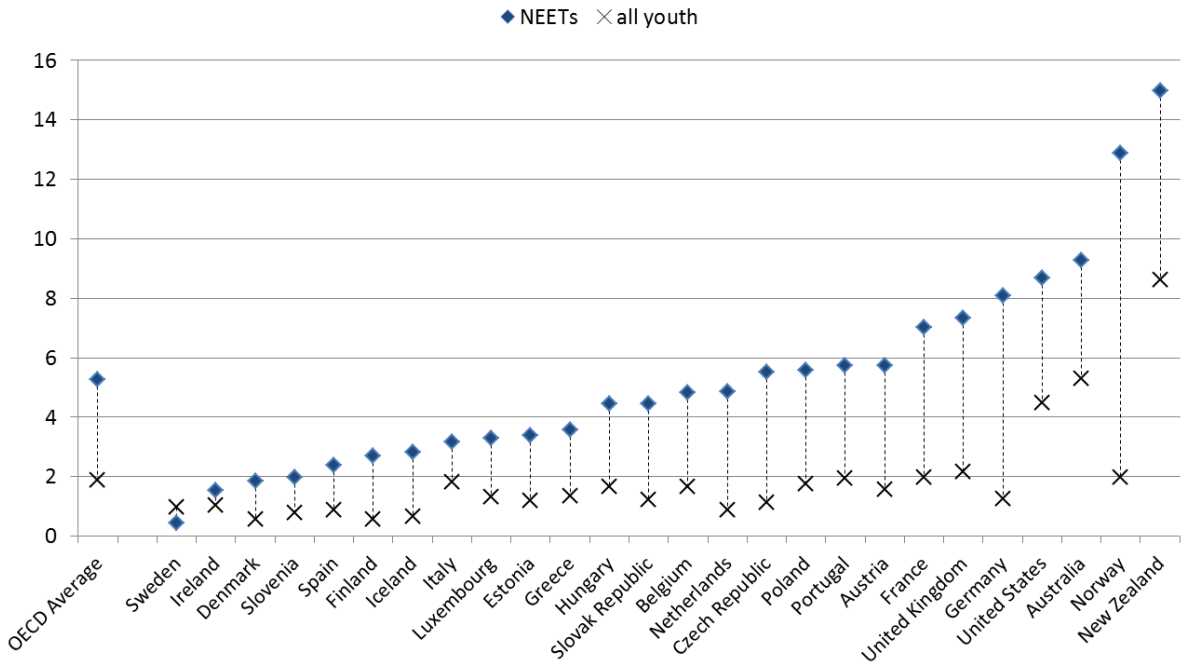
36. Another potential driver of the higher NEET rates among women is the high share of single parents among NEETs described further below (Figure 7), most of whom are female. Mexico, as the country with the second-largest female-male gap in NEET rates, has also one of the highest rates of single parenthood among NEETs (unfortunately, no data on family status are available for Turkey). However, a comparable relation cannot be drawn for Chile, where the gender gap in NEET rates is high even though rates of single parenthood among NEETs are relatively low. Similarly, Iceland, as the country with one of the highest share of single parents among NEETs, even displays slightly *lower* NEET rates for women than for men.

37. Evidence suggest that also **health problems** may be one contributing factor to NEET status among youth. Recent OECD research highlights the importance of mental disorders among young people, with about one out of four youth aged 15-24 years being affected by mental disorders (OECD, 2012d). Individuals with severe disorders, which are much less frequent, encounter particularly large obstacles in labour market participation.

38. In all OECD countries except Sweden, the share of individuals who report having bad health is much higher among NEETs than for the general youth population (Figure 7). In Norway, Germany and the Netherlands, where the size of the effect is largest, NEETs are 6 times more likely to report health problems than youth more generally. Of course, the relationship between problems of mental health and NEET status might run either direction, as it may well be that joblessness or inactivity cause or aggravate such problems.

Figure 7. NEET are much more affected than other youth by health problems

Share of individuals with poor health status in % of total population among NEETs and all youth, 2012



1. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
2. Numbers are for 2012 except for Ireland (2010) and Belgium (2011).
3. Countries are sorted by the share of NEETs with health problems in ascending order.
4. The OECD average is non-weighted.
5. No health data are available for Canada, Chile and Mexico.

Source: OECD calculations based on EU-SILC, HILDA (Australia), GSS (New Zealand) and CPS (United States).

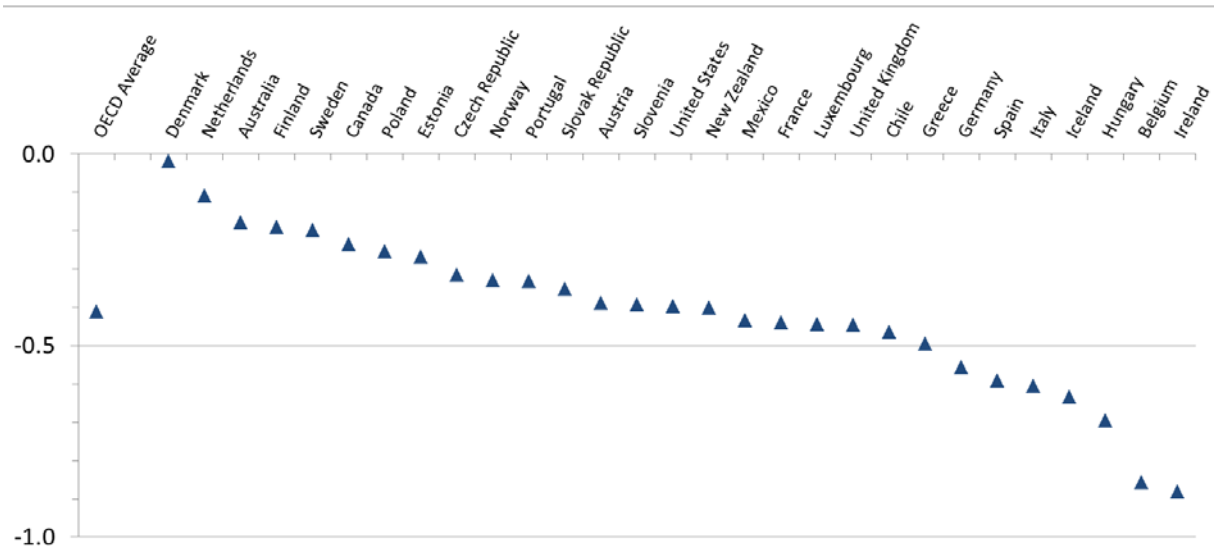
39. These findings might also reflect the relatively low thresholds for youth to receiving disability benefits (DB), especially in countries with specific entitlement rules for young people (see Section 5, Table 3 and OECD, 2012d, p. 191). It has been shown that the likelihood of returning to employment is very low once DB has been awarded, as benefits are considered as (quasi-)permanent. This issue is likely to be even more severe for youth, who enter DB at a young age and possibly without any previous work experience (OECD, 2010d). Benefit receipt among youth is discussed in more detail in Section 5.

40. In addition to the relationship between a young person's NEET status and her educational attainment (as illustrated in Figure 4), there appears to be a strong association between the risk of becoming NEET and **the education of a young person's *parents***. Figure 8 shows that in all OECD countries, the maximum level of education reached by a NEET's parents is lower on average than for non-

NEETs. Averaged across OECD countries, the maximum level of parental education for NEETs is nearly half an ISCED-level lower among NEETs compared to non-NEETs. The attainment gap in parental education is highest in Belgium and Ireland, where it corresponds to nearly one ISCED level, and lowest in some Northern European countries, in the Netherlands and Australia.

Figure 8. NEETs tend to have parents with lower education

Gap in the maximum level of educational attainment of the parents of NEETs and non-NEETs in ISCED points, 2012



1. The figure gives the difference in the maximum level of educational attainment among a young person's parents averaged for all youth who still live with their parents (and not with a partner or child in the case of New Zealand). Since for Australia, Canada and Chile, a young person's parents cannot be identified, the presented number instead gives the maximum level of education of *any household member*.
2. Parent's educational attainment is measured on a 0-6 scale consistent with the ISCED classification, where levels 0-2 correspond to at most lower-secondary education, levels 3-4 describe upper- or post-secondary education, and levels 5-6 mean tertiary education.
3. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
4. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011).
5. Countries are sorted by the gap in parents' maximum educational attainment in ascending order.
6. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico), HLFS (New Zealand) and CPS (United States).

41. An important limitation of these calculations that is worth pointing out is that parental education is *observed only for youth who are living in their parents' home*. Thus, results may be unreliable if the decision to leave the parents' home is related to the parental level of education (*e.g.* because parental education influences income) and if it differs between NEETs and non-NEETs.[12]

[12] Note that for some countries, the parents cannot be identified even where a young person still lives at home. In such cases, calculations are based instead on the maximum level of education of any household member, which might at times correspond to the level of the grand-parents or other adult relatives who live in the same household. This is probably also the explanation for the high level of education observed for Canada.

42. The association between parental education and NEET status can have a number of different drivers. One obvious conclusion would for instance be that there is a direct effect of parental education on the level of education of their children, which, as seen, is strongly related to NEET status. If parents with low educational attainment are less inclined to encourage their children to pursue higher education, this might reduce the children's opportunities in the labour market and raise their likelihood of becoming NEET. An alternative explanation is that young people whose parents have low education come more generally from disadvantaged backgrounds: the relationship shown in Figure 8 might thus for instance reflect a direct effect of poverty on the likelihood of being NEET.

43. The much higher NEET rates for young women pointed to the possible importance of family status as a determinant of NEET status. More generally, **household composition** is a key factor for understanding the situation of young NEETs, because, especially for young people, intra- or inter-household transfers from parents are an important source of income.

44. During periods out of education or employment, a young person's parents can be the primary source of support, providing both financial and other resources. In countries where young people tend to leave the parents' home early, as it is for instance the case in the Nordic countries, young NEETs may face an increased risk of poverty if there are no other income-earners in the household.

45. In nearly all OECD countries, the large majority of NEETs live in a household with at least one adult member (*i.e.* an individual aged 30 years and over). The share is highest in some of the Eastern and Southern European countries, reaching 94% in the Slovak Republic and 90% in Greece and Portugal (see left panel of Figure 9). At the other end of the spectrum, shares are 50-55% in the Nordic countries (Finland, Iceland, Norway or Sweden); nearly two-thirds of NEETs in Denmark live in a household without adults.

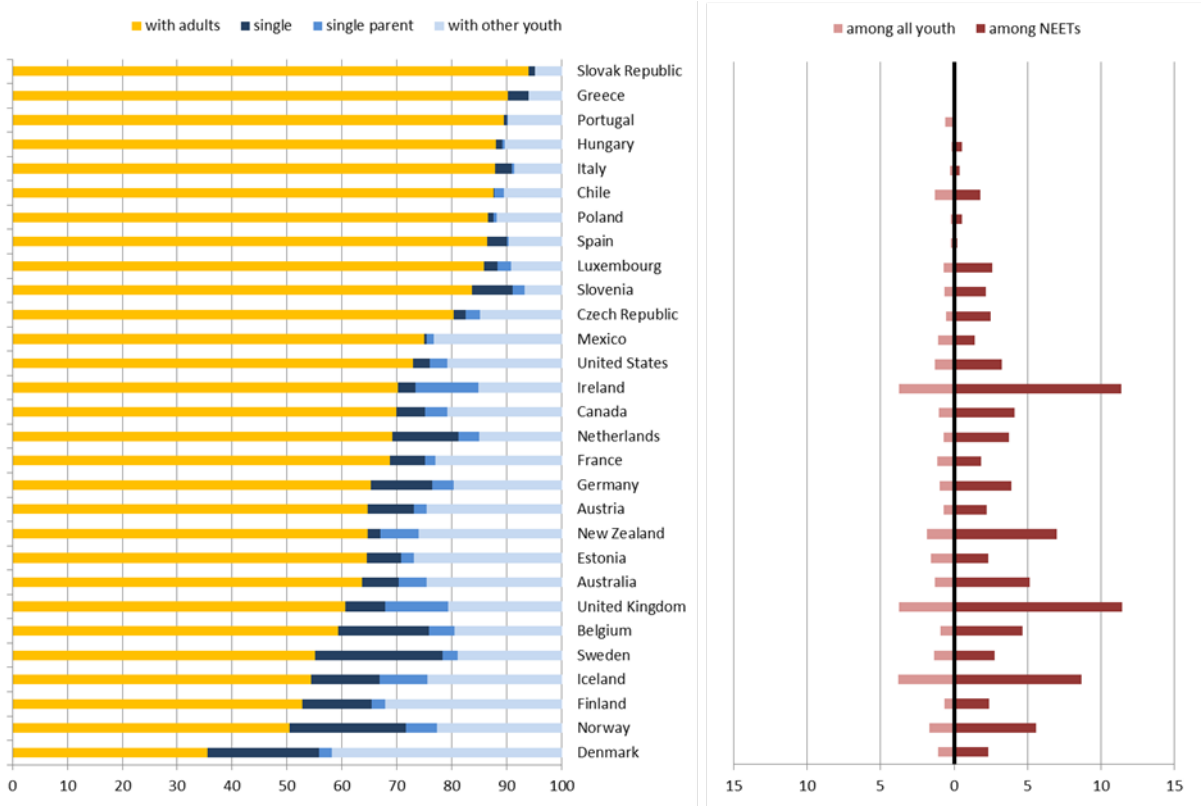
46. A striking finding is moreover that the share of single parent households among NEETs is high. On average, just above 3% of all NEETs live in single-parent households, which is nearly three times as much as in the general youth population (right panel of Figure 9).[13] The highest values are attained in the Ireland and the United Kingdom, where 11% of all NEETs live as single parents and in Iceland, with 9%.

47. The main reason for the high over-representation of single parents among NEETs is clearly that young parents may stay at home to take care of their child(ren) rather than to seek employment. In many countries, separate minimum-income support programmes exist for single parents with young children who have insufficient income. Moreover, standard Unemployment Benefits (UB) and Social Assistance (SA) programmes might have special rules for young parents exempting them from job-search requirements until their children reach school age (for an overview of benefits available to young unemployed with family responsibilities, see Table 8).

[13] The share of single parent households among NEETs plotted in the right panel of Figure 9 equals to the corresponding share of single parents in the left panel.

Figure 9. The incidence of single parenthood among NEETs is high

Left panel: breakdown of NEETs by household type in %, 2012
Right panel: share of single-parent households among all youth and NEETs in %, 2012



1. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
2. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011).
3. Household types are defined as follows: “alone” describes a young person living on their own; “lone parent” means that the young person lives with at least one dependent child and without any other youth or adults; “with other youth” describes a young person living with at least one other young person (and potentially with children) but that no adult (aged 30 years or older) lives in the same household; “with adults” means that the young person lives in a household with at least one person over 30 years and potentially with other youth or children.
4. Countries are sorted by the share of NEETs living in a household with adults in ascending order.
5. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), HLFS (New Zealand), ENIGH (Mexico) and CPS (United States).

48. Overall, the findings presented in this section document an image of strong economic disadvantage among NEETs that goes beyond the mere fact of a lack of paid employment. High shares of single parenthood and the strong incidence of bad health at least in some countries imply that there may be substantial hurdles to labour market entry for inactive NEETs. The young age and low educational attainment of NEETs furthermore suggests that they may have few employment possibilities and a low earnings potential when seeking employment.

49. The next section presents a detailed analysis of the transitions from school into the labour market based on longitudinal data, focusing, among other things, on the length of NEET spells.

3. SCHOOL-TO-LABOUR-MARKET PATHWAYS

50. The previous section provided a *cross-sectional* characterization of young NEETs in terms of their personal characteristics and living conditions giving a *snapshot* picture at a single point in time (or multiple of these snapshots for different years). While this analysis provided important insights of who young NEETs are, it remained entirely silent on the *dynamics* of NEET status: How long do young NEETs usually remain out of employment, education or training? And do young people who become NEET typically have at least some previous labour market experience?

51. This section extends the earlier cross-sectional analysis by taking a *longitudinal* perspective describing young people's transitions out of school into the labour market. Using monthly panel data, *i.e.* repeated observations for a specific sample of youth over a longer time horizon, it studies whether NEET status can be understood as a transitory step taken by youth on their way to successful labour market careers or whether NEET spells represent long-lasting departures from the labour market.

52. The analysis focuses on three cohorts of 16 year-old youth from a selection of European countries who are followed over a 48-month period starting in the years 2005, 2006 or 2007. Trajectories from school into the labour market for these youth are clustered into a small number of 'pathways'. The analysis then looks at what individual and household characteristics can be used as predictors of a young person's pathway 'choice'.[14] The restriction to youth aged 16 years at the beginning of the observation period is made because schooling is compulsory up to this age in many countries. It therefore seems natural to assume that a young person's school-to-work trajectory starts at this age.

53. In practice, of course not all young people make a school-to-labour-market transition between the age of 16 and 20 years. A significant share remain in education over the entire four-year period, while a smaller proportion move straight from education into NEET inactivity without any periods of labour market participation. Some youth finally already 'start off' outside of education when first observed at age 16. The methodology discussed below identifies and characterises all of these different pathways. For simplicity, the clusters of trajectories identified in the analysis are nonetheless referred to as 'school-to-*labour-market* pathways'.

54. This section starts with a brief introduction of the data and methodology used for characterising the 'typical' school-to-labour-market pathways. It then presents the pathways identified by this clustering mechanism and provides descriptive evidence on the personal and household characteristics of the young persons who follow these pathways. The presented analysis complements and updates an earlier OECD study of youth labour market pathways by Quintini and Manfredi (2009).[15]

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14 Throughout this section, the term 'pathway choice' or 'pathway selection' is used to describe that a young person follows a given pathway from school into work. This wording should of course not be understood as suggesting that a young person always has full control over her way into the labour market or that periods of unemployment or inactivity are necessarily voluntary.

15 Quintini and Manfredi use data from the European Community Household Panel (ECHP, waves 1994-2001) and the U.S. National Longitudinal Surveys of Youth (NLSY, cohorts 1979 and 1997). Similar earlier analysis have for instance been presented for New Zealand by the New Zealand Ministry of Employment (MBIE, 2013) and for the United Kingdom by Dorsett and Lucchino (2013).

Data and Methodology

55. Data requirements for an analysis of school-to-labour-market trajectories are substantial. The identification of individual's transitions from school into the labour market requires individual-level panel data with frequent observations that permit tracking young people's educational status and labour market participation over a longer time horizon. To allow more specifically for an analysis of trajectories that involve periods of NEET status, the number of individuals in the sample must moreover be reasonably large. Limited availability of such micro-level panel data with short observation intervals implies that the number of countries covered in the analysis presented in this section is much smaller than it would have been desirable.[16]

56. The data used in the analysis come from the longitudinal version of the European Union Statistics on Income and Living Conditions (EU-SILC). The advantage of this survey is that it provides recent panel data with monthly observations on the labour market status for each individual for a reasonably large sample. Results from a comparable analysis for the United States implemented using data from the Survey of Income and Program Participation (SIPP) are not presented in this paper because the sample size of the SIPP turned out to be insufficient given the sample selection criteria used.

57. The sample used for analysis is constructed from the 2008, 2009, and 2010 waves of EU-SILC, which contain retrospective monthly information on educational status and labour market participation for the four preceding calendar years. The total observation period for each individual thus stretches over 48 calendar months during the time from 2005 to 2010. From the three panels, only the three cohorts of young people aged 16 years at the beginning of their respective observation periods in 2005, 2006 and 2007 are retained. These individuals are followed until the age of 20 years.

58. From the information provided by the respondents on their principal activity in each month of the 48-month observation period, four mutually-exclusive activity states are defined using: **in work**, **in education**, **in unemployment** ('NEET unemployed'), and **inactive out of education** ('NEET inactive'). Young people who combine education and work are treated as 'in education'; vocational training can unfortunately not be identified as separate from education. An individual's chain of 48 monthly activity states from the age of 16 to 20 is interpreted as her school-to-work trajectory.

59. The three panels are merged for the OECD countries to give the sample used for analysis. From this sample, individuals with missing activity information in one or several months of the observation period are dropped. Countries for which the share of complete trajectories is inferior to 90% are not included in the analysis. The final sample consists of 2,434 individuals from 12 European countries. [17, 18]

60. The clustering algorithm described in Annex II is used to group the observed trajectories for all sample members based on their similarity. Each of the resulting seven clusters is interpreted as a typical pathway taken by a subsample of young 16 year-olds over the following 48-month period.

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16 An ideal data source would be monthly administrative records due to their typically large sample size and high data quality. Such data were unfortunately not available for the purposes of this paper.

17 The countries included are Austria, the Czech Republic, Estonia, France, Greece, Hungary, Italy, Luxembourg, Portugal, Spain, the Slovak Republic and Slovenia.

18 Individual sampling weights for the initial period of a young person's observation period are used to control for within-country differences in sample selection probabilities. Cross-country statistics were then calculated as simple non-weighted averages across all countries in the sample, *i.e.* without adjusting for differences in population size.

A characterisation of school-to-labour-market transitions in Europe

61. When applied to the EU-SILC sample, the clustering algorithm identifies seven different pathways:[19]

- The largest share of young people follow the ***'students'*** pathway (70% of all trajectories): This group of individuals remain in education with little or no interruption over the entire observation period from the age of 16 up to the age of 20.

- Two pathways describe trajectories of young people who make a transition from education into employment before the age of 20. Youth with the ***'school-to-employment'*** pathway (14%) remain in education for most of the 48-month observation period but eventually make a transition into employment. A much smaller group of ***'early employed'*** (2%) youth already start off their trajectories in employment at the age of 16 years and typically remain in employment for the remainder of the observation period.

