Early school leaving and labour market prospects

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1. Setting the stage

Young people spend time both in education and in the labour market. Especially in the Nordic countries, many young persons are engaged in both activities at the same time, that is, they are working while studying. However, they tend to follow quite divergent trajectories through school, and a remarkably large share has not completed secondary education by the time they get into their twenties. In this chapter, we look more carefully into the transition of young people from school towards the labour market and the statuses they go through during this transition process. In particular, we are concerned with the large variation in school-to-work pathways of young people leaving primary education (at age 16) up to age 20, and the potential link between these pathways and the young persons' subsequent activities at three points in time: at age 21, 26 and 31.

School completion, youth employment and youth unemployment are topics high on the policy agenda in most countries, as well as at the international level (see e.g. European Commission, 2012; OECD, 2010). Particular attention has for quite some time been paid to early school leavers and school drop-outs especially in view of growing skills demand in the labour market and early school-leaving being increasingly seen as a signal of future weak labour market attachment as well as social problems. Additionally, youth unemployment has in recent years been placed high up on the policy agenda by the fact that young people have been hardest hit by the financial and economic crisis (e.g. Scarpetta et al., 2010; ILO, 2011 and 2013).

The Nordic countries are characterized by high educational attainment levels and also by high employment levels among young people. At the same time, however, we see high non-completion rates from secondary education, and most Nordic countries, notably Finland and Sweden, rank high in the distribution of youth unemployment rates in Europe. How can we reconcile these stylized facts, and what is the relationship between dropping out of school and subsequent employment and unemployment outcomes?

First we need to get the facts right, though. In order to sort out the relationship between education, employment, unemployment and inactivity (outside education and the labour market) we use figures calculated from the Labour Force Surveys, mostly as provided by the OECD. Next we compare early-leaving, drop-out and non-completion rates across the Nordic countries. Finally we link post-compulsory-school trajectories of young drop-outs when aged 16–20 to their outcomes at ages 21, 26 and 31 in terms of education, employment, unemployment and inactivity, using unique national register data on three youth cohorts from Denmark, Finland and Norway. A discussion of the main findings and their policy implications concludes the chapter.

2. Education, employment and NEETS

Table 1 gives key statistics on the activities of the youth population as reported by the OECD for the Nordic countries. These statistics are further compared to a small number of other countries.

Table 1. Education and employment among young people aged 15–24, per cent of total youth population, the Nordic countries and selected non-Nordic countries, 2007 – 2012

		Attended school	Employment ratio	Empl. ratio students	Empl ratio non-students	NEET rates
Denmark	2007	75.8	66.2	46.3	19.9	4.4
	2012	82.0	53.8	42.4	11.4	6.7
Finland	2007	75.1	36.9	19.8	17.1	7.8
	2012	73.5	35.7	18.1	17.6	8.9
Iceland	2007	71.5	70.0	14.9	55.1	4.8
	2012	77.1	57.1	9.0	48.1	6.2
Norway	2007	68.2	57.2	33.2	24.0	7.8
	2012	73.0	51.3	31.5	19.8	7.2
Sweden	2007	72.4	38.0	17.4	20.6	6.9
	2012	74.4	36.2	18.0	18.2	7.4
Germany	2007	70.9	45.4	25.5	19.9	9.2
	2012	70.7	46.3	25.1	21.2	8.1
Spain	2007	60.1	38.2	10.0	28.2	11.7
	2012	69.3	18.4	5.8	12.6	18.1
UK	2007	60.7	52.3	24.7	27.6	11.7
	2011	58.0	46.6	19.5	27.1	14.9
US	2007	57.3	52.2	21.4	30.8	12.0
	2012	60.5	44.2	18.6	25.6	13.9
EU	2007	66.5	36.3	14.3	22.0	11.5
	2012	67.5	32.3	13.3	19.0	13.6
OECD	2007	57.5	43.2	15.9	27.3	15.2
	2012	60.0	38.9	14.8	24.1	15.9

Notes: The reported ratios are percentages of the total youth population of youth. The numbers are for the 1st quarter (UK 2011: 4th quarter) of the year. NEET = young people Not in Employment, Education or Training.