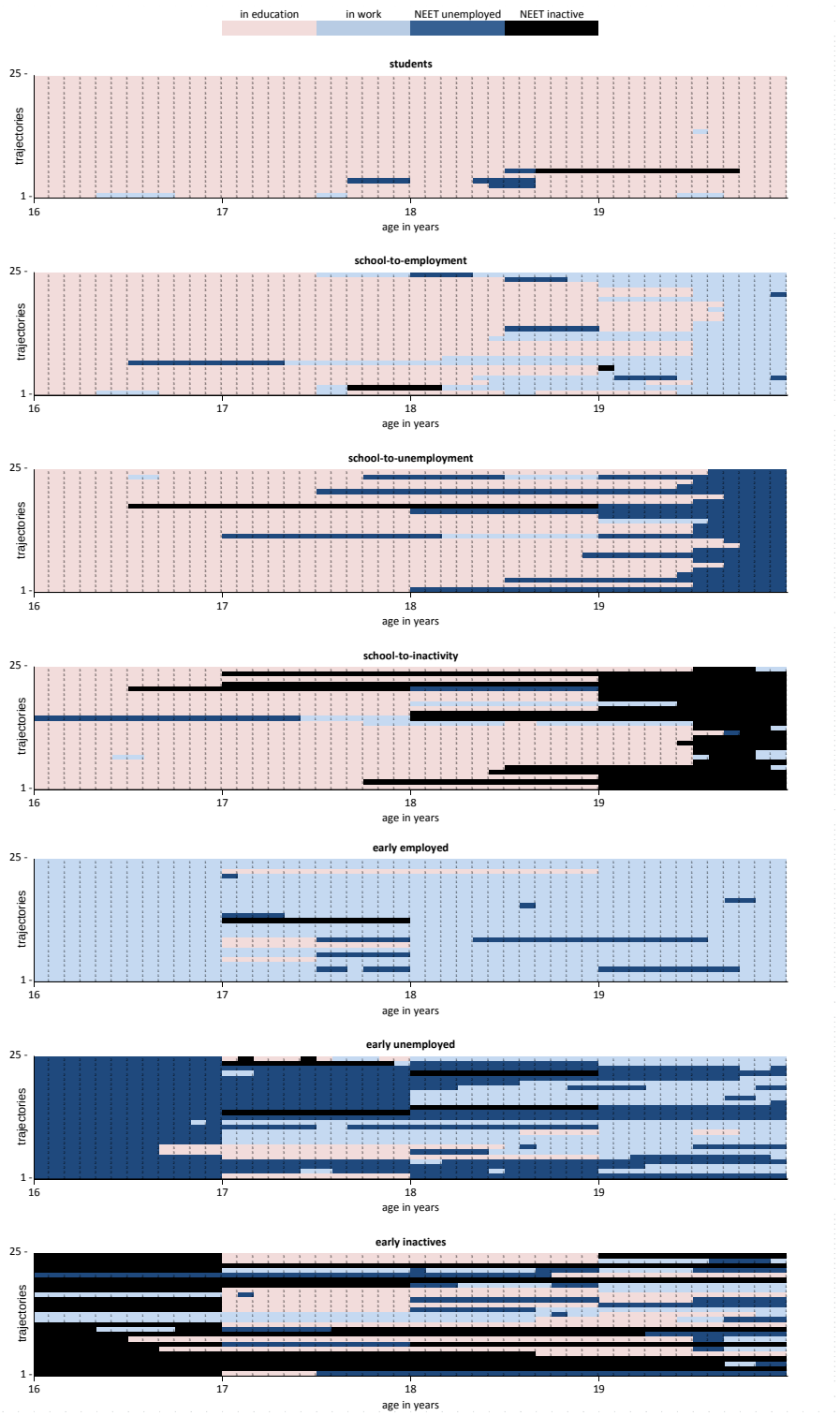
- The group of youth who experience important periods of NEET status are split up into four different pathways: Young people with the ***'school-to-unemployment'*** (9%) and ***'school-to-inactivity'*** (2%) pathways start off in education and towards the end of the observation period make a transition into NEET unemployment or inactivity, respectively. Two much smaller groups of ***'early unemployed'*** (1%) and ***'early inactives'*** (2%) start their pathways out of school or employment at the age of 16.

62. A look at the individual trajectories in each pathway illustrates that the clustering mechanism does extremely well at distinguishing the seven different pathways. Figure 10 plots, for each of the seven pathways, exemplary trajectories of 25 randomly selected individuals. Every horizontal line represents an individual's trajectory, with each coloured cell corresponding to a single month with a distinct activity state. The seven different pathways just described are identified very cleanly.[20]

[19] It is worth noting that the clustering algorithm only *identifies* the different pathways, while their names were chosen by the authors based on the observed trajectory patterns.

[20] The only exception may be the cluster referred to as the *'early inactives'* (bottom panel of Figure 10), which includes some trajectories that start off in employment. The reason is that trajectories that do not fit into any of the other clusters are allocated by the algorithm to this category. This problem can hence only be solved by further increasing the number of clusters. Indeed, a supplementary eighth cluster would have correctly identified this small group of trajectories. Due to the small sample size and for the sake of simplicity, only seven clusters are however considered in this analysis.

Figure 10. Exemplary trajectories for the seven school-to-labour-market pathways



1. The panel shows 25 exemplary trajectories for each of the seven pathways. Each line gives the trajectory for one individual from the left (initial month of the observation period) to the right (final month). Each cell corresponds to a single month with a given activity status distinguished described by one of the four colours.

Source: longitudinal EU-SILC, 2008-2010

Table 2. Periods of NEET status tend to be concentrated among a small group of young people

Average total number of months spent in the different activities states, by pathway

Pathway	*Months spent in*				Pathway frequency (in %)
	Education	Employment	NEET Unemployment	NEET Inactivity	
students	47	0	0	0	70
school-to-employment	30	15	2	1	14
early employed	1	46	1	0	2
school-to-unemployment	33	2	11	1	9
school-to-inactivity	31	2	2	12	2
early unemployed	2	13	31	2	1
early inactives	13	13	5	17	2

1. Numbers are rounded and have been calculated over the 48-month observation period from age 16-20 years. For a characterisation of the different pathway types, see the main text.

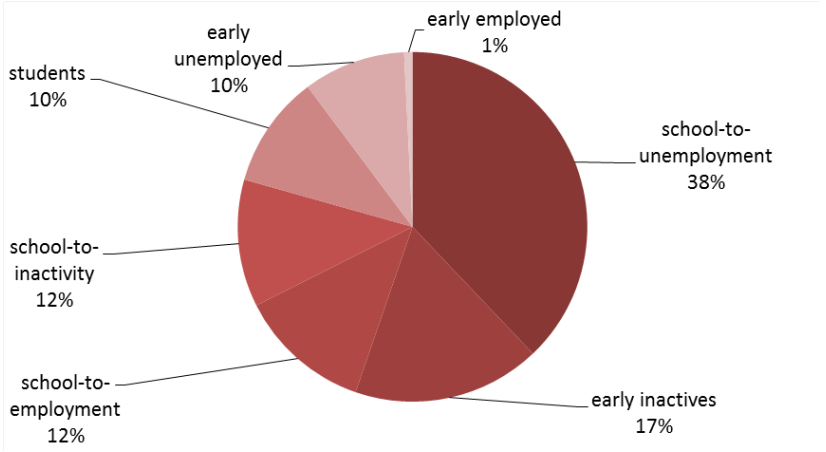
2. All numbers are non-weighted averages of the (weighted) averages observed in each of the countries.

Source: longitudinal EU-SILC, 2008-2010

63. Spells of NEET status – *i.e.* periods in unemployment or inactivity outside of education – tend to be concentrated among a relatively small share of youth. Young people who follow the *students* pathway or one of the two 'employment-related' pathways (*school-to-employment* or *early employed*) on average only spend zero to three months as NEETs over the entire 48-month observation period (Table 2). For the four remaining, 'NEET-related' pathways (the bottom four in Table 2), the number of months with NEET status varies between on average 12 and 14 months (*school-to-unemployment* and *school-to-inactivity* pathways) and 22 and 33 months (*early inactives* and *early unemployed* pathways). Especially for young people who are already out of education or work at the beginning of the observation period, NEET status thus tends to be a long-term phenomenon.

Figure 11. Early drop-outs are responsible for a substantial share of total NEET months

Pathways' respective contributions to the total number of observed NEET months



1. All numbers are non-weighted averages of the (weighted) shares observed in each of the countries.

Reading note: Young people following the *early inactives* pathway are responsible for 17% of the total observed number of months of NEET unemployment and NEET inactivity in the data.

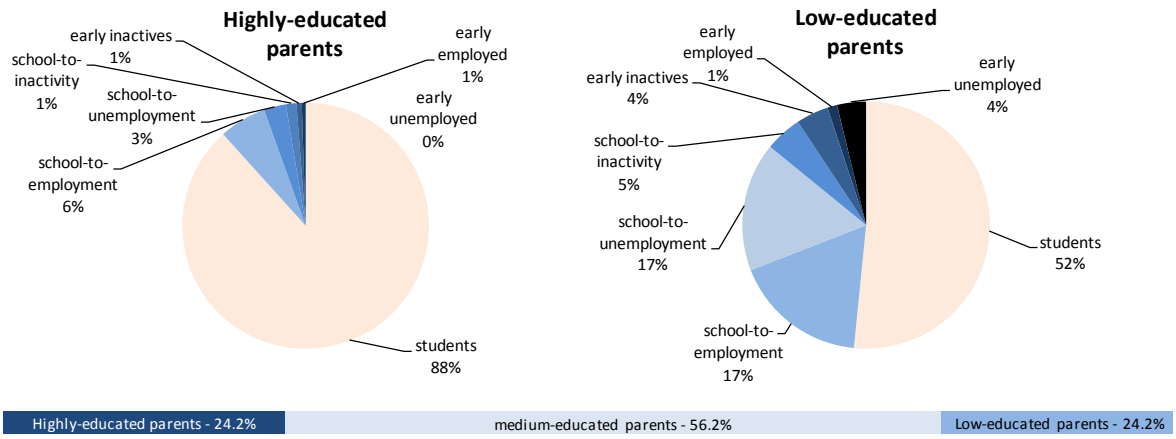
Source: longitudinal EU-SILC, 2008-2010

64. Young people who follow one of these four more 'problematic' pathways consequently also account for the largest share of the observed cumulative number of months spent in NEET status by young people. As shown in Figure 11, only 23% of total NEET months are accumulated by individuals who follow the *students*, *school-to-employment* or *early employment* pathways. The remaining 77% of all months spent in NEET status accrue to young people following one of the four more 'problematic' pathways. This is remarkable considering that these four pathways jointly account for only 15% of all young people. In particular, *early inactives*, who represent 2% of all youth in the sample, are responsible for 17% of all NEET months.

65. Even the two groups of youth who start off as NEETs at the age of 16 years however do not typically remain out of employment and education for the entire observation period. As seen, the *early unemployed* have the highest share of NEET months of all groups. Nonetheless, they accumulate on average 13 months of work experience over the 48-month observation period. Indeed, the trajectories depicted in Figure 10 show that many of the *early unemployed* find employment later in the observation period at the age of 18 or 19 years. Also the *early inactives* accumulate 13 months of employment over the same period, and they are moreover enrolled in education for another 13 out of the 48 months. Unfortunately, the EU-SILC data can tell us nothing about whether *early inactives* who return to school obtain a degree and about the quality of the jobs they find.

Figure 12. Pathway selection is highly correlated with parental education

Pathway choices by the level of parental education (among youth living with their parents)



1. The parental education level is defined as the level of the parent (father or mother) who has the highest educational attainment at the beginning of the observation period.
2. The term 'low-educated' is used to describe individuals with at most lower-secondary education (ISCED levels 0-2); 'medium-educated' refers to individuals with upper- or post-secondary education (3-4), and 'highly-educated' is used to describe individuals with tertiary education (5-6). Youth whose parents are medium-educated are not represented in the graph.
3. The horizontal bar in the bottom gives the breakdown by parental education for the entire sample.
4. Frequencies have been calculated as the non-weighted averages of the (weighted) frequency observed in each of the countries.

Source: longitudinal EU-SILC, 2008-2010

66. Studying the determinants of pathway selection is difficult due to data limitations. EU-SILC provides very little information on individuals' personal characteristics and socio-economic background. A breakdown of pathways by sex shows that young women are much more likely than young men to follow the *students* pathway, and that they have a slightly higher probability of moving from school into inactivity (*not shown*). An analysis of the relation between trajectories and migrant status is not possible due to a lack of suitable data on nationality or country of birth.

67. An interesting finding however is that pathway choices are strongly related to the level of parental education (Figure 12). Among youth who have at least one parent with tertiary education, 88% choose the *students* pathway and only around 5% follow one of the four NEET-related pathways. By contrast, among youth with parents who have no more than lower-secondary education, only 52% choose the *students* pathway, while 19% take an employment-related pathway and even 30% follow one of the NEET-related pathways. This confirms the earlier finding of a strong relationship between NEET status and parental education as reported for the cross-sectional data in Figure 8. Of course, based alone on these descriptive statistics, it is impossible to tell to what extent parental education indeed directly affects the probability of NEET status for a young person.

NEET spell characteristics

68. The final part of this longitudinal analysis focuses on the number and duration of young people's NEET spells. Table 2 showed that the majority of youth have very few or no periods of NEET status, while especially for those already out of education and work at age 16, NEET periods can be long. This analysis of pathways however provided little insights on the exact dynamics of NEET status. In particular, an interesting question is whether young NEETs tend to have several shorter NEET spells interrupted by periods of work or education, or whether single spells last long. 'Scarring effects' from unemployment and inactivity may aggravate with increased duration of the ongoing spell (a phenomenon referred to as *duration dependence*). Multiple shorter spells of NEET status, for instance to bridge gaps in the educational schedule, might thus be considered as less worrying than single prolonged spells. Figure 13 gives a breakdown of the NEET patterns observed in the different countries over the observation period for all young people in the data, *i.e.* irrespective of their pathway type.

69. Having at least some time outside of employment or education is relatively frequent among young people. Across the sample, about one out of four youth has some period of NEET status during the observation period (left panel of Figure 13). This is little surprising as it appears natural that transitions from school into professional training or employment may bring about shorter periods of inactivity. The incidence of NEET status however varies substantially across countries: In Slovenia, only 6% of all youth observed in the sample report having some time out of employment, education or training during the 48-month observation period; in Italy, the same applies for every second young person.

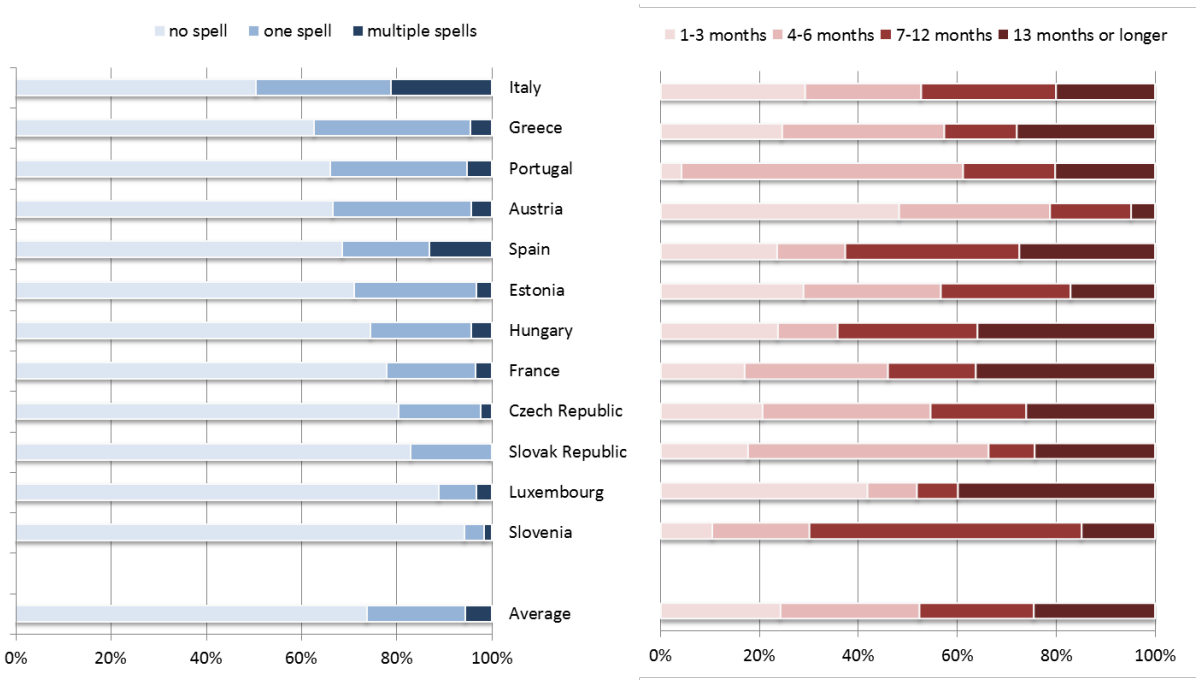
70. A repeated 'cycling' into and out of NEET status does not appear to be frequent: Across the whole sample, only 6% of individuals are observed as having more than one NEET spell over the 48-month period. The incidence of multiple NEET spells is high however in Italy (21% of all youth) and Spain (13%).

71. The time spent out of employment, education or training can moreover be long: Among all youth with a NEET spell, about one out of four has a spell of duration longer than one year. In France, Hungary, Slovenia and Spain the majority of spells last over half a year, and in France, Hungary and Luxembourg, over one-third of all NEET spells even last longer than 12 months. Spell durations are shortest in Austria, where nearly 80% of individuals with a NEET spell are out of employment, education or training for a maximum of 3 months.

72. A point worth keeping in mind when considering these spell durations is that the reported numbers are likely to be *underestimates* of actual NEET spell durations. Part of the spells observed in the data are still ongoing at the end of the observation period (*i.e.*, they are right-censored) and thus not included in the calculations with their (unobserved) full length. Similarly, for the small share of individuals who enter the sample as unemployed or inactive at the age 16, spells are left-censored and again measured as shorter than they truly are.

Figure 13. Only few youth have multiple NEET spells, but single spells can have long durations

left panel: number of NEET spells per person over a 48-month period, by country
right panel: duration of the longest NEET spell among those with at least one spell



1. NEET spells are defined as periods of single or multiple successive months of NEET unemployment and / or NEET inactivity. A spell ends as soon as the individual enters education or employment, even if only for a single month. For individuals with multiple NEET spells, spell lengths reported in the right panel are those of the longest observed spell.
2. NEET spells that are ongoing at the beginning or the end of the observation period are counted and included with their observed (censored) spell length.

Source: longitudinal EU-SILC, 2008-2010

Possible extensions

73. While the above analysis provided a number of interesting insights on the patterns of school-to-labour-market transitions and on the dynamics NEET status, it is worth pointing out two main limitations:

1. The 48-month observation period of the panel is very short. By focusing on a sample of youth aged 16 years at the beginning of the observation period, the analysis could only provide insights on periods of NEET status up to the age of 20. It would have been very interesting to look at how patterns of labour market entry of 20- or 25-year-olds differ from the ones observed for 16- to 20-year-olds, and at future periods of NEET status for those who left education early.[21] An implication of the short observation period is moreover that the share of censored spells is higher than it would otherwise be.

2. The sample size and the available information on personal and household characteristics in the EU-SILC data are rather limited. Consequently, there was little possibility of 'zooming in' on a

[21] An alternative approach would obviously have been to study the school-to-labour market trajectories for all youth irrespective of age from the moment when they leave school. This is the method used by Quintini and Manfredi (2009). This approach however requires an explicit judgement as to when the trajectory starts, and in particular how short interruptions in educational enrolment should be dealt with.

specific target group of youth, for instance by studying explicitly the labour market dynamics of single parents or migrants.

74. Both of these issues could be addressed by repeating the analysis presented in this section based on data from administrative records for a single country. Where such data are available (as for instance in Denmark or Norway), they often come with much larger sample sizes and longer observation periods thus permitting an analysis of school-to-labour market transitions for a larger sample of youth over a period of maybe 10 to 15 years. A possible alternative data source can be youth surveys with a panel or cohort structure and sufficiently large sample sizes, as available for instance in Australia.[22]

[22] The Longitudinal Surveys of Australian Youth were used to study school-to-work transitions in the Jobs for Youth review for Australia (OECD, 2009).

4. BENEFIT RECEIPT AND INCOMES AMONG YOUTH

75. Income-support programmes, in the form of unemployment benefits, social assistance, family benefits or housing allowances, have played an important macroeconomic role as automatic stabilisers during the recent crisis. Many OECD countries face high and often growing needs for social policies at times of shrinking fiscal space, which restrict the capacity for an effective response. In the early phases of the global financial and economic crisis, social spending – which accounts for about half of total public outlays in OECD countries – increased. Moreover, large fiscal stimulus packages were put in place in many countries often including greater resources for social measures. But in many OECD countries, a shift in the fiscal stance is now taking place to tackle unprecedented deficits and debt-to-GDP ratios. Social spending is part of many fiscal consolidation plans, and pressure on social spending is set to increase further.

76. Careful attention needs be paid in this context to protecting the needs of the most vulnerable, including the youth, who still experience very high non-employment rates in many countries (see Section 2). Social benefits play a crucial role for reducing poverty, particularly among low-skilled youth and those no longer living with their parents. Yet, little is currently known about adequacy and coverage of social protection for various groups of young people within and across countries. This section takes a closer look at this issue.

77. Identifying youth among benefit recipients is not an easy task. In most countries, social programmes are not specifically and explicitly targeted at young people. In most cases, age is not an eligibility criterion, except for children, students and seniors. This section sets outs to identify existing programmes and their eligibility rules for youth by presenting a number of case studies with varying assumptions (*e.g.* looking at youth with and without work experience, or with or without children). It then uses household survey data to measure recent rates of benefit receipt for various groups of youth, and compares these rates with those for adults. Due to, both, a lack of information and the focus on the least-skilled youth, the analysis leaves aside study funding programmes, while including all other types of income-support programmes young people may be eligible to.

The availability of income-support programmes

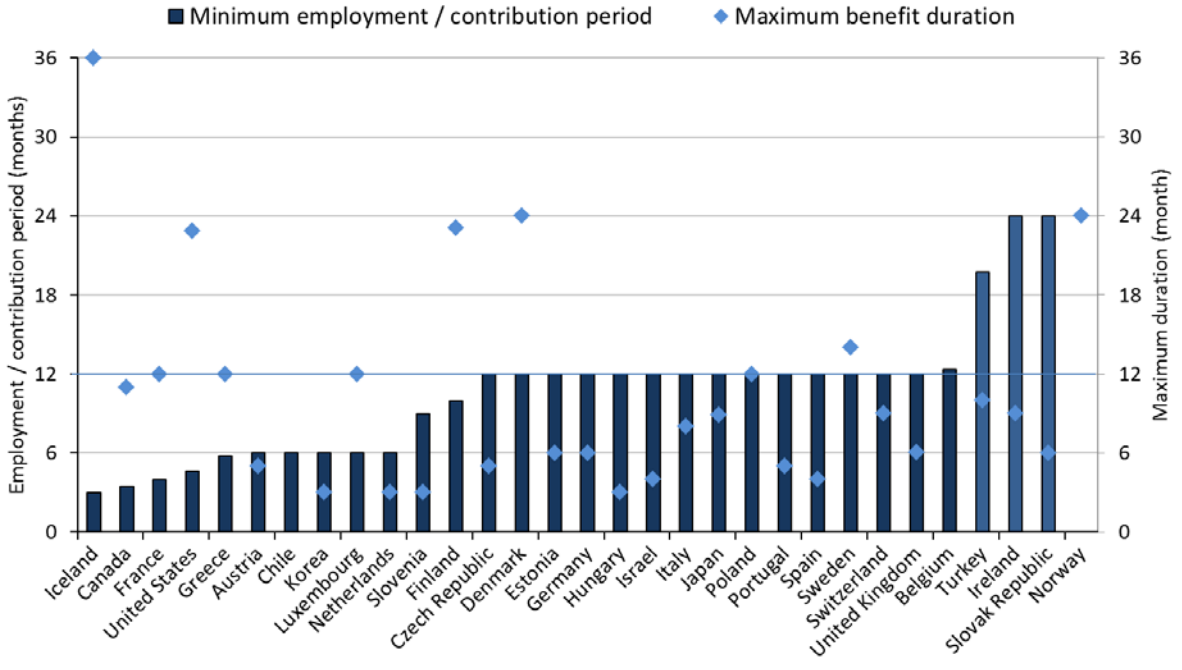
78. Social protection systems are complex and benefit eligibility rules vary widely across countries. In principle, youth can however receive all types of social benefits except for old-age pensions: unemployment benefits (UB), if they are of working-age; family benefits (FB), if they still live with their parents or if they have children themselves; housing benefits (HB) and social assistance (SA, including lone-parent (LP) benefits), if they live on their own, and disability benefits (DB) if they suffer from work incapacity.

79. This subsection presents a synthesis of the type of income support that can be received by youth in different countries as of 2012 under specific assumptions.[23] The analysis mainly focuses on three sub-categories of youth for which the social risk tends to be high:

- unemployed youth with some work experience;
- unemployed youth without any employment and contribution record;
- youth living with their parents.

Figure 14. One year of work experience entitles to unemployment insurance almost everywhere but the duration of benefits is often short

Minimum employment / contribution period and maximum duration of unemployment insurance benefit receipt for a 20 year-old with one year of previous employment living alone without children, in 2012.



1. For the United States: State of Michigan.
2. There are no UI benefit programmes in Australia and New Zealand.
3. See Table 6 in Annex III for further details.

Source: OECD Tax-Benefit models, www.oecd.org/els/social/workincentives

[23] As for tax-benefit models, cross-country comparisons of benefit systems require a certain number of assumptions. The tables presented in this section have been constructed under three different scenarios: for UB, the claimant is assumed to be 20 years old and to have a one-year unemployment insurance (UI) contribution record. For Table 4, which presents information on the availability of SA, FA, HB and UB, the claimant is assumed to be 20 years old, to not live with her parents, and to have no sufficient UI contribution record. The benefits specifically available to young people living with their parents or to young parents are presented in separate tables.

Unemployment insurance benefits for those with a work history

80. Figure 14 (and Table 6 in Annex III) shows the minimum contribution / employment record for eligibility to unemployment insurance (UI) benefits and the maximum duration of payments for a young person who has worked and contributed for one year. In all countries except Turkey, Ireland and the Slovak Republic, 12 months of employment / contributions paid are enough to be eligible to UI benefits. In Norway, the eligibility requirement is expressed in terms of earnings, as the minimum of 24% of the average wage in the previous year or 16% over three years; there is no condition in terms of work duration. In Austria, Chile, Greece, Korea, Luxembourg and the Netherlands, the minimum requirement is 6 months of work. It is lower still in the United States, France, Canada and Iceland, such that also young people who have terminated short-term contracts are likely to receive UI benefits.

81. In a majority of countries, one year of work however entitles to benefits for less than one year: The maximum duration of benefit receipt is 3 months in Hungary, Korea, the Netherlands and Slovenia, 4 months in Israel, 5 months in Austria and the Czech Republic, and 6 months in Estonia, Germany, the Slovak Republic and the United Kingdom. After this period, the young unemployed will be moved onto unemployment assistance (UA) or SA depending on the eligibility conditions of these programmes. Such programmes typically provide less generous support than UI programmes, except in the United Kingdom, where UI and UA rates are the same.

Benefits for those without a work history

82. Young unemployed who have no employment record, for instance those who just completed education or dropped out of school, can in some cases claim UB. Most often, they will however have to rely on SA if their parents cannot provide support. Table 3 shows benefits available in 2012 to young people of age 20 years *without any employment record* (see also Table 7 in Annex III for further details).

83. In eleven countries, unemployment benefits (UI or UA) are payable to youth who have not worked. In Finland, Germany and Sweden, unemployed youth receive the full amount of regular UA since eligibility criteria and benefit amounts are set irrespective of age. In other countries, reduced UB are payable (Australia, Belgium, Greece, Luxembourg, New Zealand and the United Kingdom). In Belgium, for instance, the *allocation d'insertion* is a lump-sum payment granted after an internship of about one year, the level of which depends on age and the family situation. In Australia, New Zealand and the United Kingdom, support available to young people without unemployment record reaches between 80% and 85% of the UA level paid to a 40-year-old unemployed. In these countries, UA amounts, which are flat-rate, depend on age and the family situation of the recipient (partnered or with dependent children). In some countries, UI / UA benefits for young unemployed decrease when they live with their parents (Australia, New Zealand, and Finland). In Finland the benefit is reduced with the parents' income above a certain threshold. In Denmark, unemployed youth who joined the voluntary UI immediately after finishing their education receive a reduced UI amount (either 82% or 50% of the maximum UI benefit received by unemployed with an employment record). In Ireland, reduced rates apply 18-24 year-olds.

84. The duration of UB payments varies between 5 months (in Greece) and 24 months (in Denmark). In Australia, Belgium, Finland, Germany, Ireland, New Zealand and the United Kingdom, the duration of payments is unlimited in principle.

Table 3. Means-tested benefits are available almost everywhere to unemployed youth without employment record (in 2012)

	With family responsibilities				Without family responsibilities	
	Unemployment benefits		Other benefits available		Additional child-contingent benefits	
	UA	UI	SA	HB	LP	FB
Australia	●		●	●	●	●
Austria			●		●	●
Belgium		●	●		●	●
Canada			●		●	●
Czech Republic			●	●		●
Chile						●
Denmark		●	●	●	●	●
Estonia			●		●	●
Finland	●		●	●	●	●
France				●	●	●
Germany	●			●	●	●
Greece	●				●	●
Hungary			●	●	●	●
Iceland			●	●	●	●
Ireland	●		●	●	●	●
Israel			●		●	●
Italy				●	●	
Japan			●	●	●	●
Korea			●	●	●	
Luxembourg		●			●	●
Netherlands			●	●	●	●
New Zealand	●			●	●	●
Norway			●	●	●	●
Poland			●	●	●	●
Portugal			●	●	●	●
Slovak Republic			●		●	●
Slovenia			●	●	●	●
Spain						●
Sweden	●		●	●	●	●
Switzerland			●			●
Turkey						
United Kingdom	●		●	●		●
United States			●			●

Source: OECD Tax – benefit models, www.oecd.org/els/social/workincentives

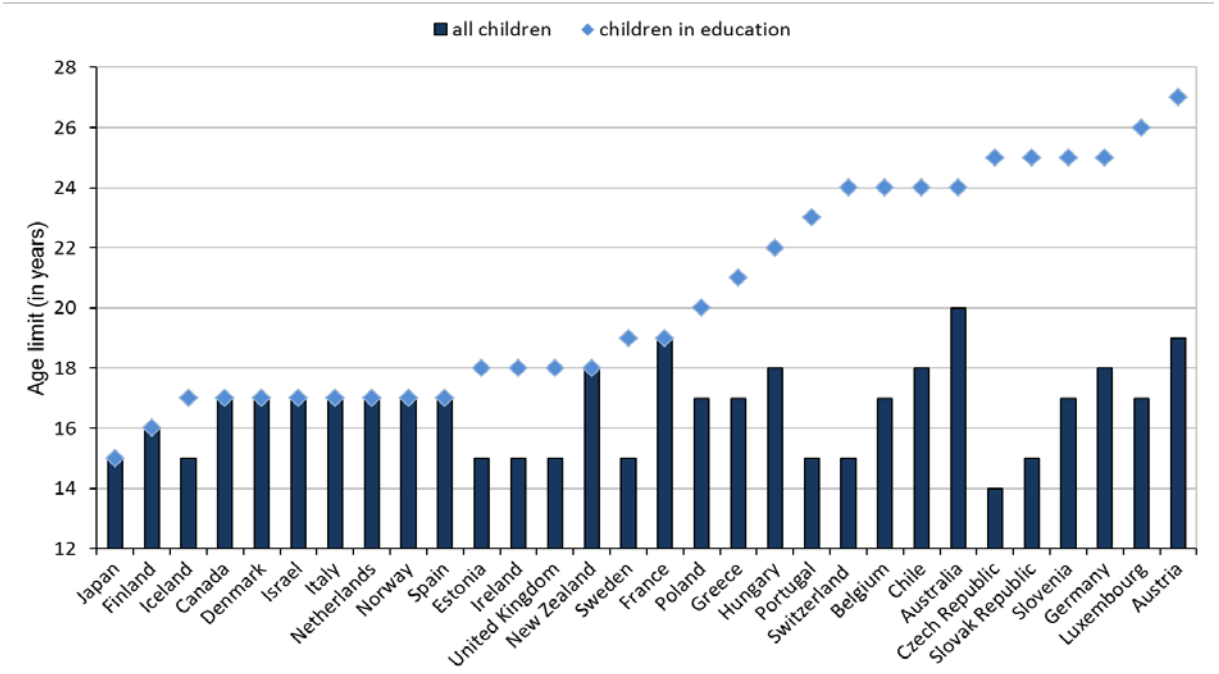
85. In countries where no UB are payable because they require a minimum employment or contribution record, 20-year-old unemployed are generally eligible for benefits of last resort such as SA. Exceptions are France and Spain, where there is a minimum-age requirement of 25 and 24 years of age, respectively. Unemployed youth below that age who have no employment history are eligible for neither UB nor SA and depend fully on family support or informal networks. In Chile and Italy, there exist no general SA schemes. In the Netherlands, young unemployed who are not eligible for UB receive reduced SA. However, the number of recipients is low since parents have to provide financial support to their children up to the age of 21. Municipalities are only obliged to provide benefits to applicants at this age in exceptional circumstances. In Israel, those below 25 years may only receive a reduced SA benefit. In most countries, 20-year-old unemployed who do not live with their parents qualify for HB (exceptions are Israel and Luxembourg, where there are age limits).

86. Young parents who live alone or in coupled households may receive child-contingent LP benefits and FB where such benefits exist. In Italy, FB are paid directly by employers and only granted if at least 70% of household taxable income stems from earnings (or earnings-replacement benefits including UB and employment pensions). In Greece, most family benefits used to be provided by employers except in the case of large families. A new, means-tested benefit that will also cover young parents from the first child is currently being phased in**.**

87. Those still living at home with their parents may still be eligible to UI if they have sufficient employment / contribution record, or to UA or SA, sometimes at a reduced rate, such as in Australia or Finland. However, in a number of countries, families must provide priority support. For instance, in Korea, the Netherlands (for those aged below 21 years), New Zealand (for those aged 16-17 years) and Norway (for those aged below 18 years), parents remain financially responsible and no SA is paid. In these countries, family cash benefits are not available above the age of 17 or 18 years (in Korea, FB are included in the main SA *Livelihood Benefit* programme).

Figure 15. Family benefits are often available to households with children above the age of 17 years

Upper age limits for family cash benefits or non-wastable tax credits for children / children in education (in years), in 2012



1. For Canada: State of Ontario; for Switzerland: Zurich

2. See Table 8 in Annex III for further details

Source: OECD Tax – benefit models, www.oecd.org/els/social/workincentives

Family benefits for those living with their parents

88. In many countries, FB are available until the child has reached a relatively high age, in which case support is provided through families rather than directly to the young person. Figure 15 plots age limits of countries' main FB (see Table 8 in Annex III for further details). On average, in 2012, FB are available until the age of 17 years, or even up to 20 years if the child is enrolled in education. In Austria, for instance, FB can even be collected until the age of 27 for students; in other OECD countries, 24-25

years is a frequent age limit. In some countries, tax reductions may moreover be available to families that pay income taxes (*not shown*). For instance, in France, the tax cut for children (*'quotient familial')* is applied until the age of 25 years for students even if they do no longer live with their parents. The extent to which these allowances and tax reductions benefit the young people is of course less clear than in cases where such cash support is paid directly to them.

Disability benefits

89. A final type of programmes available to some youth is conditional on invalidity. Such benefit programmes may be important in countries where there has been a rise in the prevalence of mental illness among youth. Table 9 in Annex III shows to what extent in 2010, existing disability pension programmes had special provisions to include or restrict access for youth. In ten countries, the minimum age for claiming disability pension is between 16 and 18 years and there are no minimum working periods. This is the case in several Nordic countries, in the Netherlands, but also in Hungary, Ireland, and Italy. In most countries, the minimum age is 20 years, or above this threshold, and a minimum working record may be required. For instance, in Canada, the Canada Pension Plan (CPP) disability pension asks for 4 to 6 years of contribution. In Austria, the *Ruhegenuss*, requires 5 years, and in Sweden, the invalidity pension is not available until a person has worked for 3 years. These limits, along improved gatekeeping in the form of stricter health examinations, help explain why, on average, disability programmes are still paid to only a relatively small share of youth (see the analysis below and OECD, 2012*d*).

The frequency of benefit receipt

90. Eligibility rules of income-support programmes tell only little about the actual coverage of benefit programmes. Benefit receipt rates are likely influenced by a range of different factors, including of course for instance the non-employment rate among youth or the share of young people who live alone. Differences in the economic environment and in living conditions are thus likely to be reflected as disparities in receipt rates across countries.

91. Household surveys can be one useful source of data for estimating benefit receipt rates among young people. It is important to keep in mind however the limitations of using survey data for such an analysis. First, household surveys typically provide reliable information only on the amount of different types of benefits received by an individual or household *over the period of a year*. The measured share of youth who receive benefits at any time during the year will generally not be a good estimate of the benefit receipt rate *at a certain point in time* (*i.e.* in a specific month) unless if benefits are typically paid for periods of close to a year. For this reason, receipt rates estimated using annual survey data may be different from those obtained from administrative records, where shorter spells of benefit receipt can often be observed (for a discussion see Immervoll, Jenkins and Königs, 2015). Receipt rates derived from survey data can nonetheless of course be useful as long as they are interpreted as measuring the share of individuals who touch benefits at any point in time during the year.

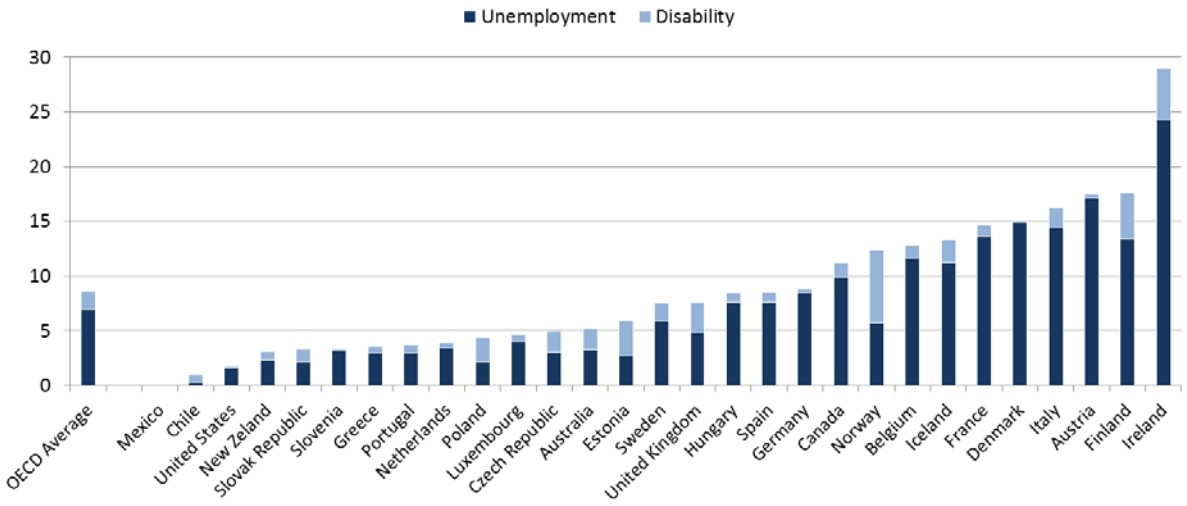
92. Social benefits are moreover grouped into two categories in terms of the relevant benefit-receiving unit. Unemployment and disability benefits are typically awarded at the individual level; UB and DB receipt rates in this section are therefore expressed as the number of young people receiving those benefits as a percentage share of the overall youth population. Social assistance, housing benefits and family benefits by contrast are typically awarded at the family- or household level, often conditional on a means test that takes into account the income and resources of several household members. The analysis presented in this section therefore calculates receipt rates of SA, HB and FB as the share of individuals *living in households that receive benefits* as a share of all youth.

93. UB receipt rates among youth are relatively low in most OECD countries (Figure 16). On average, slightly above 7% of all youth aged 16-29 years receive UB. Receipt rates are particularly low on the American continent except for Canada (Chile, Mexico, United States) and in some Southern and Eastern European countries (Slovak Republic, Slovenia, Greece, Portugal), all of which have receipt rates of below 3%. This is in line with the previous conclusion that youth with limited or no work experience are usually not entitled to these benefits. UB receipt among youth is more frequent in Northern European countries and Central Europe with benefit receipt rates of above 10%, either because benefits are more easily accessible or due to high youth unemployment rates.

94. Disability benefit receipt rates are much lower, averaging only around 2% of all youth in OECD countries. Exceptions are Norway (7% of all youth) and Finland and Ireland (5%).

Figure 16. Receipt rates of unemployment and disability benefits among youth are generally low

Share of youth who received benefits at any time during the year 2012 (in % of the total number of youth)



1. The share of youth who receive both UB and DB over the year is negligible and hence not reported in the graph. It reaches 0.5% of all youth in Finland, Ireland and, Norway.
2. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
3. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011).
4. Results for New Zealand are not official statistics, but have been created for research purposes from the Integrated Data Infrastructure (IDI) managed by Statistics New Zealand.
5. Countries are sorted by the total benefit receipt rate in ascending order.
6. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico), HLFS and administrative data (New Zealand) and CPS (United States).

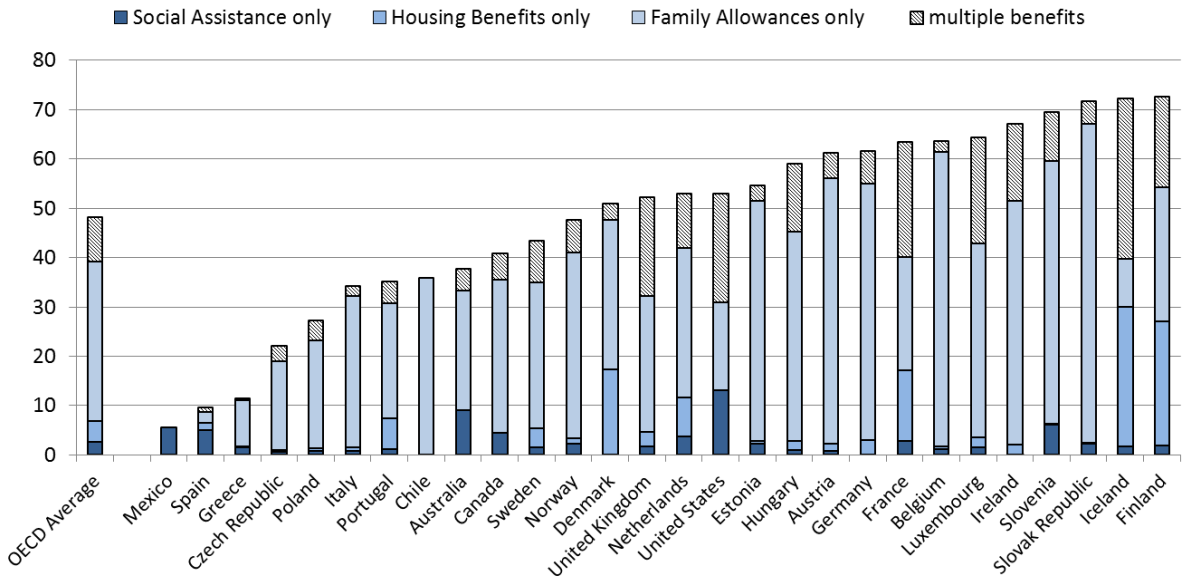
95. Social assistance, housing and family benefits play an important role for youth living in low-income households and those lacking work experience. Figure 17 gives the share of youth who live in a household that receives SA, HB, FB or several of these benefits (irrespective of household type and the age of other household members).

96. The share of youth covered by these household-level benefits is much higher than for individual-based UI and DB. In the majority of countries, more than half of all youth are covered by household-level income-support. The highest receipt rates are observed in Northern and Eastern Europe, with around or

above 70% of youth living in benefit-receiving households in Finland, Iceland, the Slovak Republic and Slovenia. High benefit receipt rates in these countries and elsewhere are primarily driven by receipt of FB. While some young people may receive these benefits as young parents, many more live in claimant household as children. Unsurprisingly, much higher benefit receipt rates are observed in countries where cash support for families is 'universal' or at least very broad (which is true for the majority of OECD countries, see Table 8 in Annex III) than in countries where benefits are only targeted at low-income households (Mexico, Spain, Greece, Italy, Portugal, Chile, Australia).

Figure 17. Receipt of household-level income-support benefit is frequent

Share of youth who lived in a benefit-receiving household in 2012 (in % of the total number of youth)



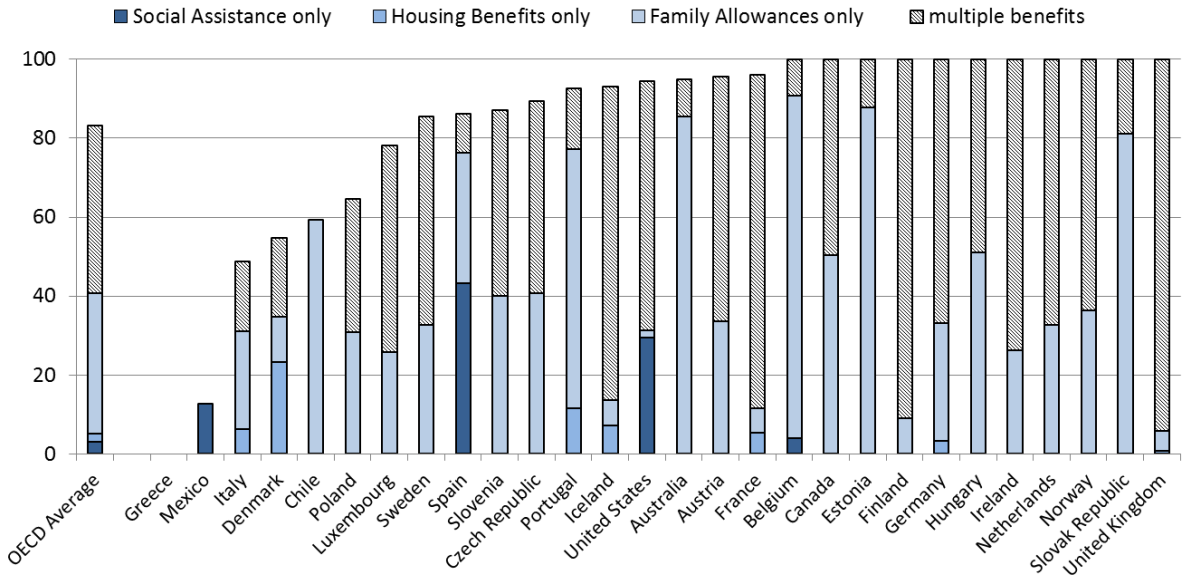
1. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
2. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011). No complete data are available for New Zealand.
3. For European countries, SA corresponds to the benefit category called "Other cash transfers not classified elsewhere" in EU-SILC.
4. Only cash transfers are included. For the Unites States, SA benefits include Food Stamps.
5. Countries are sorted by the total benefit receipt rate in ascending order.
6. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico) and CPS (United States).

97. For single subgroups of youth, benefit receipt rates can be higher still. For single parents, for instance, rates of benefit receipt are over 80% on average, and in the majority of OECD countries they even reach over 90% (see Figure 18).

Figure 18. Single-parents are well-covered by income-support benefits in most OECD countries

Share of single-parent youth who received benefits at any time during the year 2012 (in % of the total number of single-parent youth)



1. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
2. Numbers are for 2012 except for Ireland (2010) and Belgium and Chile (all 2011). No complete data are available for New Zealand.
3. Canada could not be included in the analysis because single parents cannot be identified in the Canadian SLID.
4. For European countries, SA corresponds to the benefit category called "Other cash transfers not classified elsewhere" in EU-SILC.
5. Only cash transfers are included. For the Unites States, SA benefits include Food Stamps.
6. Countries are sorted by the total benefit receipt rate in ascending order.
7. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico) and CPS (United States).