Source: OECD.

The first column of Table 1 shows the per cent of young people aged 15–24 who attended school in the first quarter of 2007 and 2012. School attendance in the Nordic countries is well above EU and OECD averages. Only in Finland, among the Nordic countries, did school attendance not increase from 2007 to 2012.

When looking at employment ratios for young people in the Nordic countries, we find particularly high employment rates in Denmark, Iceland and Norway, with Iceland reaching a youth employment ratio of 70 per cent in 2007. Considerably lower employment ratios are observed for Finland and Sweden.

The next two columns report youth employment ratios separately for students who are in employment and employed non-students. Among the Nordic countries, Denmark and Norway stand out with a high share of students who are also working. Iceland, in turn, has a relatively high employment ratio among the non-students. The comparatively low employment ratios for young people in Finland and Sweden are for the most part a result of low employment ratios among students relative to the situation in notably Denmark and Norway, but not in relation to the employment ratios of the two countries' non-students.

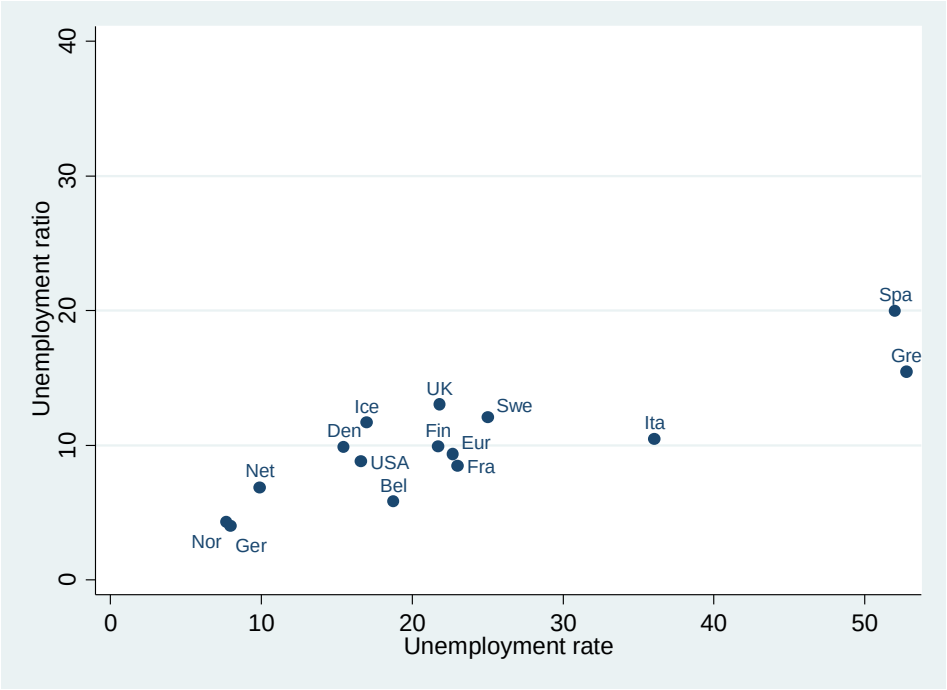
In 2007, the NEET rates ranged from 4.4 per cent in Denmark to 7.8 per cent in Finland and Norway. With the exception of Norway, all Nordic countries have seen an increase in the NEET rate between 2007 and 2012, now ranging from 6.7 per cent in Denmark to 8.9 per cent in Finland. However, together with Germany, all five Nordic countries have a NEET rate which is well below EU and OECD averages.

3. Youth unemployment

Young people are the first to be hit by increasing unemployment. They are new labour market entrants or typically employed on a temporary basis in business-cycle-sensitive jobs and, hence, among the first to suffer from cut-downs in the workforce or reductions in hiring rates. Figure 1 shows figures from the first quarter of 2012 for the Nordic countries as well as for a few non-Nordic countries. The horizontal axis gives the unemployment rate as a percentage of the labour force. We note that Sweden has a higher youth unemployment rate than the average for Euro countries (EUR), and that both Finland and Sweden have higher rates than the UK and the US.