The incidence of poverty

98. Studying the income and poverty situation of young people is not straightforward. Clearly, young people's disposable incomes are closely linked to their labour market status. The declining employment rates documented in Section 2 will therefore translate into lower average earnings and rising rates of benefit receipt.

99. While the benefit receipt rates just presented give an impression of the share of young people who touched benefit at some point during 2012, they say little about the generosity or duration of benefit payments. In other words, even if the *coverage* of benefits is good – as it appears to be the case for instance for single parents (see Figure 18) – this leaves the question about their *adequacy* unanswered.

100. For the measured income of a young person, her living arrangements are moreover arguably as important as the labour market situation. For young people, labour market entry is often associated with the move out of the parents' home, financial independence from the parents and possibly with family formation. Since incomes and poverty status are typically assessed at the household level, labour market

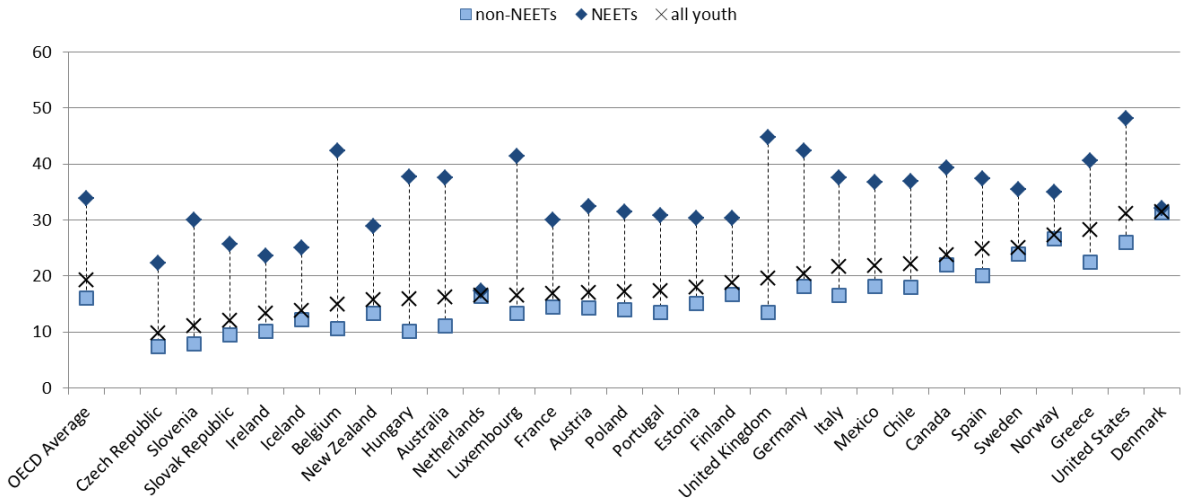
entry may thus be associated with a *drop* in the measured disposable (household) income if the parents of the young person had a good income. This is especially true in times of meagre entry-level wages and a high incidence of part-time work among the young employed.

101. Finally, intra-family transfers from parents or close relatives may be an important source of revenue especially for youth in education and for NEETs. These payments may however be irregular and often cannot be easily measured using the standard household survey data.

102. This subsection studies the income situation of young people by focusing on the proportion of youth who live in poor households and in particular the poverty rate among NEETs.[24] A more detailed analysis of a young person's income sources, including for instance transfers from the parents or also income from study grants and loans, could not yet be achieved due to a lack of suitable cross-country data.

Figure 19. Poverty rates for NEETs are much higher than for non-NEET youth

Share in % of NEETs and non-NEETs living in a household with an income below the poverty line, 2012



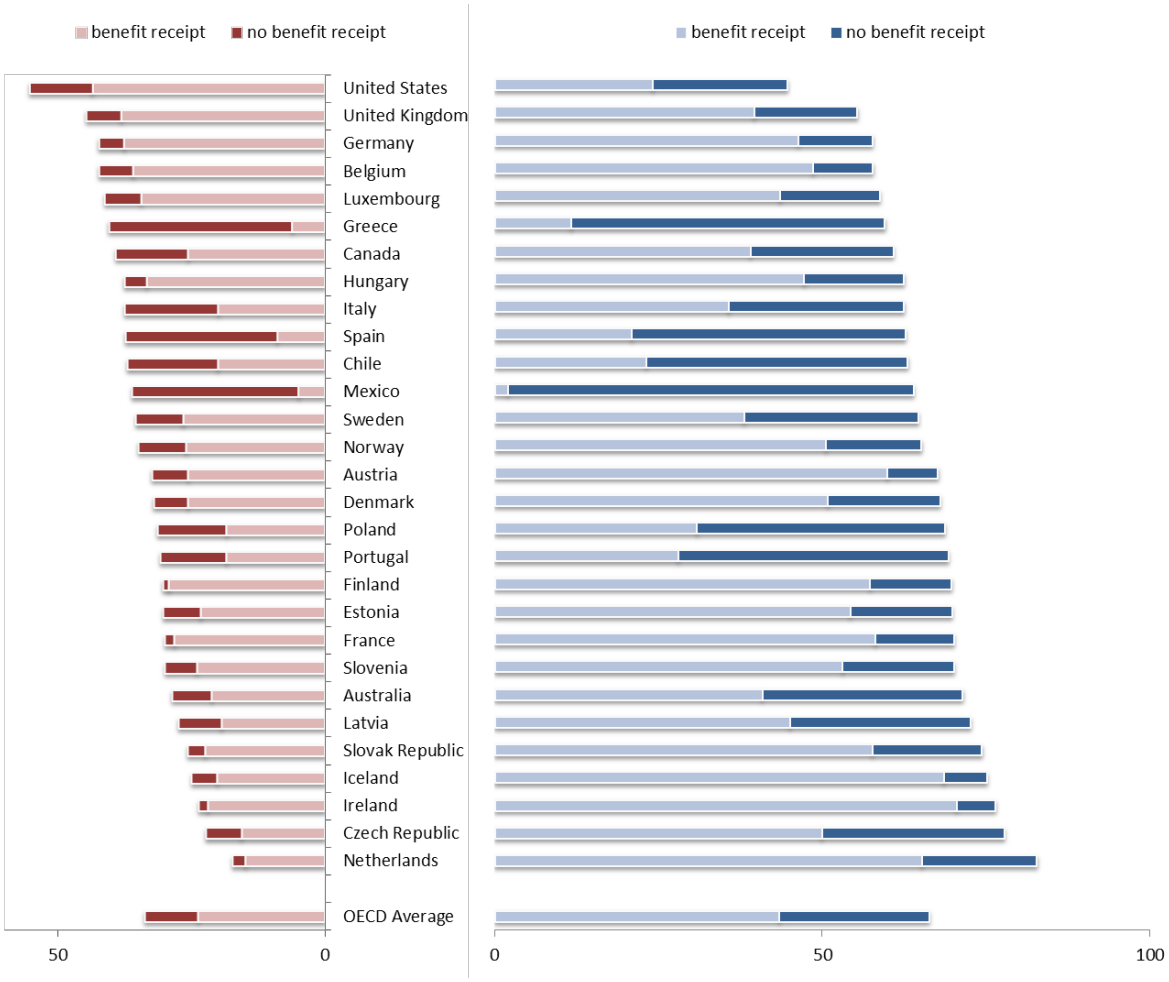
1. The poverty line is defined as 60% of median equivalised disposable household income after taxes and social transfers.
2. Numbers are for individuals aged 16-29 years, except for the United States (16-24). No complete data are available for New Zealand.
3. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011).
4. Countries are sorted by the youth poverty rate in ascending order.
5. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico), HES (New Zealand) and CPS (United States).

24 The poverty line is defined as 60% of median equivalised disposable household income after taxes and transfers. Equivalised income is household income divided by the square root of the household size. Some OECD publications use 50% of median equivalised income as poverty threshold. Since the main focus of this section however lies in the analysis of the drivers of poverty among youth rather than in an assessment of poverty levels *per se*, the choice of poverty line is not of primary importance.

Figure 20. Despite high income-support coverage, many NEETs live in poverty

Benefit receipt among poor NEETs (left panel) and non-poor NEETs (right panel) in % of all NEETs, 2012



1. The poverty line is defined as 60% of median equivalised disposable household income after taxes and social transfers. The analysis includes youth from all household types.
2. For defining the group of benefit recipients, account is taken of UB, DB, SA, HB and FB.
3. Numbers are for individuals aged 16-29 years, except for the United States (16-24).
4. Numbers are for 2012 except for Ireland (2010) and Belgium, Canada and Chile (all 2011). No complete data are available for New Zealand.
5. Countries are sorted by the poverty rate among NEETs in descending order.
6. The OECD average is non-weighted.

Source: OECD calculations based on EU-SILC, HILDA (Australia), SLID (Canada), CASEN (Chile), ENIGH (Mexico) and CPS (United States).

103. Across OECD countries, close to 20% of all youth live in poverty (Figure 19).[25] Youth poverty rates re highest in some of the Nordic countries (Denmark, Norway, and Sweden), in the United States (for

[25] This poverty rate is a non-weighted average across all countries represented in Figure 19. The poverty rate increases to 26% once differences in the size of the youth population are taken into account (see Table 1 and the discussion in the Introduction).

a somewhat younger youth population, see figure notes) and in Greece, at rates of 25% or above. The lowest incidence of poverty is observed for a selection of Eastern European countries, with rates of 10-12% for the Czech Republic, Slovenia and the Slovak Republic.

104. In nearly all countries, the incidence of poverty is substantially higher among NEETs than among non-NEETs. With more than one-third of all NEETs living in poor households, the disparity is 18 percentage points on average. The largest differences are observed for Belgium (32 percentage points) and the United Kingdom (31 percentage points). By contrast, poverty rates among NEETs and non-NEETs are virtually identical in Denmark and the Netherlands.

105. These numbers confirm the importance of living conditions for a young person's income. Many of the countries with the highest youth poverty rates are those where young people are known to leave their parents' home at a very young age. Indeed, Figure 9, which described the household types of young NEETs, named Denmark, Norway and Sweden among the countries with the lowest shares of young NEETs living with adults (and the same is true among youth more generally). One the other end of the spectrum, the Slovak Republic is one of the countries with the lowest youth poverty rates the one with the lowest proportion of NEETs not living with adults.

106. A striking finding is that poverty rates for NEETs are high despite the fact that many of them in fact receiving income-support benefits. The left panel of Figure 20 shows that around 70% of NEETs with an annual household income below the poverty line receive some sort of income-support payments (either UB, DB, SA, HB or FB). This suggests that, at least for this group, the generosity or duration of benefit payments is not sufficient to permit an avoidance of poverty. Except in Greece, Spain and Mexico, the large majority of poor NEETs however receive some income-support payments. The right-hand panel of Figure 20 confirms that the coverage of NEETs by benefit payments is relatively high more generally, with also more than two-thirds of non-poor NEETs receiving some income-support payments.

5. POLICIES TO PROMOTE SELF-SUFFICIENCY OF YOUTH: EVIDENCE FROM EVALUATIONS OF SOCIAL, EMPLOYMENT AND TRAINING PROGRAMMES

107. Cash benefits are essential to avoid extreme poverty in periods of hardship, especially for youth not living with their parents. Income support can help them engage in intensive job search and training activities. However, particularly for the most disadvantaged, transfers must be complemented with specialised programmes that aim at improving skills necessary for labour market integration and that help overcome non-financial barriers.

108. This section investigates the role of a large range of interventions that can influence the skills of youth, both cognitive and non-cognitive, and improve the job prospects for young people. It first recalls to what extent skills may influence labour market and other social outcomes, and how they can be changed over the life course, but notably for teenagers and young adults. It then turns to interventions that act both on personality traits and cognition for the most disadvantaged youth and investigates the role of policies that aim at increasing job experience and contacts with potential employers.

109. A full account of all existing services for youth among the OECD countries can clearly not be given at this stage since existing databases on in-kind programmes do not break down spending and participants by the type of beneficiaries. Besides, programme participation is rarely recorded in international surveys. Therefore, the choice of programmes presented in this section is guided by the availability of rigorous evaluations that help identify what works and for whom. In practice, this leads to an overrepresentation of programmes from anglophone countries and in particular from the US, where many of such evaluations exist. To the extent possible, an effort is however made to also reflect experiences from other OECD countries.[26] A synthesis of the measures for youth in this area is presented in Table 10 in Annex IV.

The determinants of labour market and social outcomes

110. Cognitive skills and the educational attainment play a key role for determining various individual-level outcomes, notably employment status and wages, fertility, crime and health. However, also personality traits such as openness to others and to new experiences, interest in learning, the ability to cooperate, resilience or the ability to control one's emotions are strong predictors. These 'non-cognitive' skills can be interpreted as 'internal assets' that positively affect academic, family, social and employment outcomes (see Almlund *et al.*, 2011 and Cunha and Heckman, 2007). Studies suggest that these abilities are at least half due to the environment children grow up in, both at home and at school, the rest being usually attributed to hereditary factors.

111. The impact of cognitive abilities (such as attention, memory, language skills, reasoning, problem-solving, *etc.*, as measured by IQ and other ability tests) and of schooling on outcomes like income or health have been long recognised. The effect of personality on these outcomes is much less known, but it is the

26. American programmes are more often present in the academic literature on evaluation for at least two reasons: First, U.S. states design and implement their own programmes, which implies that the number of different pilots or experiences available for evaluation is large. Second, funding arrangements of programmes, at least at the federal level, often require post-programme evaluation based on strict scientific standards.

subject of an intense recent stream of research. Personality traits that are most commonly discussed by psychologists and economists are *Conscientiousness*, *Openness to Experience*, *Extraversion*, *Agreeableness* and *Neuroticism / Emotional Stability*, together often referred to as the 'Big Five' personality factors in the field of personality psychology. Table 4 details the facets associated with each of the main five traits.

Table 4. The 'Big Five' personality traits and their facets

Personality trait	Facets (and correlated trait adjective)	Related Traits
Conscientiousness	Competence (efficient), Order (organized) Dutifulness, (not careless), Achievement striving (ambitious), Self-discipline (not lazy), Deliberation (not impulsive)	Grit Perseverance ; Delay of gratification; Impulse control Achievement striving; Ambition Work ethic
Openness to Experience	Fantasy (imaginative), Aesthetic (artistic), Feelings (excitable), Actions (wide interests), Ideas (curious) Values (unconventional)	
Extraversion	Warmth (friendly), Gregariousness (sociable), Assertiveness (self-confident), Activity (energetic), Excitement seeking (adventurous), Positive emotions (enthusiastic)	
Agreeableness	Trust (forgiving), Straightforwardness (not demanding), Altruism (warm), Compliance (not stubborn), Modesty (not show-off), Tender-mindedness (sympathetic)	Empathy; Perspective taking; Cooperation; Competitiveness
Neuroticism/ Emotional Stability	Anxiety (worrying), Hostility (irritable), Depression (not contented), Self-consciousness (shy), Impulsiveness (moody), Vulnerability to stress (not self-confident)	Internal vs. External Locus of control; Core self-evaluation; Self-esteem; Self-efficacy; Optimism Psychopathologies (mental disorders) including depression and anxiety disorders

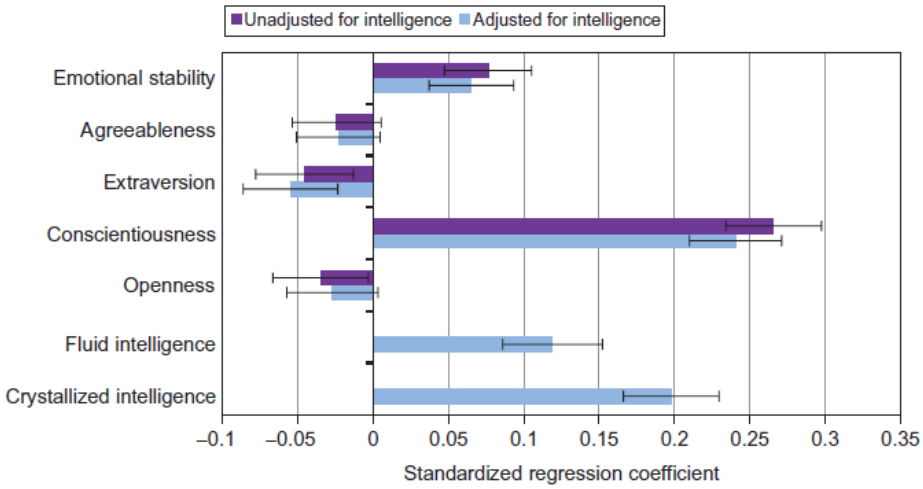
Source: Almlund et al. (2011), Table 1.3 adapted from John and Srivastava (1999).

112. The *causal* impact of skills – both cognitive and non-cognitive - on various social and labour market outcomes is very difficult to identify, not least because the level of skills reached at a given age may be influenced by these outcomes as much as these outcomes influence them. For instance, while self-esteem may have a positive effect on income, income may again raise self-esteem. Besides, skills and social outcomes are both influenced by schooling, which in turn can be affected by skills and expected social outcomes. For instance, the number of years spent in education may be influence by the level of unemployment. For these reasons, a possible strategy to correctly identify the distinct effect of skills on various social outcomes is to measure them early in life and to control for the level of schooling reached.

113. A number of recent studies used convincing identification techniques (see Almlund et al., 2011 for a large synthesis on which this section draws). They show that non-cognitive skills are essential for acquiring cognitive skills, and that both types of skills must be considered for explaining educational and social outcomes:

- A growing body of research finds that personality is associated with educational attainment (completed years of schooling) and notably the probability of dropping out of high school. Of the 'Big Five' traits, *Openness to Experience* and *Conscientiousness* best predict overall educational achievement. These results are obtained for representative samples from working-age populations in the United States (Goldberg et al, 1998), Australia (Báron and Cobb-Clark, 2010), and European countries (Van Eijck and De Graaf, 2004, Almlund et al., 2011, Brunello and Schlotter, 2011). Controlling for parents' education and occupational status does not significantly alter these results. *Conscientiousness* is associated with years of schooling as much as measures of intelligence are (see Figure 21 for the case of Germany). In the case of the United States, *Conscientiousness* predicts college grades to an equal degree as high school grades do. *Emotional Stability* (and notably self-esteem and 'internal locus of control', *i.e.* the belief that what happens in life can be controlled) is also often a good predictor of school attainment in these studies.

Figure 21. Association of Intelligence and the 'Big Five' with years of schooling for males in Germany



1. The figure displays standardised regression coefficients from a multivariate regression of attended years of schooling on the Big Five and intelligence, controlling for age and age squared. The bars represent standard errors. The data is a representative sample of German adults aged 21-94 years old.

2. "Fluid intelligence" is the rate at which individuals learn and is measured by aptitude tests, while "crystallized intelligence" is the acquired knowledge and is measured by achievement tests. Controlling for these two measures of intelligence, conscientiousness is associated with years of schooling to a similar degree as intelligence.

Source: Almlund et al, (2011) Fig. 1.9 p.93, based on the German Socio-Economic Panel (GSOEP), waves 2004–2008.

- *Conscientiousness* influences school grades at all levels of education. Once again, *Conscientiousness* is associated with better grades as much as measures of intelligence are (Poropat 2009). This can be explained by the fact that conscientious students have more positive study habits, put more effort into their studies and have better behaviour in the classroom than others, controlling for intelligence. Other personality traits such as *Openness* and *Emotional Stability* appear to have a stronger role at lower educational levels.

- Job performance and academic performance share a number of determinants. For example, both require completing work on a schedule and involve intelligence to varying degrees. As a result, it is not surprising that non-cognitive skills, such as *Conscientiousness* and *Emotional Stability* ('locus of control' and self-esteem) are also positively related to labour market performance (see Brunello and Schlotter, 2011). *Conscientiousness* is the personality trait most strongly associated with job performance but only about half as predictive as intelligence (measured by IQ tests).

However, *Conscientiousness* may play a more pervasive role than intelligence. The importance of intelligence increases with job complexity: cognitive skills are more important for professors, scientists, and senior managers than for semi-skilled or unskilled labourers. By contrast, the importance of *Conscientiousness* applies to a wider spectrum of jobs. Besides, there is evidence that facets related to *Emotional Stability* ('locus of control' and self-esteem) predict adult earnings to a similar degree as cognitive ability (Heckman, Stixrud, and Urzua, 2006). Personality traits hence seem to affect earnings above and beyond their effects on education and the effects of education on earnings, notably for individuals with lower levels of job complexity.

- Recent evidence also suggests that personality traits are predictors of health outcomes (OECD, 2010*a*). *Conscientiousness* seems to be the most important of the 'Big Five' traits, and a stronger predictor than cognitive measures or socio-economic status (Roberts et al., 2007). Personality likely affects health through behaviours such as smoking, eating and exercising habits. Self-esteem is also susceptible to reduce risky sexual behaviour, notably among girls (number of partners, unprotected sexual encounters, Favara, 2013). Traits measured during elementary school directly influence health outcomes during midlife, and moreover indirectly through educational attainment. Most studies control for relevant background factors, including the severity of disease. Other traits such as *Emotional Stability*, *Openness to Experience*, and *Agreeableness* are also associated with longer lives.

- Studies that focus on the link between skills and crime are less numerous. However there is evidence that Self-Control (associated with *Conscientiousness*), *Emotional Stability*, and *Agreeableness* are important protective factors against criminal activity (John et al.1994, Agnew et al. 2002). Controlling for the influence of education and cognitive ability, these traits appear equally predictive of lower criminal activity (Heckman, Stixrud, and Urzua, 2006).

114. The main conclusion from this literature is that non-cognitive skills are just as predictive as cognitive ability measures (as captured by IQ and other tests) for educational, labour market and other social outcomes even after controlling for family background and cognition. This provides a new perspective on the direction of social and educational policy interventions.

115. Indeed, there is evidence that non-cognitive skills are as malleable as cognition and can be influenced by education. Some studies find that non-cognitive skills can be affected by external factors even more than cognitive ability, the latter being determined relatively early in life.[27] Early childhood interventions such as the Perry School project in the United States have been found to have significant and durable effects on personality traits and social outcomes.[28] There is also evidence however that specialised interventions for adolescents as well as work experience throughout the life cycle can improve non-

27. See Almlund et al (2011) for a synthesis and Anger (2011) for an example based on German data (GSOEP).

28. The Perry Preschool Program, carried out in the years 1962-67, was targeted at low-income black children with initial IQs below 85 at age 3. Preschool was provided each weekday morning in 2.5-hour sessions. The average child-teacher ratio was 6:1. The curriculum emphasised social skills and active learning, in which the children engaged in activities that *(i)* involved decision-making and problem-solving, *(ii)* were planned, carried out, and reviewed by the children themselves, with support from adults and *(iii)* involved working with others when problems arose. In addition, there were home visits to promote parent-child interactions. The programme ended after two years of enrolment.

The programme was evaluated by the method of random assignment. The impact on cognitive abilities was limited but the effects on non-cognitive abilities were significant, which induced better educational attainment and improved labour market outcomes at adult age (Heckman, Pinto, and Savelyev, 2013). The programme was cost-effective with a rate of return of around 6–10% per annum.

cognitive skills. [29] Indeed, many types of successful interventions targeted at disadvantaged students aim at changing this type of skills, in association or not with educational components: mentoring, school-centred or after-school support, second-chance programmes, and even some apprenticeship schemes.

Evidence on programmes' success and limitations

116. In spite of the evidence discussed above, there is an on-going debate about the most appropriate form of support for disadvantaged youth (Fryer, 2011). Proponents of the school-centred approach cite the excellent results obtained in particular schools, which sometimes achieve or outperform average national outcomes even with a more disadvantaged student population. Advocates of out-of-school interventions, either through public, associative or community-based programmes, argue that schools are dealing with issues that actually originate outside the classroom. They cite research showing that achievement gaps across various ethnic or socio-economic groups are formed before children ever enter school, and that one-third to one-half of the performance gap can be explained by family-environment indicators (Fryer and Levitt, 2004, 2006). These debates cannot be easily closed, which is why, in what follows, the whole range of interventions for which there is evidence of positive social impacts is presented.

Special school programmes

117. One of the best solutions to limit the risk of drop-out from education is to intervene early at school with special programmes suited to disadvantaged groups. Schools can provide a comprehensive environment that improves cognitive skills, advances knowledge-formation and also influences 'life skills' and personality traits of those at-risk of dropping out. Several types of solutions exist, from reducing the class size for groups of highly disadvantaged students, to developing special curricula, or adding additional services to existing curricula.

118. Class size matters, especially for young children and the most disadvantaged ones, but probably less for adolescents:

- For instance, the project STAR (Student/Teacher Achievement Ratio) randomly assigned a cohort of 11,571 children and their teachers to different classrooms within their schools. Some students were assigned to small classes (15 students on average) in pre-school and elementary school, while others were assigned to larger classes (22 students on average). The experiment was implemented across 79 schools in Tennessee from 1985-89. An evaluation of the programme showed that assignment to a small class was associated with positive changes in personality as well as later-life earnings (Dee and West, 2008, Chetty et al. 2010).

- Similar results were obtained by Piketty and Valdenaire (2006) for France. They use exogenous differences in class sizes due to rules regarding the maximum number of students in a class to identify the impact of class size. They find that *one* fewer child in elementary school (aged 7-8 years) increases math test score by 0.3 to 0.4 points (2.5-3% of standard deviation) and even by 0.7 points for socially disadvantaged children. The improvement is only 0.2 points (1-1.3% of standard deviation) for lower-secondary school grades, and only 0.05 points (0.4% of standard deviation) for upper-secondary school grades. The same identification approach was used earlier

29. For example, Gottschalk (2005) shows evidence from a randomised control trial that working at a job can improve locus of control. Based on the Self-Sufficiency Project (SSP) in Canada, in which some welfare benefit recipients were randomly offered substantial subsidies to work (leading the experiment group to work about one-third hours more than those in the control group), he shows that after 36 months, those who received the subsidy were more likely to have an improved locus of control.

by Angrist and Lavy (1999) in the case of elementary schools in Israel: They found an impact of class size for children aged 8-10 (3rd and 4th grades) but not for those aged 10-11 (fifth grade).

119. Educational methods and the content of educational programmes can also substantially improve achievement among disadvantaged students. The so-called 'charter schools' often target students from disadvantaged backgrounds, who may not have access to quality public schools in their neighbourhoods or for whom traditional programmes are less suited. They usually provide more resources (as reflected in smaller class sizes), complementary services, and better trained teachers. The programmes of many of such schools have recently been evaluated in the United States.

- The *Knowledge is Power Program* (KIPP) for instance is the nation's largest network of charter schools. There are currently 141 KIPP schools in 20 states and the District of Columbia, serving 50,000 students. More than 86% of students are from low-income families, and 95% are black or Hispanic. These schools focus on behaviour, discipline, and commitment, provide modest financial rewards for performance, and allow students to spend more time at school. Angrist et al. (2013) performed the first quasi-experimental analysis of a KIPP school (in Lynn, Massachusetts) and found large impacts on achievement: gains about 0.1 standard deviations per year in English language and 0.4 standard deviations per year in math, with larger effects among the most disadvantaged students. Similarly, Abdulkadiroglu et al. (2009) find that students enrolled in Boston charter schools with organised lotteries gain about 0.17 standard deviations per year in English and 0.53 standard deviations per year in math.

- In some cases, charter schools are combined with the provision of other social services. The *Harlem Children's Zone* (HCZ) – a 97-block area in central Harlem, New York – for instance combines reform-minded charter schools with a web of 'community services' designed to ensure that the social environment outside of school is positive and supportive to children.[30] Eligible children are selected at random when the number of applicants exceeds the number of available slots for admission. Dobbie and Fryer (2009) show that after 3 years in these schools, students have nearly closed the achievement gap in maths with average white students in other New York City schools, and the size of the gains is strikingly similar to those found for the KIPP Lynn school. They also improve results in English, but much less than in maths. However, Dobbie and Fryer find no correlation between participation in social programmes outside schools and academic achievement, which suggests that proximity to the social programmes cannot alone fill the educational achievement gap.

- By offering the opportunity of boarding, charter schools can increase the time spent on academic activities. In France, the *Internats d'excellence* are boarding schools targeted at secondary students. They were created in 2009, and by 2012, they enrolled more than 4,000 students from disadvantaged backgrounds. Students who applied were aged between 11 and 16 years and selected randomly if they were eligible. Eligibility was determined based on their grades (average when compared to national metrics, but generally performing better than their local peers) and socio-economic parameters (below average). Teachers tended to be better educated than their public-school counterparts, and the pupil-teacher ratios were lower. Participants dedicated significantly more time to academic activities. Behaghel, Charpentier and Gurgand (2012) evaluated this programme based on surveys from the first school that opened in 2009. They find that students were nearly three times as likely to express interest in taking college-preparatory

30. These services include a 'Single Stop' programme that provides clients with access to a broad bundle of free services (securing benefits, legal guidance, financial advice, debt relief counselling and domestic crisis resolution), but also access to mental health professionals, workshops on domestic violence and on parenting, and other health services.

classes, and that they were 25% more likely to say they wanted to attain a master's degree (motivation, self-esteem). After two years, students' average math score had increased by 0.4 standard deviations, a substantial amount relative to other educational interventions. By contrast, no effect was found on French language scores. This pattern of improvements in maths but not in language scores is common in educational programmes (except for very young children).

- Schools can also be connected to external services to provide better support to at-risk students. In Portugal, the programme *Domains for Priority Intervention* (TEIP) creates partnerships between 'priority schools' and other public and private entities (*e.g.* health centres, associations, various agencies) in specific disadvantaged areas to provide alternatives to traditional school, and vocational courses to those at-risk of dropping out. Moreover, it includes a mandatory educational project for each school or schools consortium, agreed with central administration, periodical assessment of results in different domains (under-achievement and drop-out rates, students' assiduousness and behaviour), and qualified consultancy by experts. School failure rates progressively declined after implementation of the programme and after 4 years, in 2010, they were practically identical to national rates (Dias and Tomas, 2012).

120. An obvious question when looking at these studies is how general are the lessons learned from these one-off experiences. Every school has its unique features and charter schools are especially diverse in their methods. For instance, Angrist, Pathak, and Walters (2012) report a wide range of estimated 'charter effects' for a sample of schools from Massachusetts. Some experiences suggest that also certain methods of instruction may significantly improve the performance of disadvantaged students.[31] Which particular aspects of the successful experiences mentioned above are the most promising for closing the educational achievement gap remains to be identified.

School-based interventions

121. Where special educational programmes do not exist on a sufficient scale, or for youth who cannot participate in such programmes for other reasons, timely and targeted interventions in mainstream schooling can improve outcomes for the most disadvantaged youth. Again, effects of such programmes are not limited to cognitive skills, but can take the form of improved health outcomes or reductions in crime and even obesity, depending on the nature of programmes (OECD, 2010*a*). School has several advantages as an institution for delivering targeted life skills or cognitive programmes in addition to the more traditional curriculum. These include notably the availability of trained professionals who already are in close contact with the young people, and thus the opportunity to identify those at risk early.

122. In-school interventions targeted at disadvantaged youth can offer a wide range of services that complement and support formal education. For instance, the U.S. *Quantum Opportunity Program* (QOP), a federal pilot that started in 1995 and lasted for five years, offered intensive year-round support to low-achieving students aged 14-18 years from low-performing high schools. While the programme's main objective was to improve educational achievement, the QOP also aimed at reducing risky behaviour such as substance abuse, crime, and teenage pregnancy. High school students who were selected into the programme enrolled in 250 hours of educational services but also participated in 250 hours of development activities and mentoring and 250 hours of community services. Case managers, with small caseloads of 15 to 25 youth, aimed at establishing long-term relationships with the young people even if these dropped out from the programme. Formal evaluations (Rodrígues-Planas, 2010*a*, *b*) suggest that programme

[31] For instance, in the United States, 'Mastery learning' is a group-based, teacher-paced instructional model based on the idea that students must attain a certain level of mastery in a particular objective before moving on to a new objective. Based on thirty-five evaluation studies, the average effect size from mastery learning programmes was 0.78 standard deviations (Guskey and Gates, 1985).

participation was associated with a 7 percentage point increase in the probability of graduating high school in the last year of the programme, and a 9 percentage point increase in the probability of attending college three years after the termination of the programme. However, the outcomes tended to fade over time, except for the younger enrolees and the programme benefited girls significantly more than boys. No beneficial effects could be found on risky behaviour.[32]

123. At a cost of about $25,000 per student, the *Quantum Opportunity Program* was very expensive. More generally, tailored programmes can be much more costly than general programmes when they are intensive and last several years. For this reason they need to be targeted to those youth most at-risk of becoming NEET. Also, smaller, less costly interventions can help students overcome difficulties at school, as confirmed through other programme evaluations. Since psychological states and performances at an early age can have a persistent effect on the development of teenagers and young adults, some early interventions can benefit disadvantaged groups.

124. Some of these interventions target non-cognitive skills:

- For instance, the *Self-Affirmation* essay-writing intervention in the United States was intended specifically to improve the academic achievement of minorities by reducing the impact of being negatively stereotyped in school. Seventh graders were randomly assigned to either a treatment or control group. Both groups were given structured writing assignments three to five times over the course of two school years, but the treatment group was instructed to write about their personal values, such as relationships with friends and family or musical interests and about how these were important, while the control group was given 'neutral' essay topics. Cohen et al. (2009) find that for black students, this very modest programme increased average grades by 0.24 points (on a scale from 0 to 4.33) and that the impact was even greater for low-achieving black students (0.41 points). Interventions that help to improve motivation, self-esteem and confidence can thus have a significant effect on school performance.[33]

- Some programmes specifically target risky behaviour. To achieve an effect, simply providing information to youth does not seem to be very effective in improving healthy behaviour (OECD, 2010*a*). Successful programmes are therefore typically more ambitious. In Mexico, *Planeando tu Vida* ('Planning Your Life') is a school-based, teacher-led programme for the 15 to 20 youth that focuses on sexual education and contraceptive use, as well as on improving self-esteem and communication. It provides not only information on sexuality and the use of contraception, but also includes group discussions, role-plays and writing exercises. From an analysis of a set of comparable schools, it appears that at the end of the intervention, sexually active young participants were more likely to use some form of contraception than sexually active non-participants of the same age. Similarly, in Chile, the school-based *Adolescence: Time of Choices*

32. The programme also provided financial incentives for every hour devoted to programme activities and a bonus if youth got their diploma or enrolled in training or post-secondary education. Rodrígues-Planas (2010b) suggest that for some participants, this component might have increased the risk of substance abuse.

33. There is experimental evidence showing that exogenous 'shocks' to non-cognitive skills affect test performance especially among those who experience difficulties. For instance Behncke (2009) finds that giving words of encouragement, that boost self-efficacy or self-esteem in the short-term, just before a math test was associated with 2.5% higher scores among all students and 8% higher scores among those with self-reported difficulties in math. The result suggests that non-cognitive skills can be shaped, even in the very short-term.

was found to have increased the use of contraceptives and reduced the incidence of adolescent pregnancy among participants (Cunningham et al, 2008).

125. Other interventions rather directly target cognitive skills:

- In the *Supplemental Literacy Interventions* in the United States, students aged 14-15 years, who were two-five years below grade level in reading, were provided with full-year supplemental literacy courses. Trained teachers provided directly at school an average of eleven hours of supplemental instruction per month, adapting their lessons to the needs of their students. Reading test scores of participants increased over the year at a rate 23% higher than for comparable non-participants. The programme also improved students' performance on tests in English language, arts and mathematics (Corin et al. 2010).

- In the United Kingdom, the *Excellence in Cities* intervention, introduced in 1999, provided additional teaching to more advanced students and additional learning support to the least advanced ones in under-performing schools. Machin et al (2007) find that this programme was cost-effective (based on the estimated return to additional years of schooling), with improved outcomes in mathematics (though not in English) measured at age 14, but only for the medium-high performing students and not for those hardest to reach. The impact was stronger in the most disadvantaged schools.

126. Participation in community service or benevolent associative activities after school has also shown to be associated with better outcomes at school and to help develop interpersonal skills. Based on the National Household Education Survey in the United States, Schmidt et al. (2007) find that participation in any community service is associated with positive youth outcomes (grades, civic awareness, behaviour, etc.) whether service is voluntary or required. Adolescents who worked directly with individuals in need had better academic improvements; those who worked for organizations had better civic outcomes than adolescents who performed other types of service. One of possible channels of these positive effects, as reported by numerous researchers, is a possible change in personality traits through participation in community activities. After engaging in these activities, students show a stronger sense of personal and social responsibility and improved self-esteem, which has a strong impact on later social and labour market outcomes (Drago, 2008). However, one of the main challenges is to get youth from the most disadvantaged backgrounds to participate in these activities, perhaps through linkages with school and other social programmes.

Mentoring programmes

127. Mentoring programmes can also help fill the gaps for youth who may lack guidance and positive role models at home. A number of studies have identified the favourable impact of natural and durable relationships with caring adults other than parents on health, self-esteem, risky behaviour and the well-being of adolescents (Grossman and Bulle, 2006). Mentoring programmes, often community-based, have been developed in a number of countries over the past decades to establish such relationships for children and youth who lack adult support at home, notably disadvantaged school students or young people whose parents are in prison. Evaluations show that the favourable impact on education (greater commitment to learning, better school attendance and in some cases better grades) largely depends on the quality and strength of the mentoring relationship, as well as on an appropriate targeting to youth at-risk (DuBois et al. 2002, Rhodes, 2008).

- In Portugal, the *Entrepreneurs for Social Inclusion programme* (EPSIS) consists of one-to-one or small-group meetings between trained professionals (often psychologists or specialists of educational sciences) and 13-15 year old students, in particular those most at risk of failing their

year and/or dropping out. The EPSIS staff are located in local schools, and meetings take place outside class hours. The programme is tailored to each participant's individual non-cognitive skill deficit using individual techniques (motivational discussions, self-control, problem-solving techniques) and group techniques (study methods, social competences training, management of criticism, anxiety self-control). Overall, the programme was successful, cost-effectively decreasing grade retention by 10 percentage points (Martins, 2010).

- In Germany, the *Qualifications and Connections* programme (*Abschluss und Anschluss – Bildungsketten bis zum Ausbildungsabschluss*) targets low-performing students around the age of 16 years in the lowest of the three German secondary-school types. It is a four-year programme to help youth make a smooth transition to the next educational level and avoid prevent them from dropping out. The counsellors help increase motivation, define expectations, analyse students' potential, identify the young participants' interests and provide occupational guidance. Students are mentored until completion of their first year in vocational training. The programme involves over 1,000 basic and special secondary schools. Around 2,000 mentors were trained and recruited to work on the programme. The programme is too recent to have been comprehensively evaluated, but preliminary evidence suggests that even though no significant improvement in school grades can be found, transitions to vocational preparation programmes significantly increased (Christe and Rademacker, 2012).

- In the United States, *Big Brothers Big Sisters of America* is one of the oldest and largest mentoring programmes. An estimated five million American youth are currently involved in volunteer mentoring programmes nationwide, including more than 100,000 participants in *Big Brothers Big Sisters*. Agency staff matches adult volunteers with youth on the basis of a variety of factors, including shared interests. Mentors and mentees establish a relationship on evenings or the week-end outside school, and engage in various activities such as conversation, culture or sport. Based on a controlled experiment, where over 1,000 youth were randomly assigned to a treatment or control groups and questioned 18 months later, Grossman and Rhodes (2002) evaluated the impact of this programme on self-esteem and a number of educational and social outcomes, such as grades and school attendance, social assistance receipt, violence and drug use. They find that adolescents in mentoring relationships that lasted a year or longer reported the largest number of improvements, notably less violent behaviour and substance abuse and better school attendance, with progressively smaller effects emerging among youth who were in relationships that terminated earlier. Older adolescents, as well as those who had sustained emotional, sexual or physical abuse, were most likely to be in relationships terminating early. No impact on school grades was found.

128. Despite these success stories, many questions remain concerning the nature and influence of mentoring relationships, and the type of activities and mentors that help most improving social outcomes. Meta-analyses of rigorously evaluated programmes show that larger impacts are found when mentoring is based on close one-to-one relationships, which is more often the case in community and school-based programmes. The quality of the relationship also matters: youth who feel closer to their mentors experience greater improvements in their outcomes. In this respect, engaging in social activities and informal conversations and talking about how youth spend their days usually results in closer relationships than when mentoring is only focused on homework and academic activities. Finally, providing mentors with an appropriate training is key to the success of this type of intervention, as trained mentors are better at establishing close relationships with youth (Grossman and Bulle, 2006).

Apprenticeships

129. Apprenticeships aim primarily at improving cognitive skills, either general skills or those specific to the requirements of identified vacancies and employers' needs. The apprenticeship system is often regarded as exemplary because it provides the skills needed by firms and combines on-the-job training and formal education, thus offering substantial initial work experience. The work experience provided by apprenticeships however probably also improves non-cognitive skills, because personality is malleable through work experience as mentioned previously.

130. The type of work experience offered by apprenticeships is key to labour market integration. The search for stable employment is a time-consuming process, particularly in countries without highly developed apprenticeship systems. Many young workers – especially the least educated –struggle for years. Recent research shows that social ties serve as a key component in the process of matching workers and firms in general, particularly among the young and low-educated (Pellizzari, 2010). For Sweden, Kramarz and Skans (2013) show that 14% of youth have a close relative (parent, sibling, uncle or aunt) within the place of their first stable employment; this rises to 19% among the least educated. These results indicate that the lower the education of the graduate, the more important the network. Firms apparently tend to provide jobs to workers whom they already know, rather than to unknown applicants. This suggests that it is insufficient to provide casual contacts between the employers and (in particular) low-educated job seekers. Although policies cannot provide close substitutes to parental contacts, low educated job-seekers may benefit more from long-lasting exposure to single employers, such as in many apprenticeship programmes, than from shorter exposure to many employers. In Germany, the share of apprentices who stay in the same firm after completing their apprenticeship has been around 60% in recent years (Grunau, 2011).

131. While the benefits of the apprenticeship system are often alleged, there are few, but all converging, studies of the returns to apprenticeship training. The positive impact of apprenticeships on labour market outcomes has been established also controlling for potential selection effects: those who enter apprenticeship are also those who probably have individual characteristics - like motivation or the professional status of their parents - that yield better labour market outcomes anyway.

- For Germany, Krueger and Pischke (1995) and Winkelmann (1996) estimate private returns to an apprenticeship (*i.e.* the costs and benefits of this type of programme) in the order of 15–20%. This is in the upper range of the rates of return of formal education from no degree to an upper-secondary degree obtained for various countries (OECD, 2012*c*). Indeed, the apprenticeship system significantly improves wages and employment stability when compared to individuals with 'schooling only' (Adda et al., 2011). After 3 to 4 years, about 80% are employed (of whom 60 to 70% are in 'stable' employment relationships). Their wage profile is similar to that of university students in early years, but flatter in later years.

- For Austria, Fersterer and Winter-Ebmer (2003) find returns of 15% to a training period of three to four years. Fersterer, Pischke and Winter-Ebmer (2008) find similar returns among small firms.

- In France, Abriac, Rathelot and Sanchez (2009) find that an apprenticeship increases the chances to be employed by 7 percentage points.

- In the United-Kingdom, McIntosh (2004) finds that the returns of apprenticeships are on average in the range of 5%-7% per year, which is consistent with the previous evaluations of 2-3 year programmes. More interestingly, the results reveal that the highest returns to apprenticeships are earned by those who did not acquire any previous qualifications at school. Young men with no

school qualifications, completing a 2-year apprenticeship, earn on average 13% more than similarly unqualified school leavers, holding all other factors constant, while the returns to apprenticeship for the other groups are 9%.

132. Thus it may be particularly important that apprenticeship programmes benefit the most disadvantaged students. This is challenging both because this group has more difficulties finding a training position with local employers, and because they might also lack the motivation to do so.

133. Two types of interventions might help improve the access to apprenticeships:

- Training positions equivalent to apprenticeships may be created in sufficient numbers for those who fail to get one in the regular system. For instance, in Austria, an apprenticeship guarantee was created in 2008 by social partners together with the federal government: sufficient offers in 'supra-company' training facilities (educational institutions) must be available for those who cannot find a regular apprenticeship placement in a company. Students get theoretical training at a vocational school and practical experience at an educational institution, from where, in some cases, can transfer to local firms after one year. Students also receive socio-pedagogical counselling, learning support and job-search assistance. During the academic year 2008/09, 16,107 young people participated in the 'supra-company' apprenticeship programme, of whom 22% were either without employment or without an apprenticeship for more than six months before the measure (Eurofound, 2012).

- Preparation for apprenticeships might be key to successful transitions from traditional education to training programmes. For instance, in Finland, the *Job Start* experiment run from 2006 to 2009 helped young people unsure about their options to clarify study choices and increase their learning skills and motivation in liaison with existing VET / apprenticeship programmes. The network created between staff and the participating institutions, as well as the individual approach proved to be key to the success of the pilot (Jäppinen, 2010). Also in Germany, 'pre-apprenticeship' training exists to prepare those who are not ready to enter an apprenticeship because they lack either motivation or the basic skills needed to succeed in his type of programme. The programme consists of a subsidised internship in a firm where predominantly basic practical skills and literacy are conveyed. These trainings are limited to one year, and potentially also include basic education to catch up on the lower-secondary schooling degree. While this programme proves to be successful in terms of employment outcomes, its impact is still limited among the most disadvantaged students (Caliendo et al., 2011).

- Apprenticeship can also be embedded in high schools to target more easily those at risk of dropping out and to enable smooth transitions to vocational training. In the United States, the *Career Academies*, established about 30 years ago, have become widely used (in about 5,000 high schools). They aim at keeping students engaged in school and prepare them for successful transitions to post-secondary education and employment. They operate as small learning communities (150 and 200 students from grades 9 -10 through grade 12) within a larger school, combine academic and technical curricula around a career theme, and establish partnerships with local employers to provide career awareness and work-based learning opportunities. More than 80% of students are black or Hispanic. Based on a sample of students randomly assigned to this programme and followed over 15 years, Kemple (2008) estimates that Career Academies increased earnings by 11% (or $2,088) per year for Academy group members compared with similar individuals in the control group. Gains are stronger for young men. The programme also increased the percentage of young people living independently with children and a spouse or partner. Young men also experienced positive impacts on marriage and on being custodial parents (plus 12 percentage points). The programme by contrast had no significant impact on

educational attainment (finishing school or getting the high-school-level equivalent GED certificate).