The vertical axis, in turn, measures youth unemployment in relation to the whole youth population, that is, by means of the unemployment ratio. While 23 per cent of the European youth labour force is unemployed, the unemployed young people constitute only 9.6 per cent of the youth population. In terms of the unemployment ratio, however, all Nordic countries except Norway score higher than the average for Euro countries. In both Iceland and Sweden, youth employment is, in fact, higher than in Italy when measured by means of the unemployment ratio.

Figure 1. Youth unemployment rates and unemployment ratios, the Nordic countries and selected non-Nordic countries, 2012 (1st quarter)

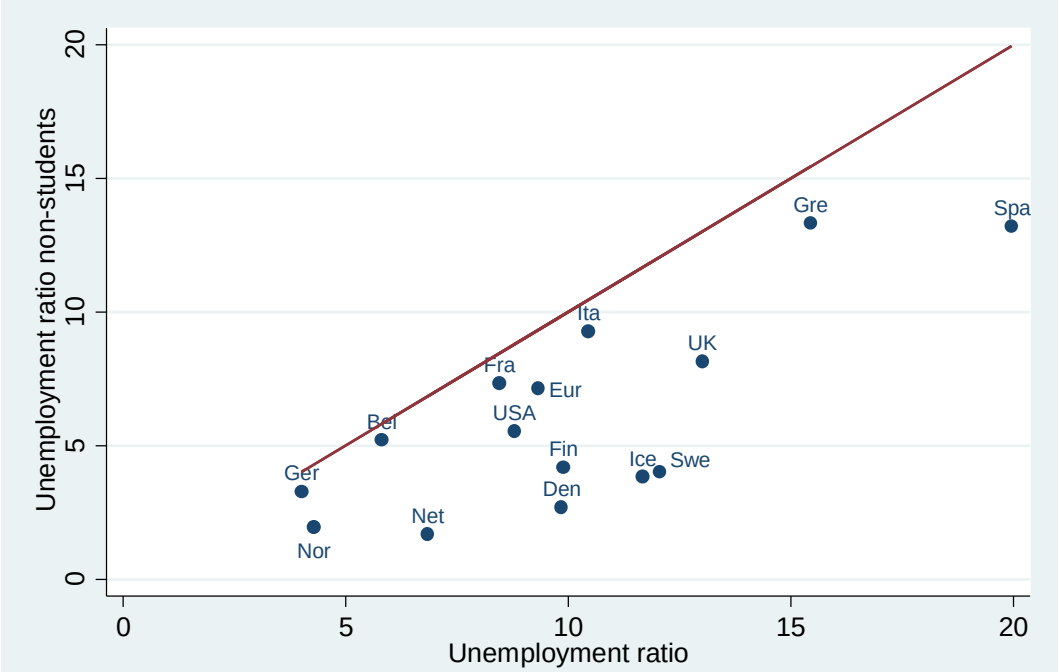


Notes: Unemployment rate = unemployed 15–24 year-olds in relation to the labour force of the age group. Unemployment ratio = unemployed 15–24 year-olds in relation to the whole population of the age group.

Source: OECD.

However, many of the young people recorded in the Labour Force Surveys to be unemployed are actually attending school and, moreover, typically on a full-time basis. Figure 2 shows what happens when we remove from the pool of young unemployed those young people who report studying as their main activity. What we are left with on the vertical axis of Figure 2 are unemployed young persons who are not attending school. For the Euro area as a whole, the youth unemployment ratio drops from 9.3 per cent to 7.2 per cent of the youth population. For the Nordic countries, the change is even larger. After this correction, all Nordic countries rank among those with the lowest level of youth unemployment (among the non-students).