Second-chance programmes

134. Some programmes offer a full set of services to youth who have left high school with no diploma. Such offers are usually called 'second-chance programmes' and are typically offered after the mandatory schooling age, which is 16, 17 or 18 in most countries. While focusing on skills training combined with basic education (to remedy shortcomings in reading and math) and vocational training (usually linked to local employers' needs), these interventions typically feature various post-programme placement, housing and mobility services, as well as individual coaching for orientation and motivation. Participants usually obtain the equivalent of a high-school diploma or a recognised certification by the end of the training period. Some programmes give the participants the opportunity to reside at the centres during the training. These second-chance interventions are human-resource intensive and can therefore be very costly. Some have been rigorously evaluated in the United States:

- The *Job Corps* is probably the largest and most well-known programme in the United States. It was created in 1964 and today, there are 110 centres nationwide, most often operated by private contractors, under competitive contracts including performance incentives. It is targeted at young people aged 16-24 years with low income, and offers many services such as counselling, vocational training, basic academic education and job search. The long-term impact of *Job Corps* on several social outcomes has been evaluated extensively (see Box 1). Overall, the programme appears to be cost-effective, but only for 20- to 24-year-olds.

- The *National Guard Youth Challenge* programme is a 17-month intervention for youth who have dropped out of high school. While the programme does not require military enrolment, it stresses aspects of military discipline. The programme features a one-year mentoring programme and offers residence. It focuses on self-discipline, academic achievement, teamwork and service to the community, and it prepares students for the GED exam. The programme then encourages participants to seek further education and training or employment during a one-year post-residential phase of the programme. Nine months after entry, participants in the programme were 12% more likely to obtain a high school diploma or GED; they were also 9% more likely to be working full time, and were less likely to be arrested. They also had higher levels of self-efficacy (a trait related to *Emotional Stability*, Bloom, Gardenhire-Crooks and Mandsager, 2009). However, it is unclear whether these improvements are lasting.

- In Chile, the *Jovenes* programme targets disadvantaged youth and offers a bundle of services, including classroom training, work experience, like skills, counselling and job search assistance. It was also implemented in Argentina and the Dominican Republic. The programme increased the probability of employment by 21%, with stronger effects for women and younger participants (under 21 years), and increased earnings by about 26%, again with larger results among younger participants (Cunningham et al, 2008).

135. Similar programmes exist in other countries: In France, the *Ecole de la deuxième chance* offers services close to those of the *Job Corps* but without the possibility to reside at the centres. In Canada, the *Employability Improvement Programme* (EIP) offers a choice of services and training options and eight components related to counselling assistance, training and work experience, mobility assistance and related services, and income support, but is not specifically targeted at youth (even though mainly young people participate). The EIP had a significant impact on annual earnings due to an increase in weeks worked. In the United Kingdom, the *New Deal for Young People*, now replaced by the *Work Programme,* offered similar options but not in a single centre.

Box 1. The Job Corps in the United States

Among second-chance programmes for youth, one programme has been extensively studied: the Job Corps. It is the United States' largest education and job training programme for disadvantaged youth aged 16 to 24. Most students reside at the Job Corps centre during training. The duration of the programme is 8 months on average. It offers an intensive programme, which includes vocational training, academic education, but also counselling, social skills training, health care and health education, as well as placement.

The programme assigns individual counsellors and after testing, youth are provided vocational training (in 75 different trades), drivers' education, and basic academic instruction to alleviate deficits in reading, math, and writing skills and to provide a high-school-level equivalent GED certificate. After graduation, youth are assisted in their job search and living arrangements, transportation, as well as family support resources. Each year, more than 60,000 new participants enrol at a cost per student of about $16,000.

Schochet et al. (2006) analysed results from an experiment carried out from late 1994 to early 1996, which selected at random nearly 81,000 eligible applicants nationwide to be assigned to either a programme group, or to a control group. They show that the programme does yield earnings gains in years 3 and 4 after the random assignment (a gain of about 12% in year 4). As shown in Table 5 below, these gains are however not sustainable except for the older enrolees aged 20 to 24 at programme application.

Table 5. Benefits and Costs of the Job Corps

	All Job Corps	Those 20 to 24 Years Old
Earnings following program exit	119	34,896
Output produced during vocational training	220	250
Reduced use of other programs/services	2,186	937
Reduced crime	1,240	-3,787
Total benefits	3,544	32,045
Program cost	-16,205	-17,755
Transfers	2,361	2,562
Total costs	-13,844	-15,193
Net benefits	-10,300	16,853

1. All values are in 1995 dollars.

Source: Schochet et al. (2006, Table 10).

The table above also shows that the Job Corps significantly reduces involvement in crime: The authors write: "According to the survey data, the arrest rate was reduced by 16% (about five percentage points), and similar reductions were found also for conviction and incarceration rates" (Schochet et al., 2006, p. 3). The programme also has small but beneficial impacts on receipt of social assistance and on self-assessed health status. Overall, the cost per student exceeds benefits for the full sample but is lower for the 20- to 24-year-olds. This experiment shows that the returns to training of disadvantaged teenagers or young adults are quite uncertain, and may be uneven across sub-groups.

136. Second-chance programmes might not always be successful, even for older participants. For instance, in the United States, the *Jobstart* demonstration was operated in 13 cities in the 1980s as a non-residential alternative to *Job Corps* to help disadvantaged youth, aged 17-21 years, who lack basic skills and dropped out of school. It offered education and training as well as support services and job placement assistance. An evaluation however shows that it did not achieve any significant impacts on employment except for mothers and other women (small effects), and only in the city of San Jose (Cave and Doolittle, 1991).

Subsidised-employment programmes

137. The programmes reviewed so far primarily aim at improving the supply of skills. From an employment perspective, increasing the demand for these skills and boosting the number of available jobs might also be important, notably for youth who have not achieved post-secondary education. Two types of interventions are typically used: hiring subsidies in the private sector and work experience in public jobs. Even though the available evaluations do not distinguish the impact for different types of youth, participants are usually the least qualified.

Hiring subsidies

138. Hiring subsidies in the private sector are one of the active labour market policies that can have a positive impact on employment, notably for youth. These programmes are temporary wage subsidies paid for several months from the hiring date. Their amount may vary either with the wage level or the skill level of participants. Targeting usually aims at limiting deadweight effects that are typical for this type of measures, and focus on groups where unemployment is high. In his meta-analysis of 137 programme evaluations from 19 European countries over a long period (1983 to 2006), Kluve (2010) finds that evaluations of placement assistance and private-sector subsidies have a probability of estimating a significant positive impact that is higher by 50 and 30 percentage points, respectively, than for evaluations of training programmes (considering all types of participants, including adults). Specific studies on youth suggest that subsidies can be especially beneficial to youth when targeted at the low-skilled or at low-wage jobs (see Cahuc, Carcillo, and Zylberberg, 2014, for a synthesis):

- In the United Kingdom, one of the options in the *New Deal for Young People* (NDYP) after 6 months of unemployment was a job subsidy of up to £60 per week offered for a duration of 6 months. Dorsett (2006) evaluated this programme. He finds that the subsidised employment option is more effective at increasing young people's chances of exiting unemployment and securing unsubsidised employment after the programme than the other available options (notably education / training or temporary public employment). This result is confirmed by van Reenen (2003): unemployed young men are 20% more likely to get jobs as a result of the NDYP program, and much of this effect is likely to be due to the wage subsidy option (and also, but to a smaller extent, to enhanced job search).

- In France, Fougère, Kramarz and Magnac (2000) studied several programmes targeted at young unemployed, and concluded that the reduction of labour costs is the only programme to have a significant impact on the employment probabilities of low-wage workers, even though the effect appears to be stronger for workers aged 25-30 years.

- In Germany, Caliendo, Künn and Schmidl (2011) evaluated the impact of several types of labour market interventions for unemployed German youth in the 2000s. In terms of improving the employment probabilities of unemployed youths, they find the largest long-term employment impact for participants in wage subsidies (10 to 20 percentage-point increases in the employment probability over 60 months) followed by job search assistance.

139. To the extent that the experience of employment may change personality traits, this type of intervention is also likely to improve self-esteem and other important skills, although no study has investigated this aspect so far. Hiring subsidies may moreover be particularly important for the employment prospects of the low-skilled youth where the cost of the minimum wage for firms is high. Even though targeting is essential to improving the efficiency of subsidies, a tight targeting based exclusively on individual characteristics such as age and diploma might induce substitution effects across groups, which will limit the aggregate impact.

Temporary public-job schemes

140. In some countries, especially in Europe, one of the options, notably for least-skilled youth, is to refer them directly to temporary public jobs. The main rationale for this type of policy is to offer some labour market experience to the most disadvantaged who have a low probability of finding a job in the regular labour market. Hence, like temporary hiring subsidies, temporary public jobs could 're-shuffle the queue' of the unemployed. This policy is sometimes used at a larger scale to lower the number of the registered unemployed during slumps.

141. Unfortunately, there is now strong evidence from various countries that this type of policy has no positive post-programme impact on the probability of employed in the regular labour market:

- In Sweden, where public jobs have been widely used in the past, there is absolutely no evidence of post-programme impact (Sianesi, 2002).

- The same conclusion holds for similar programmes in Germany. Caliendo et al. (2004) show that, at the beginning of the 2000s, two years after the start of public-employment programmes, programme participants had a significantly *higher* probability of being registered as unemployed at the labour office than matched non-participants. Caliendo et al. (2011) confirm this finding specifically for youth: public sector job-creation schemes are found to be harmful (with a *negative* effect) for the employment prospects of participants in the short- to medium-run and ineffective in the long-run.

- This is consistent the ineffectiveness of *Environmental Task Force* jobs implemented in the United Kingdom as part of the *New Deal for Young People* (Dorsett, 2006).

142. Overall, meta-analyses of the impact of active labour market programmes such as Kluve (2010), who looks at 139 European programmes, or Card, Kluve and Weber (2010), who look at 199 programmes, find that jobs in the public sector are more often ineffective than other interventions, and even appear detrimental, with negative treatment effects. Among Europe-based studies, evaluations of public-employment programmes are around 25 percentage points less likely to estimate a significant positive impact than evaluations of training programmes, and 17 points more likely to report a negative impact.

143. Some of the possible reasons for this negative effect may be that the nature of the accrued work experience is not valued in the private sector, the existence of 'stigma' effects, as well as the fact that participants are locked-in during the programme and do not look for a regular job (see van Ours (2004) on the case of the Slovak Republic). It cannot be concluded however that public-employment schemes should never be used:

- First, most studies only consider the employment impact, ignoring potential effects on self-esteem and other social outcomes such as health, and crime. Unfortunately, very few studies investigate these aspects in depth. One example is *Youth Service Canada*, which was designed in the 1990s to help young unemployed people acquire work experience in the non-for-profit sector for 6 to 9 months. No effect on any type of labour market outcomes was found. However, the programme was beneficial for self-confidence and increased post-programme school and training participation (HDRC, 1999). If effects of this kind could be found in future evaluations, they may justify the recourse to this type of intervention for the hardest-to-place youth who have difficulties succeeding in other types of programmes, such as training or hiring subsidies.

- Second, this type of measures can be utilised within the framework of an activation strategy, in which a logic of rights and duties is invoked so as to incentivise certain groups of unemployed to

intensify their search effort (the threat effect). For instance, programmes such as *Work-for-the-Dole* in Australia and the *One-Euro Jobs* in Germany, which oblige certain unemployed individuals (notably youth) to work part-time while pursuing their job search, are partly designed to enforce the logic of rights and duties.

- Third, some of these programmes may be associated with vocational training classes, and might even deliver certified qualifications. Under these circumstances, and as long as the training content is intensive enough and in line with the needs of local employers, they may act as substitutes for those who failed to enter regular apprenticeship.

Temporary public-job schemes might be hence be useful in some limited cases as a tightly targeted intervention for the most disadvantaged youth, but not as part of larger-scale programmes.

Reaching out to youth in need

144. After this review of the empirical evidence on the effectiveness of individual interventions, the section concludes with more general considerations on methods that may help reach out to the most disadvantaged youth to enrol them in educational or employment programmes.

Measuring the gap at school to reach those at-risk early

145. One of the main challenges of social programmes is to build capacities and organise service delivery to ensure that those who need the most support are reached as early as possible. This may involve measurement of the achievement gaps on a regular basis. For instance, in the United States, the *No Child Left Behind* Act requires all public schools receiving federal funding to administer an annual, state-wide standardised test to all students. This means that all students take the same test under the same conditions, which helps identify those at risk of dropping out on a regular basis.

146. The early identification of at-risk youth can also involve the integration of social services with schools, which are often in the best position to evaluate which youth are being left behind in terms of cognitive or non-cognitive outcomes. Even before skills fall below expectations at a given age, a series of socio-economic factors associated with higher risks - especially when arising simultaneously - can be identified. These factors may be the level of ability at entry into secondary school, evidence of challenging behaviour at school, the absence of parents at home, their educational attainment levels and economic status, the housing situation (*e.g.* the number of children per bedroom, see Goux and Maurin, 2005), their ethnic background, *etc.* In Ireland, the *School Completion Programme* integrates schools, parents and relevant agencies to identify as early as possible young people at risk of early school-leaving to be able to provide them with before- and after-school support.

Targeting disadvantaged groups

147. Some social programmes might be most effective when adapted and targeted at specific population groups, life stages, or geographic areas where risks are higher, in particular in the current context of low economic growth and strong pressure for fiscal consolidation. Targeting can apply for very specific services, such as the provision of basic language services to migrant youth, or subsidizing driving classes for youth living in remote areas (as for instance done in France). But a too large number of different programmes may also increase complexity and induce a lack of policy transparency. A balance moreover needs to be struck between adapting policies to local needs and centralising service delivery to improve coordination and management. OECD countries offer many examples of effectively targeted programmes over recent years:

- Social support can be provided to young people who belong to economically disadvantaged minority groups (who may accumulate economic disadvantages and discrimination in the labour market). In Australia, *Abstudy* provides financial support to young aboriginals aged 16 years and over who enrol in education or an apprenticeship. The programme covers living, accommodation, and education expenses, depending on the individual situation. Support is conditional upon school attendance. In the US, *Early College High Schools* (a programme mostly targeted at minorities, including black Americans and those for with English a second language) have been successful in reducing drop-out rates and increasing transitions to tertiary education, with special programmes including more support from teachers and advisors in and out of school.

- Some cash programmes are specifically targeted at young people who failed to complete upper-secondary education or those who are at-risk of failing completion because they belong to economically disadvantaged families. For instance, in the UK, the *Education Maintenance Allowance* (now being replaced by a bursary system) was paid directly to low-income-family students aged 16 to 19 years who stay in secondary to tertiary education to foster school attendance. This was found to have contributed to an increase of full-time education by around 5% (Chowdry *et al*., 2008). In New Zealand, the *Student Allowance* is based on the same principle, but also comprises an accommodation supplement for young people not living with their parents. These allowances are paid directly to the youth in question in order to enhance financial incentives, and they can be associated with counselling or supervision to be more effective.

- Another way to target programmes is to focus on specific economically challenged areas. In France, young people make up 35% of the population in the *Zones Urbaines Sensibles*, where housing and employment conditions are degraded. The *Revenu Contractualisé d'Autonomie* is a pilot programme which provides benefits to young people aged 16-25 years living in such areas, conditional to their participation in an intensive 6- or 12-month active programme, which provides tight coaching, vocational training and solutions to enhance geographic mobility. In the UK, *Employment Zones* (see Griffiths and Durkin, 2007) were defined in economically challenged areas in order to provide enhanced coaching, notably for young people, to help them look for a job, create a business, improve their skills or even buy the clothes needed for a job interview. The success of these programmes often depends on the quality of the service providers, the design of the right incentives for operators and youth, and the ability of providers to offer multiple types of services with some flexibility.

- Youth are often supported in their efforts to finish tertiary education. Programmes targeted explicitly at students usually take the form of study grants, bursaries (usually means-tested) or loans. These programmes are however only part of the support students might receive. In France, a large part of the support to tertiary students goes through general housing benefits as a significant proportion of students live away from their parental home (Robert-Bobée, 2002). This can raise targeting issues as it might not always be easy to assess the actual housing situation of students (*i.e.*, students who declare low income may receive support from their families).

Delivering policies effectively

148. Some young people might in fact face multiple of these barriers and experience difficulties finishing school or getting a stable job and housing. The way services are delivered locally will determine in part how effective they can be. In the U.S., for example, the 1998 Workforce Investment Act (WIA) enacted a formula-funded youth programme serving eligible low-income youth aged 14-21 years who face barriers to employment. Funds for youth services are allocated to state and local areas based on a formula distribution for a maximum of flexibility. Services are varied and can include preparation of youth for

employment and/or post-secondary education through strong linkages between academic and occupational learning, welfare-to-work programmes and needs-related payments. Youth are followed for up to 12 months after placement with counselling during training and work experience to avoid drop-outs. These services are organised differently and adapted to the situation of the different states and cities.

149. Some countries have opted for one-stop shops that offer multiple services and can tackle a whole range of problems. They are typically intensive in individual support, with counsellors only following a small number of youth, and well-connected locally to other public and private partners. In Sweden, the *Navigator Centres* are a national network for the young seeking (re-)integration into education, training and employment. About half to 70% of all visitors to *Navigator Centres* manage to move on to employment or education within a year. In addition, those who do not move to employment state that their confidence and commitment to work was strengthened (Eurofound, 2012). In other European countries, one-stop-shop services identify early school-leavers and offer them solutions to re-enter education or find training or work experience. In the Netherlands, the Regional Registration and Coordination institutes (RRC) identifies youth leaving school without basic qualifications, and in Finland, municipalities are now required to contact and follow-up high school drop-outs at risk of remaining NEET for long periods.

Helping and involving families

150. Some benefits are not paid directly to young people but to their families, either in the form of direct cash payments or tax rebates. In some countries, such benefits are universal and not conditional on education, health or programmes participation. In France, family allowances are for instance paid to parents depending on the number of children up to the age of 20 years (and even 21 years if still living at home) and are increased from the age 14 years. Income-tax rebates can also be given to parents for each of their children (up to the age of 21 years in France and even up to the age of 25 years if the young person is a student). In other countries, family benefits target more clearly young people from disadvantaged families. In Iceland, low-income families, large families and sole-parent families can all receive higher family benefit payments. Australia's Family Tax benefit comprises a component for at-risk young people aged between 13 and 15 years to stay in education.

151. Additional research is needed to evaluate the impact of this kind of support to families on educational attainment and health prospects of youth, and to identify margins for improvement. In some cases, these transfers have been made conditional on social outcomes, such as school attendance. This was the case in Wisconsin in the 1980s, where the *Learnfare initiative* sanctioned a family's welfare benefits when covered teens failed to meet school-attendance targets. *Learnfare* required that teens in families receiving welfare, including teen parents, who had not yet graduated from high school or completed an equivalent degree, attend school regularly (attendance was checked twice a year). In the case of non-compliance, teens were removed from their family's welfare grant until school enrolment was re-established. Based on a controlled experiment in 9 countries, Dee (2009) finds that *Learnfare* increased school enrolment by 3.7% and attendance by 4.5% among participants, with larger effects among subgroups at risk of dropping out of school. *Learnfare* closed the enrolment gap between baseline dropouts and school attendees by 41%. Currently, 38 states have similar policies that link school attendance and welfare receipt. Similarly, in Mexico the conditional cash transfer programme *Progressa,* created in 1997 (and replaced by *Oportunidades* in 2002), significantly increased the number of years of education of children among poor households (by about 10%, Schultz, 2004).

152. In any circumstances, however, families play an essential role in helping youth build the capacities and social assets that help them become self-sufficient. Associating parents of disadvantaged children with programmes, in the form of continuous coordination, training sessions or even active participation, can help improve the effectiveness of social and educational services. For instance, in France (Paris area, 2008), a simple experimental programme of parent-school meetings achieved strong increases

in the level and quality of school-related parental care. The programme took place in 37 middle schools of a relatively deprived educational district. In 200 classes, some 1,000 parents (22%) of sixth graders enrolled in a programme of three debates with the school staff on how to successfully manage the transition from primary school to lower-secondary school. The programme offered information on the functioning of schools and advice on how to help children with homework. Among parents who agreed to participate, a fraction was randomly selected and measured to have benefited from the programme. Avvisati et al. (2013) find that the improved involvement of parents translated into a significant reduction of truancy and misbehaviour in classes, and that the programme ultimately resulted in fewer literacy problems for children. Impacts are extremely strong: their order of magnitude is that of average differences between white-collar and blue-collar families in the control group.

Activating benefit receipt for all inactive or unemployed youth: youth guarantees

153. Although cash benefits can be used to lower poverty rates in the short term for at-risk groups, there is the risk of inducing benefit dependency, especially for those with no or low qualifications and those who have never worked before. Many cash benefit programmes that reach young people are not specifically targeted at them and adapted to their needs. This helps protect those who do not belong to any specific group but who encounter difficulties at one stage in their pathway to adulthood. Still, there is a need for specific requirements (such as mandatory participation in education programmes) and counselling adapted to this type of clients.

154. While programmes for the unemployed often include such requirements for youth, which increasingly is the case, this holds less often for general social assistance programmes. This is however the type of programme that many discouraged young people will have to rely on if they fail to acquire sufficient work experience to be eligible for unemployment or other working-age benefits.

155. *Youth Guarantees* typically aim at including activity requirements for all NEETs, whether registered with employment services or not. They typically aim at offering a concrete job offer or participation in an active programme such as those reviewed previously (second-chance, apprenticeship, counselling, work experience, further education, *etc.*) within a few months of the young person leaving formal education or becoming unemployed. The implementation of effective youth guarantees faces several challenges:

- First, youth must be identified and reached early, and the offer must be adapted to the individual needs and aspirations of youth.

- Second, a number of barriers to programme participation, such as housing issues, a lack of mobility, and health problems must often be solved before the young person can enter the programme.

- Third, programme participation must be monitored strictly, as many youth need continuous support to maintain motivation and keep attending programmes; programme participation must be mandatory for those receiving cash benefits.

156. The provision of youth guarantees importantly requires the availability of a sufficient number of trained caseworkers to establish a close relationship with the young clients. Good counselling and orientation is a success factor for this type of comprehensive programmes. For instance, the New Deal for Young People (NDYP) was introduced in the United Kingdom in 1998 and was in effect until 2011. It was targeted at the 18-24-year-old, and comprised a first, 4-month ‘Gateway’ phase, which included intensive counselling and at least weekly interviews with a personal advisor, and small basic skill courses. The Gateway was then followed by a whole range of options if the young person was still unemployed. The

NDYP was first implemented in pilot areas, which allowed evaluating its effectiveness. Blundell et al. (2004) showed that it significantly improved participants' exits into employment – by 5 percentage points – which corresponds to a rise in the probability of getting a job by about 20% compared to similar non-participants in non-pilot areas. They do not find any displacement effect in form of reducing job-finding rates for other youth the same pilot areas.

157. Youth guarantees also require a strong coordination between many service providers (health, social and employment, local authorities, career guidance providers, education and training institutions, local employers and social partners, *etc*.). Several countries have successfully implemented this approach, notably in Northern Europe:

- In Finland, the *Youth Guarantee* scheme (*Nuorten Yhteiskuntatakuu*) was introduced in 2005 and revised in 2010. It obliges the employment services, within the three months following registration as jobseeker under 25 years, to develop a personal development plan, to carry out a needs-assessment and to make a concrete programme offer. In 2011, 83.5% of young job seekers received a successful offer within three months of registering as unemployed (Eurofound, 2012).

- The same principles apply in Sweden and Denmark: In Sweden, the new *job guarantee for young people* (*Jobbgaranti för ungdommar*) introduced in 2007 allows all youth below the age of 25 years registered with the public employment service to take part in the 'job guarantee'. This comprises guidance and coaching, combined with work internships, apprenticeships and other work experience placements. In 2008, 24-year olds participating in the scheme managed to find a job more quickly than older young people registered with the public employment services (Eurofound, 2012).

- In April 2013, the EU countries endorsed the principle of the *Youth Guarantee* (Council Recommendation) and the OECD Action Plan for Youth now provides guidelines to implement this type of comprehensive programme.

158. Youth Guarantees do not in principle have to be limited to registered jobseekers. Disability benefit programmes in particular are facing big challenges in relation to young claimants, the number of which has been increasing in most countries more than for other age groups in the past decade. These programmes often have special (more lenient) eligibility conditions for young adults: they lack participation requirements and payments tend to be permanent or *de facto* permanent. This makes the benefit attractive for clients and explains why some countries (*e.g.* Denmark and Sweden) are discussing the possibility of abolishing disability benefits for young people altogether to replace them with an individual activation and education-oriented programme.

159. Overall, like cognitive skills, personality traits influence a range of outcomes: educational attainment, labour market performance and social outcomes like health (mental health, substance abuse, risky sexual behaviours) or even crime. They can be changed during life, but earlier interventions tend to be more efficient. Successful interventions for the most disadvantaged youth should therefore aim at improving both cognitive skills and non-cognitive "life" skills, such as conscientiousness, emotional stability or openness to experience. Existing interventions range from after-school support, to mentoring, health prevention programmes, apprenticeship schemes or second-chance programmes. Some of these programmes are intensive and very costly and therefore need to be well-targeted. There is also evidence however that even small but well-designed programmes can achieve a significant and durable impact on skills and educational attainment. The implementation and targeting of these interventions can be facilitated by one-stop centres, which also help the delivery of a wider range of services to address multiple barriers to employment. Important existing initiatives have however not yet been evaluated, and more research is needed to identify the good practices in this area across OECD countries.

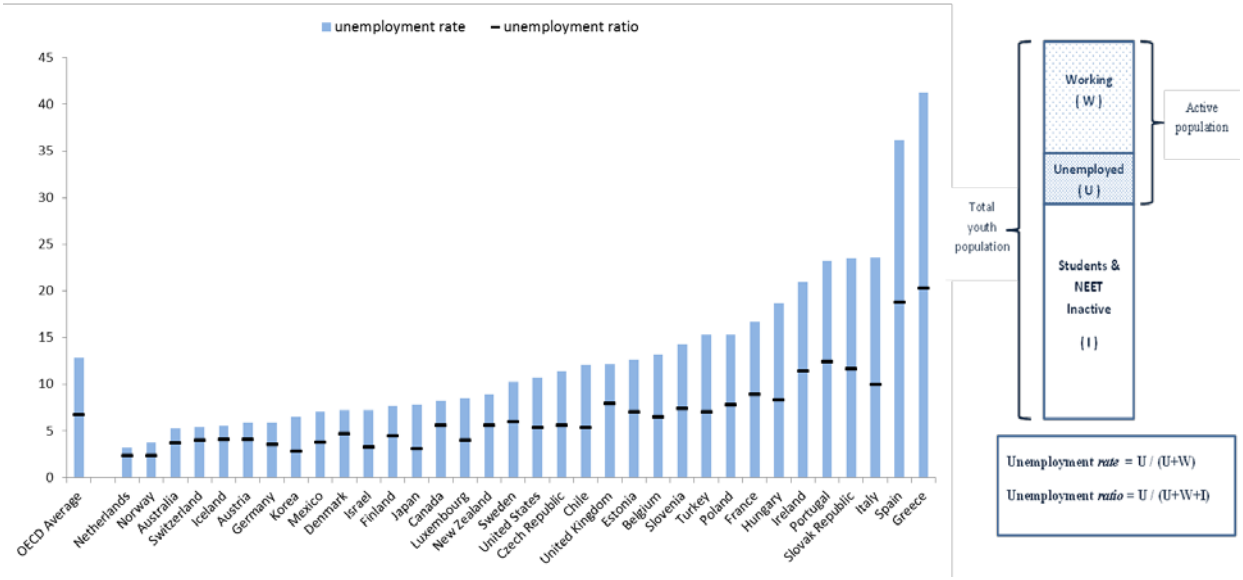
ANNEX I: UNEMPLOYMENT RATES VS. UNEMPLOYMENT RATIOS

160. Since the start of the Great Recession, the public debate about the labour market situation of youth has centred primarily around the often dramatic rises in youth unemployment rates in OECD countries. An aspect worth noting is, however, that especially for youth, the unemployment rate can give a misleading impression when interpreted as an indicator of joblessness among all youth, or when used for comparisons of joblessness across countries or over time.

161. In Section 2, youth unemployment is described in terms of the **unemployment *ratio***, *i.e.*, the share of unemployed *out of the total youth population*. This number is always lower than the ***unemployment rate***, which is the number of unemployed as a share of (the much smaller group of) *youth active in the labour market*. The relation between unemployment ratio and unemployment rate is determined by the labour force participation rate. At a low labour participation rate, the unemployment rate will be much higher than the unemployment ratio because the reference group is much smaller (Figure 22); unemployment ratio and unemployment rate converge as the participation rate approaches 100%.

Figure 22. Unemployment rates are always higher than Unemployment ratios

Youth unemployment ratio and rate in %, 2012



1. Numbers are for individuals aged 15-29 years, except for Japan (15-24) and the United States (16-24).
2. For Chile Israel, Japan, Korea and Turkey, the numbers presented are for 2011.
3. Countries are sorted by the youth unemployment rate in ascending order.
4. The OECD average is non-weighted.

Source: EU-LFS, SEW (Australia), LFS (Canada), CASEN (Chile), ENOE (Mexico), HLFS (New Zealand), CPS (United States) and OECD Education Database (Israel, Japan, Korea, Turkey)

162. At youth participation rates of around 50%, unemployment rates will be about twice as high as the corresponding unemployment ratios. For Greece and Spain, unemployment ratios of 20% and 19% translate into youth unemployment rates 41% and 36%, respectively. The effect is larger still in Italy, where at a participation rate of only 42%, an unemployment ratio of 10% translates into an unemployment rate of 24%.

163. Youth unemployment rates should thus not be understood as measuring joblessness in the overall youth population, because they refer to the population of active youth only and a large share of youth in many countries do not participate in the labour market. When comparing joblessness across countries or over time, it should be considered that higher unemployment rates may reflect both a higher incidence of joblessness but also a lower participation rate at given levels of joblessness.

ANNEX II: CLUSTERING PROCESS FOR THE ANALYSIS OF SCHOOL-TO-WORK TRANSITIONS

164. To identify the 'typical' school-to-labour-market pathways in the data, a clustering procedure is used that groups individuals' trajectories according to their similarity based on a vector of characteristics. This process is implemented as follows (see Figure 23 below):

3. Selection of individuals into the sample on the basis of

   (i) *age*: the sample is restricted to individual who are 16 years old at the start of their observation period (in 2005, 2006 or 2007);

   (ii) *completeness*: young people are retained in the sample only if information on educational and labour market status is non-missing in each of the 48 months of the observation period. Countries in which not at least 60% of all 16-year-olds have complete trajectories are excluded.

4. Trajectories are constructed from the raw data as 'chains' of activity states over the observation period, with each sequence consisting of 48 monthly activity states. Four types of activities are distinguished: *in work*, *in education*, *NEET unemployed*, and *NEET inactive*.

5. The information contained in each of the individual trajectories is summarised in a vector based on the following four criteria:

   (i) The main activity at the beginning of the trajectory: For robustness, the most frequent activity status during the first five months is used.

   (ii) The main activity at the end of the trajectory: For robustness, the most frequent activity status during the final five months is used.

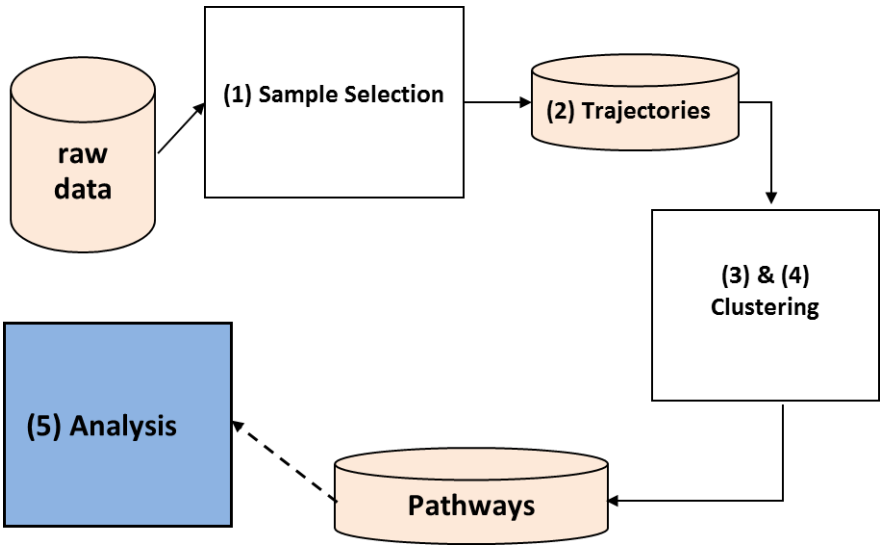
   (iii) The relative frequency of each of the four activity states over the 48-month observation sequence.

   (iv) The normalised number of transitions between different states over the observation period.

6. Trajectories are clustered using Ward's (1963) hierarchical agglomerative algorithm (cf. Quintini and Manfredi, 2009). A number of seven different clusters per data source is imposed, resulting from a trade-off between the greatest possible homogeneity of trajectories within the cluster and the desired differentiability between clusters.

7. Clustered trajectories are matched with information on individual and household characteristics used for the analyses.

Figure 23. Scheme of the clustering mechanism



ANNEX III: BENEFIT ELIGIBILITY CRITERIA FOR YOUTH

Table 6. Minimum employment / contribution period for Unemployment Insurance benefits

For a 20-year old with a one-year employment record living alone without children, in 2012

	Reference period (in months)	Minimum employment / contribution period (in months)	Ratio [2]/[1]	Waiting period (in days)	Maximum duration (in months)	Minimum age	Additional information
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Australia	–	–	–	–	–	–	UI does not exist; UA only
Austria	12	6	50%	0	5	–	Lower contribution period for youth (younger than 25 years). The total duration is 20 weeks. Benefit extensions depend on the employment record and age-related ceilings (*e.g.* 30 weeks after 156 weeks of work in 5 years, and more for older unemployed).
Belgium	18	12	67%	0	Unlimited	–	Lower contribution period for youth (younger than 36 years)
Canada	12	3	25%	14	11	–	Regular benefits are payable for a maximum period of 45 weeks, starting after an unpaid two-week waiting period. The number of weeks of benefits which a claimant is entitled to is a function of the number of hours worked in the qualifying period and the local unemployment rate. Entitlement varies from 14 to 45 weeks.
Chile	–	6	–	0	–	18	Individual unemployment accounts: Workers who contributed under a permanent (temporary) contract need to have contributed into their individual savings account for 12 months (6 months) since their affiliation to the system or since their last employment spell. The maximum duration depends on the account balance.
Czech Republic	36	12	33%	–	5	–	
Denmark	36	12	33%	0	24	–	

	Reference period (in months)	Minimum employment / contribution period (in months)	Ratio [2]/[1]	Waiting period (in days)	Maximum duration (in months)	Minimum age	Additional information
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Estonia	36	12	33%	7	6	16	Maximum benefit duration: 6 months if the insurance period is shorter than 56 months; 9 months for 56–110 months; 1 year if 111 months or longer.
Finland	28	10	36%	7	23	17	
France	28	4	14%	7	12	16	The benefit maximum duration depends on the length of the contribution period: 4 months for 4 months of contribution since the last unemployment spell, 5 months for 5 months, and so on up to 24 months.
Germany	24	12	50%	0	6	–	The benefit maximum duration depends on the length of the contribution period: 6 months for 12 months of contributions, 8 for 16 months, 10 for 20 months, 12 for 24 months
Greece	14	6	43%	6	12	–	
Hungary	36	12	33%	0	3	–	
Iceland	12	3	25%	0	36	16	In order to qualify for full benefits, the recipient must have worked for the last 12 months.
Ireland	24	24	100%	3	9	16	Contributions: At least 104 weeks since first started work, and 39 weeks in the relevant tax year or 26 weeks in the relevant tax year and 26 weeks in the prior tax year. The relevant tax year is the second last complete tax year before the year in which the benefit is claimed. So, for claims made in 2012, the relevant tax year is 2010.
Israel	18	12	67%	5	4	18	The maximum benefit duration increases with age and family responsibilities (*e.g.* 6 months for an unemployed aged 35 to 45 years with at least 3 dependents).
Italy	24	12	50%	7	8	–	
Japan	24	12	50%	7	9	–	The maximum benefit duration increases with the contribution period: : 90 days below 5 years of contributions , 120 days over 10 years, and 150 days over 20 years
Korea	18	6	33%	7	3	–	Under the age of 30 years, the maximum benefit duration is 3 months for contribution periods below 3 years, 6 months from 3 to 5 years, and 7 months from 5 to 10 years.
Luxembourg	12	6	50%	0	12	16	Unemployed younger than 21 years with completed education or less than 6 working months in the last 12 months are eligible for a lower benefit amount payable for 1 year after a waiting period of 6 months (conditional on having completed at least 9 years of

	Reference period (in months)	Minimum employment / contribution period (in months)	Ratio [2]/[1]	Waiting period (in days)	Maximum duration (in months)	Minimum age	Additional information
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
							education) or 9 months.
Netherlands	8	6	75%	0	3	–	Employment & Contributions: 26 weeks out of 36, plus 52 days in 4 out of the last 5 years. The "Short-term earnings-related benefit" can be paid with a maximum duration of 3 months for those not having worked 52 days in 4 out of the last 5 years. The duration of the earning-related benefit varies with the employment record. In this table it is assumed that the person has been working full time from the age of 18 years onwards. The maximum benefit duration increases with the employment record: 3 months below 4 years of contributions, and 1 month per year between 4 and 38 years.
New Zealand	–	–	–	–	–	–	UI does not exist; UA only
Norway	–	–	–	–	12-24	–	Eligibility depends on previous earnings: at least 24% of the average wage during the preceding calendar year or 16% of the average wage over previous three years. Also the maximum benefit depends on previous earnings: if earnings are at least twice the basic amount (NOK 164,244 in 2012), the duration is 2 years; for earnings below, the duration is 1 year.
Poland	18	12	67%	7	6-12	18	The maximum benefit duration depends on the local level of unemployment compared to the national average on 30 June of the year preceding the date of registration: 12 months if more than 150%, 6 months otherwise
Portugal	24	12	50%	0	5	–	The maximum duration depends on the age and contribution period (t): for those below 30, if t <15 months: 150 days; t ≥ 15 and < 24 months: 210 days; t ≥ 24 months: 330 days.
Slovak Republic	36	24	67%	0	6	16	
Slovenia	24	9	38%	–	3	–	Unemployment benefit duration depends on the total length of the insurance period: 3 months for an insurance period of 1 to 5 years, 6 months for a period of 5 to 15 years, and so on
Spain	72	12	17%	0	4	16	

	Reference period (in months)	Minimum employment / contribution period (in months)	Ratio [2]/[1]	Waiting period (in days)	Maximum duration (in months)	Minimum age	Additional information
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Sweden	12	12	100%	7	14		Employment: 6 months in last 6 months; Contribution: membership in an insurance fund for the last 12 months.
Switzerland	24	12	50%	5	9		For 12 months of contributions, 260 days (about 9 months) of benefit duration.
Turkey	36	20	56%	0	10		Employment: 600 days in the last 3 years Employment + Contributions: 120 days continuously, immediately before unemployment.
United Kingdom	24	12	50%	3	6	16	
United States	–	5	–	0	23		Employment record: 20 weeks (plus minimum earnings requirement). All workers get regular state UI benefits for up to 20 weeks. If they are still unemployed after those benefits are exhausted, they will generally draw Emergency Unemployment Compensation followed by Extended Benefits. Duration of benefit in Michigan on 1st July 2012 was 67 weeks.

1. The information for the United States reflects the situation of the Michigan unemployment benefit scheme, for which payment duration has been extended due to high unemployment rates. Emergency Unemployment Compensation and Extended Benefits are paid after exhaustion of regular UI (26 weeks).

Source: OECD Tax – benefit models. www.oecd.org/els/social/workincentives

Table 7. Benefits available to unemployed youth

For a 20 year-old unemployed single living alone without unemployment record, in 2012

	No family responsibilities					Family responsibilities		
	Scheme	Special age rules	Duration (in months)	Other benefits available		Child-contingent benefits		Additional information
				SA	HB	LP	FB	
	[1]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Australia	UA	16-20	Unlimited	Yes	Yes	Yes	Yes	UA: Youth allowance. Reduced benefits for those living at home. Age limit extended to 24 years for students. Parenting Payment is an income-support payment available to lone parents.
Austria	–	–	–	Yes	–	Yes	Yes	For those aged under 25 years, a 26-week (instead of one-year) employment record qualifies for UI. Housing benefits may be available for youth depending on the state.
Belgium	UI	18-30	36 months	Yes	–	Yes	Yes	UI: *Allocation d'insertion*. Benefits vary by age and are granted after an internship period of 310 days (exceptions for parents and isolated youth). The *Allocation parent isolé* (lone parent supplement) is a supplement to other benefits.
Canada	–	–	–	Yes	–	Yes	Yes	For lone parents: child care supplements and tax credits
Czech Republic	–	–	–	Yes	Yes	–	Yes	–
Chile	–	–	–	–	–	–	Yes	Youth in extreme poverty, notably with children, may be eligible to *Chile Solidario*, the main SA programme.
Denmark	UI	–	24	Reduced	Yes	Yes	Yes	For individuals entering benefits straight after education, UI rates are reduced (to 82% of the maximum unemployment benefit for graduates and 50% of the maximum unemployment benefit for those younger than 25 years without sufficient education). SA rates are reduced for those aged 18-24 years. For lone parents: family benefit supplements.
Estonia	–	–	–	Yes	–	Yes	Yes	Housing costs are covered by SA. For lone parents: Single parent child allowance.

	No family responsibilities					Family responsibilities		
	Scheme	Special age rules	Duration (in months)	Other benefits available		Child-contingent benefits		Additional information
				SA	HB	LP	FB	
	[1]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Finland	UA	≥17	Unlimited	Yes	Yes	Yes	Yes	Those entering the labour force for the first time and living with parents only get 50% of UA benefit; a person aged 17-24 years may not decline a job or training offer or choose not to apply for vocational training. The social assistance may be reduced for 18-24 year-olds without vocational education who refuse to participate in education or drop out from education. For lone parents: family benefit supplements.
France	–	–	–	No	Yes	Yes	Yes	Only those younger than 25 years old having worked 2 years in the last 3 years are eligible to SA. For lone parents: SA supplement, no family benefits for the first child.
Germany	UA	≥15	Unlimited	–	Yes	Yes	Yes	UA: Up to the age of 25 years, jobseekers have to be placed as soon as possible into jobs, training or work experience schemes with possibilities to acquire qualifications. Families with youths under 18 or 25 years are entitled to benefits to cover education costs and participation in sports and cultural activities. For lone parents: SA supplement and alimony replacement payment
Greece	UA	20-29	5	–	–	Yes	Yes	For lone parents: alimony replacement payment. A means-tested family benefit will replace existing family allowances in 2014 and will be provided according to the family income and the number of children, replacing several benefits paid to salaried workers and large families.
Hungary	–	–	–	Yes	Yes	Yes	Yes	To be eligible for SA, a certain period of cooperation with the local government is needed. For lone parents, higher family benefits
Iceland	–	–	–	Yes	Yes	Yes	Yes	For lone parents, higher family benefits
Ireland	UA	18-25	Unlimited	Yes	Yes	Yes	Yes	UA and SA rates are the same and are reduced for 18-24 year-olds. Unemployed youth or single parents may attend a second- or third-level education course and receive the Back to Education Allowance (BTEA), which can be combined with part-time work. For lone parents: specific lone parent benefit and tax credit

	No family responsibilities			Family responsibilities				Additional information
	Scheme	Special age rules	Duration (in months)	Other benefits available		Child-contingent benefits		
				SA	HB	LP	FB	
	[1]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Israel	–	–	–	Yes	No	Yes	Yes	SA is available to those aged at least 20 years, and registered as unemployed. The benefit is 80% of the normal rate for those under 25 years. For lone parents: higher SA rate.
Italy	–	–	–	–	Yes	Yes	No	For lone parents: wastable tax credit. Family benefits are only paid to those with earned income.
Japan	–	–	–	Yes	Yes	Yes	Yes	Supplementary child allowance available as part of SA. Specific lone parent benefit
Korea	–	–	–	Yes	Yes	Yes	–	Other family members are obliged to provide support first. For those over 18 years with work capacity, benefits are provided conditional on participation in the 'self-help' work programme. For lone parents: child-raising support
Luxembourg	UI	<21	12	No	No	Yes	Yes	UI: After a 6-month waiting period if at least 9 years of education were completed (9-month waiting period otherwise); benefit amounts to 70% of the minimum wage (40% for under 18 year-olds without completed education). SA: those under 25 years do not qualify unless they have dependent children, are responsible for a dependent person or are unable to work. For lone parents: refundable tax credit.
Netherlands	–	–	–	Reduced	Reduced	Yes	Yes	SA receipt is exceptional since parents must provide financial support up to age 21. Young people until 27 years of age are deemed to be in work or education. There is a waiting period of 4 weeks before payment for those below 27 to look for work or education. For lone parents: Single parent and additional tax credit, both wastable.
New Zealand	UA	–	Unlimited	–	Yes	Yes	Yes	For UA: Minimum age of 18 years or 16 years and married, in a civil union or *de facto* relationship with one or more dependent children. Benefit is renewable for periods of 12 months after work re-assessment. For HB, youth aged 16-17 years are not eligible unless they are financially independent. For lone parents: Domestic purpose benefit

	No family responsibilities					Family responsibilities		Additional information
	Scheme	Special age rules	Duration (in months)	Other benefits available		Child-contingent benefits		
				SA	HB	LP	FB	
	[1]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Norway	–	–	–	Yes	Yes	Yes	Yes	There is no age condition for SA. In practice, however, SA is rarely given individually to youth under the age of 18 years due to the parents' responsibility for caring for their children. For lone parents: Transitional Benefit, family benefit supplements, and supplementary childcare benefits
Poland	–	–	–	Yes	Yes	Yes	Yes	A recent school-leaver in on-the-job training is eligible to 40% of basic unemployment insurance benefits. For lone parents, family benefit supplement and wastable tax credit.
Portugal	–	–	–	Yes	Yes	Yes	Yes	For lone parents: wastable tax credit (higher rate) and higher family benefits.
Slovak Republic	–	–	–	Yes	–	Yes	Yes	Housing benefits are part of the SA scheme. For lone parents: alimony replacement payment
Slovenia		–	–	Yes	Yes	Yes	Yes	Singles aged over 18 years who are registered as unemployed are eligible to SA. For lone parents: family benefit supplement.
Spain	–	–	–	No	–	–	Yes	Only those having contributed to the social-security system for a minimum of 6 months (3 months if children) are eligible to UA. The minimum age of SA is 25 years or less if the claimant has dependants (it can be 18 years in certain regions). The maximum amount of SA varies across regions. Some regions have HB schemes.
Sweden	UA	–	14	Yes	Yes	Yes	Yes	UA: Waiting period of 4 months if the student enters the labour market without previous employment record. UA is not available for youth aged 18-19 years. For lone parents: specific lone parent benefit.
Switzerland	–	–	–	Yes	–		Yes	SA includes supplements for housing, as well as supplements for special needs of youth older than 16 years (linked to training and education).
Turkey	–	–	–	–	–	–	–	–

	No family responsibilities					Family responsibilities		
	Scheme	Special age rules	Duration (in months)	Other benefits available		Child-contingent benefits		Additional information
				SA	HB	LP	FB	
	[1]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
United Kingdom	UA	≥18	Unlimited	Yes	Yes	–	Yes	SA (*Income Support*) is normally not payable to individuals aged 16-17 years. For UA, those aged 18 to 24 years may have to participate in the *Work Programme* after 9 months of benefit receipt (after 3 months if NEET). For lone parents: specific Tax Credit only for those working.
United States	–	–	–	Yes	–	–	Yes	Family benefits: Temporary Assistance for Needy Families (TANF)

1. "–" indicates no information is available or "not applicable"; "No" indicates that the benefit does exist but it is not available for the young unemployed.

Source: OECD Tax – benefit models. www.oecd.org/els/social/workincentives

Table 8. Benefits available to young people living with their parents (2012)

	Upper age limit for children	Upper age limit for students	Means test on	Observations
	[1]	[2]	[3]	[4]
Australia	20	24	Family income.	Family tax benefit (FTB) part A to help families with cost of raising children.
	15	18	Income of secondary earner in a couple.	FTB part B paid to families with one main income.
Austria	19	27	No	Maximum amount comprises benefit and non-wastable tax credit. For low-income families, there is an extra supplement for each additional child from the 3rd.
Belgium	17	24	No	For unemployed, family benefits are increased from the 7th month of unemployment.
Canada (Ontario)	17	17	Family taxable income.	Canada child tax benefit (non-wastable tax credit).
	17	17	Family taxable income.	National Child Benefit (NCB) supplement for low income families.
	17	17	Family taxable income.	Ontario Child Benefit
Czech Republic	14	25	Family income relative to minimum living standard.	
Chile	18	24	Family income	
Denmark	17	17	No	Parents can also receive a means-tested 'Green cheque' of EUR 300 per child through the tax system in respect of their first two children.
Estonia	15	18	No	Payment triples for the third and subsequent children.
Finland	16	16	No	
France	19	19	No	Family allowance: zero benefit for first child.
Germany	18	25	No	*Kindergeld* is a non-wastable tax credit in the form of a monthly tax refund (reduces SA if there is no tax liability).

	Upper age limit for children [1]	Upper age limit for students [2]	Means test on [3]	Observations [4]
	25	25	Yes	*Supplementary child allowance (Kinderzuschlag)* is paid to parents to prevent them from having to apply for Unemployment Benefit II / welfare benefits only because of the maintenance of their children.
Greece	17	21	Yes	Employment condition: 50 days of work prior to the claim. A means-tested family benefit will replace existing family allowances in 2014 and will be provided according to the family income and the number of children.
Hungary	16	20	No	
Iceland	15	17	Allowance is reduced by a percentage of income above limit.	Basic allowance has an income limit of ISK 3,600,000 for a couple. Reduction is 3, 5 and 7% for 1, 2 and 3 children respectively.
Ireland	15	18	No	–
Israel	17	17	No	Increment to child allowance available for families with three or more children.
Italy	17	17	Household taxable income.	Benefit is paid by employers and is only granted if at least 70% of household taxable income is employment income (or earnings replacement benefits including unemployment benefits and employment pension). A spouse is considered a dependant so a couple with no children can receive family allowance. Benefits are reduced in proportion to the days not worked. Temporary additional benefit available in 2010 for children aged less than 3 years.
	17	17	Household taxable income.	Wastable family tax credits.
Japan	15	15	No	Supplementary child allowance available as part of SA.
Korea	–	–	–	–
Luxembourg	17	26	No	Maximum amount by age is reached at age 12.
Netherlands	17	17	No	Universal child benefit.
	17	17	Family taxable income.	More generous for low-income families. The benefit is withdrawn at a rate of 7.6% when the family's yearly taxable income exceeds EUR 28,897.
New Zealand	18	18	Family income.	Family Tax Credit. Each dollar of gross income in excess of NZD 36,350 reduces Family Tax Credit by 21.25 cents

	Upper age limit for children [1]	Upper age limit for students [2]	Means test on [3]	Observations [4]
Norway	17	17	No	Lone-parents receive payment for one more child than they have, as well as a supplement for children aged between 1 and 3 years.
Poland	17	20	Net income per family member.	Supplementary benefits available in specific circumstances.
Portugal	15	23	Family gross income (including some benefits)	Higher benefits for children young than 1 year, or below 3 years in large families. Benefits vary relative to family income (six levels). For first income-level households, the benefit amount is doubled in September for schooling expenses for children between 6 and 16.
Slovak Republic	15	25	No	The child allowance is provided at a uniform amount. Child tax credit is described in employment-conditional benefits table.
Slovenia	17	25	Gross income	Large family allowance is paid as a lump sum payment for families with three and more children. Benefit amount is increased by 10% for lone parents.
Spain	17	17	Gross family income.	Not taxable.
Sweden	15	19	No	–
Switzerland (Zurich)	15	24	No	Amounts are fixed by the cantons and paid by the employer. Benefits are taxable but not subject to social contributions.
Turkey	–	–	–	–
United Kingdom	15	18	No	Fixed rate from 2nd child.
	15	18	Gross family income.	Child Tax Credit. Withdrawn after Working Tax Credit has been exhausted where families are also eligible for the WTC.
United States (Michigan)	–	–	Yes	Temporary Assistance for Needy Families (TANF): benefit is based on family size at the time of application rather than the number of children. The benefit levels and duration vary by State.

1. Family benefits include non wastable tax-credits. In general, family benefits are non-taxable unless otherwise indicated.
2. In Australia, there exists the Parenting Payment, which is a benefit for Lone Parents.
3. "–" indicates no information is available or "not applicable".

Source: OECD Tax – benefit models. www.oecd.org/els/social/workincentives

Table 9. Age rules and contribution period for Disability benefits (2010)

	Scheme	Age group subject to special rules	Duration	Eligibility conditions		Additional information	Programme Name
				Means-tested	Contribution record		
	[1]	[4]	[5]	[6]	[7]	[8]	[9]
Australia	Sick Leave	Age 21 years (25 years if full-time student) or older	As long as the conditions are met	Yes	Must have a job		Sickness Allowance
	Disability Pension	Rates varying as function of age between 18-20 years and over 21 years	Pension	Yes unless blind	N.I.	A youth disability supplement for single disability pensioners younger than 21 years is included in the rates of the disability pension.	Disability Support Pension
Austria	Disability Pension	No	Pension	No	5 years	12 months with highest salary are used which are gradually extended to 480 highest months in 2028.	*Ruhegenuss* (< 60 years)
Belgium	Disability Pension	Age 21 or older	Pension	No		The amount of allowance depends on household income and the handicapped person's degree of autonomy.	*Allocation de remplacement de revenu* (ARR)
Canada	Disability Pension	No	Until child is 18	No	4/6 years, or 3/6 years if 25+ years of contributions. 2/3 years in Quebec.		QPP/CPP: disabled contributor's child benefit
	Disability Pension	No	Pension	No	4/6 years, or 3/6 years if 25+ years of contributions.		CPP disability pension
Chile	Disability Pension	Aged 18 or older	Pension	Yes	No		*Pensión Basica Solidaria* (PBS) *de Invalidez*

	Scheme	Age group subject to special rules	Duration	Eligibility conditions		Additional information	Programme Name
				Means-tested	Contribution record		
	[1]	[4]	[5]	[6]	[7]	[8]	[9]
Czech Republic	Disability Pension	See duration	Modulated as function of age.	No	1 to 5 years depending on age.	Examples of duration: If beneficiary is aged 20-22, the pension lasts for one year, if he is aged 38+ the pension lasts for 10 years.	Pension Insurance for Full Disability - Pension for Degree III of Disability (since 2010)
Denmark	Disability Pension	Aged 15 or older	Pension	No		No special rules affecting youth	*Nye førtidspensionister, højeste og mellemste førtidspension, personlige tillæg mv.*
Finland	Disability Pension	Aged 16 or older	Pension	No		No special rules affecting youth	Disability pension (including individual early retirement pension)
France	Disability Pension	Aged 20 or older	From 1 year to 5 years, 10 years if the disability condition stands.	Yes			Allocation for handicapped adults (AAH)
Germany	Disability Pension		Maximum 3 years	No	3/5 years	Suspended if the person exceeds an income threshold in combination with an unemployment pension.	*Rente wegen verminderter Erwerbfähigkeit*
Hungary	Disability Pension		Pension, not converted into Old-Age	No			*Rokkantsági nyugdíjak*
	Disability Pension	Aged 18 or older	Pension	No			*Fogyatékossági támogatás*
	Disability Pension	Aged 18 or older	As long as eligible	No		Persons over the age of 18 years of age who completely lost their capability to work before the age of 25	*Rokkantsági járadék*

	Scheme	Age group subject to special rules	Duration	Eligibility conditions		Additional information	Programme Name
				Means-tested	Contribution record		
	[1]	[4]	[5]	[6]	[7]	[8]	[9]
Ireland	Disability Pension	Aged 16 or older	Pension	Yes			Disability allowance
	Disability Pension	Aged 18 or older	Pension	Yes			Blind Allowance
Italy	Disability Pension		Maximum 3 years; can be renewed 3 times.	No	At least 5 years, 3 of which in last 5 years		INPS: Invalidity Allowance
	Disability Pension		Pension	Yes		Review possible during the 4 years after the annuity is fixed; thereafter at intervals of at least 3 years. No further review after 10 years	INPS Invalidity Pension
Japan	Disability Pension	Aged 20 or older	Pension	No	66.7% of the period from age 20 to two months before the claim.	Dependent's supplement for children under 18 (20 if disabled)	New system: Disability basic pension
Luxembourg	Disability Pension		As long as eligible	No	12 of last 36 months	Any beneficiary who, as a result of prolonged disease or infirmity, has suffered a reduction in working capacity, preventing him/her from exercising the profession.	Pension scheme: Disability benefits
Netherlands	Disability Pension	Aged 17 or older	Pension	No			WAJONG Disablement Assistance for Handicapped Young Persons Act
	Disability Pension		Pension, health status can be revised	No		Eligible after 2 years of sickness and after WGA with minimum level of incapacity of 35%.	IVA Fully Disabled Income Scheme (WIA)

	Scheme	Age group subject to special rules	Duration	Eligibility conditions		Additional information	Programme Name
				Means-tested	Contribution record		
	[1]	[4]	[5]	[6]	[7]	[8]	[9]
New Zealand	Disability Pension	Aged 16 or older	Pension	Yes		This benefit was replaced by Supported Living Payment on 15 July 2013.	Invalid's Benefit
	Sick Leave	Aged 18 or older		Yes		Aged 16 or 17 years if married or in a civil union with a dependent child or pregnant, or if undergoing treatment in an approved rehabilitation programme.	Sickness Benefit/Sickness Benefit- Hardship
Norway	Disability Pension	Age 18 or older	Pension	No	Last 3 years		Disability Pension
Portugal	Disability Pension	Qualifying period	Pension	No	5 years for partial Incapacity, 3 years for total incapacity	Qualifying period of 5 years for partial disability pension and 3 years for total disability pension.	*Pensão de Invalidez*
	Disability Pension	Qualifying period	Pension	Yes		Qualifying period of 5 years for partial disability pension and 3 years for total disability pension.	*Pensão social de Invalidez*
Slovak Republic	Disability Pension		Pension	No	1 year minimum	The minimum insurance period depends on age and varies from less than one year (for those aged up to 20 years) to 15 years for those 45 years or older.	Disability pension / Disability insurance
Slovenia	Disability Pension		Pension		Graduated according to age	Contributions example: insurance should cover at least one third of the period between attaining 20 years of age (or 23 or 26 years after higher or university education) and the occurrence of invalidity. If the disabled person is over 21 years but not yet 30 years old, only one quarter of the period between reaching 21 years and the occurrence of the invalidity is required.	Invalidity Pension
Spain	Disability Pension		Pension	No	Graduated according to age		Contributory Disability Pension

	Scheme	Age group subject to special rules	Duration	Eligibility conditions		Additional information	Programme Name
				Means-tested	Contribution record		
	[1]	[4]	[5]	[6]	[7]	[8]	[9]
	Disability Pension	Age 18 or older	Pension	Yes			Non Contributory Disability Pension
Sweden	Disability Pension	Age 18 or older	Pension	No	3 years	The amount of the pension depends on the number of contribution years (which determines the pension scale) and the average annual income (which determines the amount of the pension in the applicable pension scale).	AI - Invalidity Pension
Switzerland	Sick Leave	Age 18 or older	As long as person is eligible	No	Must be working		Invalidity Insurance (AI) - daily indemnities
United States	Disability Pension	21	Pension	No	Graduated according to age	The insured must have a quarter of coverage for each year since the age of 21 years up to the year the disability began, up to 40 quarters of coverage.	Disability Insurance Disabled workers

1. "–" indicates no information is available or "not applicable"; "No" indicates that the benefit does exist but it is not available for the young unemployed.

Source: OECD Tax – benefit models. www.oecd.org/els/social/workincentives

ANNEX IV: IMPACT-EVALUATIONS OF INTERVENTIONS FOR DISADVANTAGED YOUTH

Table 10. Interventions targeted at disadvantaged youth

Type [1]	Programme [2]	Country [3]	Age range (in years) [4]	Treatment [5]	Impact [6]	Study [7]
After-school	Quantum Opportunity Program	USA	14-18	This programme had high school students participate in 250 hours of educational services, 250 hours of development activities and mentoring, and 250 hours of community service and provided students with financial incentives.	33% more students graduated from high school.	Taggart (1995)
					9 percentage point increase in college attendance 3 years after programme completion, larger impact for younger participants.	Rodrígues-Planas (2010)
After-school	Summer Training and Education Program (STEP)	USA	14-15	This programme provided summer reading and math remediation along with life skills instruction to academically struggling low-income students.	No long-term impact	Walker and Vilella-Velez (1992)
After-school	"Occupational start" (*Ammattistartti*)	FIN	?	This programme offers young people who are unsure about their study and career direction an alternative programme focusing on learning skills, information about different occupations and motivation, in liaison with existing VET programmes.	The network created between the staff and other institutions and the individual approach are key to the success of the programme.	Jäppinen (2010)

Type [1]	Programme [2]	Country [3]	Age range (in years) [4]	Treatment [5]	Impact [6]	Study [7]
Apprenticeship	Apprenticeship guarantee	AUT	?	In 2008, social partners, together with the federal government, created an apprenticeship training guarantee: sufficient offers in supra-company training facilities are available for those who cannot find a regular apprenticeship placement in a company.	During the school year 2008/09, 16,107 young people participated in the programme, of which 22% were either without employment or an apprenticeship for more than six months before the measure.	Eurofound (2012)
Conditional Cash Transfer	Learnfare	USA	13-19	This conditional cash transfer programme sanctions a family's welfare grant if teenagers in the family do not meet required school attendance goals.	Increased school enrolment and attendance	Dee (2009)
Conditional Cash Transfer	Self Sufficiency Program	CAN	Single parents over 19	A selection of welfare recipients are randomly offered substantial subsidies to work, which more than doubled earnings at the minimum wage	People in the experiment group worked about 1/3 more hours than in the control group, and after 36 months had improved locus of control.	Gottschalk (2005)
Job guarantee	Job guarantee for young people (*Jobbgaranti för ungdommar*)	SWE	16–25	Anyone in the relevant age range who has been enrolled with the public employment service for at least three months is entitled to take part in the "job guarantee" that includes: guidance and coaching combined with work internships, apprenticeships and other work experience placements.	The 24-year-olds participating in the guarantee managed to find a job more quickly than older people enrolled with the public employment services in 2008.	IFAU, 2008, Eurofound, 2012
Mentoring	Big Brothers Big Sisters	USA	6-18	Agency staff matched adult volunteers with youth on the basis of a variety of factors, including shared interests	Adolescents in relationships that lasted a year or longer reported the largest improvements in academic, psychosocial, and behavioural outcomes.	Grossman and Rhodes (2002)

Type [1]	Programme [2]	Country [3]	Age range (in years) [4]	Treatment [5]	Impact [6]	Study [7]
Mentoring	Entrepreneurs for Social Inclusion, EPSIS	PRT	13-15	This programme consists of one-to-one meetings with trained professionals or meetings in small groups, and tailored at each participant's individual non-cognitive skill deficit: motivation, self-esteem, study skills.	Cost-effective in reducing grade retention by 10%.	Martins (2010)
Mentoring	Qualifications and connections (*Abschluss und Anschluss – Bildungsketten bis zum Ausbildungsabschluss*)	DEU	Around 16	A four-year programme to help low-performing students in the lowest of the three German secondary-school types make a smooth transition to the next level of education and avoid dropping out: increase motivation, define expectations, analyse the potential, identify the interests and provide occupational guidance; students are mentored in their penultimate school year until the completion of their first year in vocational training. The programme involves over 1,000 basic and special secondary schools. Around 2,000 mentors will be trained and recruited to work on the programme.	Very preliminary: no significant improvement in school grades, but transitions to vocational preparation programmes increase.	Christe and Rademacker (2012)
School-based	*Zones d'Education Prioritaire*	FRA	?	The programme, which started in 1982, channels additional resources to schools in disadvantaged areas and encourages the development of new teaching projects.	No impact on the probability of obtaining at least one diploma by the end of schooling, reaching 8th grade, reaching 10th grade and success at the high school diploma.	Benabou, Kramarz, Prost (2006)
School-based	Excellence in Cities	GBR	6-18	The programme provided additional teaching to more advanced students, and additional learning support to the least advanced students in under-performing schools.	Improved outcomes in mathematics (though not in English), and only for the middle-high performing students, not for the hard to reach pupils. The impact was stronger in the most disadvantaged schools.	Machin et al (2007)

Type [1]	Programme [2]	Country [3]	Age range (in years) [4]	Treatment [5]	Impact [6]	Study [7]
School-based	Supplemental Literacy Interventions	USA	14-15	Students who were two to five years below grade-level in reading were provided with full-year supplemental literacy courses that provided an average of eleven hours per month of supplemental instruction.	Reading test scores of participants increased over the year at a rate 23% higher than that of comparable non-participants. The programme also improved students' performance on tests in English, arts and mathematics	Corrin et al. (2010)
School-based	Mastery Learning	USA	5-12	This group-based, teacher-paced instructional model requires that students master a particular objective before moving to a new objective. Students are evaluated on absolute scales as opposed to norm-referenced scales.	On average 0.78 standard deviations on achievement tests.	Guskey and Gates (1985).
School-based	Project CRISS	USA	9-18	This professional development model for teachers aims to give teachers more effective strategies for teaching reading and writing focusing on student-owned reading strategies.	No significant impact on post-secondary achievements (5th grade), but increase in the percentage of young people living independently with children and a spouse or partner.	James-Burdumy et al. (2009)
School-based	Career Academies	USA	14-18	Small school model that combines academic and technical curricula and provides students with work-based learning opportunities.	11% higher earnings per year (at age 18-27 years).	Kemple (2008)
School-based	Comer School Development Program	USA	5-12	Whole-school reform model that aims to improve intra-school relations and climate in order to improve academic achievement.	No achievement effects (7th-8th grades).	Cook et al. (1999)
School-based	Success for All	USA	5-10	School-wide programme that focuses on early detection of and intervention around reading problems using an ability-level reading group instruction.	0.36 standard deviations on phonemic awareness; 0.24 standard deviations on word identification; 0.21 standard deviations on passage comprehension (2nd grade).	Borman et al. (2007)

Type [1]	Programme [2]	Country [3]	Age range (in years) [4]	Treatment [5]	Impact [6]	Study [7]
School-based	Knowledge Is Power Program (KIPP)	USA	5-18	Charter schools, in low performing areas, for minority and disadvantaged youth, focusing on behaviour, discipline, commitment, modest financial rewards, and allowing more time at school.	Results from KIPP Lynn (MA): large impacts on achievement: gains about 0.1 standard deviations per year in English language and 0.4 standard deviations per year in math, with larger effects on the most disadvantaged.	Angrist et al. (2013)
School-based	*Internats d'Excellence*	FRA	11-18	Teachers tended to be better educated than their public school counterparts, and the pupil-teacher ratios were also lower. Participants also dedicated significantly more time to academic activities.	Students were nearly three times as likely to express interest in taking college-preparatory classes, and 25% more likely to say they wanted to attain a master's degree (motivation, self-esteem). After two years, students' average math score increased by 0.4 standard deviations.	Behaghel, Charpentier and Gurgand (2012)
School-based	Domains for Priority Intervention, TEIP	PRT	6-15	Partnerships between schools and other public and private entities (*e.g.* health centres, associations, various agencies) to provide curricular alternatives, second chances and vocational courses	School failure rates progressively decreased after implementation in 2006 and in 2010, they were practically identical to national rates.	Dias and Tomas (2012)
School-based / After-school	xl programme	GBR	11-14	This programme aims at improving the non-cognitive skills of secondary school students at risk of underachievement or exclusion: motivation, confidence, self-esteem, social skills and behaviour.	Very small effects on school performance (tests at 11 and 14 and 2 years after the start of the programme).	Holmlund and Silva (2009)
Second chance	Job Corps	USA	16-24	The programme offers an intensive one-year programme which includes vocational training, academic education, but also counselling, social skills training, health care and health education, as well as placement. Most students reside at the Job Corps centre while training.	The programme yields earnings gains in years 3 and 4 after random assignment (a gain of about 12% in year 4). These gains are not sustainable except for the older enrolees (20-24 years).	Schochet et al. (2006)

Type	Programme	Country	Age range (in years)	Treatment	Impact	Study
[1]	[2]	[3]	[4]	[5]	[6]	[7]
Second chance	National Guard Youth Challenge Program	USA	16-18	This 17-month programme for high school dropouts has residential and post-residential phases. The residential phase provides students with a highly structured "quasi-military" experience and the post-residential phase provides students with mentoring.	12% more likely to earn a high school diploma or high-school-level equivalent GED within 9 months, 9% more likely to work, improved measures of criminality and health. Benefit-cost ratio of 2.66.	Bloom et al. (2009) ; Perez-Arce et al (2012)

Source: Fryer (2011), Almlund et al. (2011), and Eurofound (2012).

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