Figure 2. Youth unemployment ratios with and without students, the Nordic countries and selected non-Nordic countries, 2012 (1st quarter)



Notes: Unemployment ratio = unemployed 15–24 year-olds in relation to the whole population of the age group. Unemployment ratio, non-students = unemployed 15–24 year-olds with studying not being their main activity in relation to the whole population of the age group. The red line shows the 45 degree angle.

Source: OECD.

The countries which fall the most below the 45-degree line added to Figure 2 are the ones with the largest proportion of unemployed youth who are also students. The pattern displayed in the figure thus arises from the fact that the unemployed young persons who are *not* at the same time attending school make up a smaller proportion in the Nordic countries compared to the other countries in the figure. In all Nordic countries, the proportion of unemployed young people who are not also in school is less than one-half, and as small as one-third in Sweden.

4. Drop-out and completion rates for secondary education

Completion and non-completion (drop-out) from secondary education can be measured in a multitude of ways. Markussen (2010), for instance, reviews studies measuring drop-out rates for the Nordic countries. He thereby emphasizes the lack of comparable information across countries, which is due both to different conceptual issues and differences across countries in the organization of secondary education. Table 2 presents selected numbers gathered from international sources.

Table 2. Completion, early leaving and drop-out rates for the Nordic countries

		Denmark	Finland	Iceland	Norway	Sweden
Upper secondary graduation rates						
< 25 year-olds	2011	79.4	85.0	70.4	77.7	75.4
≥ 25 year-olds	2011	10.2	11.0	17.4	11.8	0
Total		*89.6*	*96.0*	*87.8*	*89.5*	*75.4*
	2007	12.9	9.1	23.2	18.4	8.0

Early school leavers (Eurostat)	2012	9.1	8.9	20.1	14.8	7.5
School drop-outs (OECD scoreboard for youth)	2009	14.2	9.7	55.2	20.3	7.4

Notes: The first lines show expected graduation rates before and after the age of 25 as reported by the OECD *Education at a Glance*. 'Early school leavers' (Eurostat) refer to persons aged 18–24 fulfilling the following two conditions: first, the highest level of education or training attained is ISCED 0, 1, 2 or 3c short; second, respondents declared not having received any education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding no answers to the questions "highest level of education or training attained" and "participation in education and training". Both the numerators and the denominators come from the EU Labour Force Survey (Eurostat). The OECD Scoreboard for youth: share of youth not in education and without an ISCED 3 degree.

Graduation rates from upper secondary school before age 25 are highest in Finland. When adding graduation rates completed at age 25 or later, the expected lifetime graduation rate from upper secondary school is close to 90 per cent for all Nordic countries, except Sweden. In terms of early school leavers, Denmark, Finland and Sweden stand out with small rates. Using the drop-out rates of the OECD, Sweden has the lowest drop-out rate, closely followed by Finland. Irrespective of the measure used, non-completion is relatively high in Norway and especially in Iceland.

5. Moving from a static to a dynamic approach

A major shortcoming of the indicators reported above is that they illustrate the youth situation at a given point in time. Put differently, they conceal the dynamics behind these numbers, that is, the fact that young people are highly mobile between main activities especially in the years after completing compulsory education. Accordingly it is of utmost importance to try to capture these dynamics in the lives of young people. In the following we try to illustrate these dynamics and their implications for non-completion of secondary education and subsequent labour market outcomes. This exercise is undertaken for three Nordic countries: Denmark, Finland and Norway.

Our analysis focuses on three full cohorts of young people who turned 16 in 1993, 1998 and 2003, respectively. These young people are followed over the years on an annual basis up to age 21 (all cohorts), age 26 (the two oldest cohorts) and age 31 (the oldest cohort). The national datasets on which our analysis is based are compiled from register data administered by the Statistical Bureau in the respective country. The datasets contain yearly recordings of the young persons' labour market status, as well as detailed individual and parental background information. Taken together, this allows us to uncover patterns and differences in post-compulsory-school trajectories and subsequent labour market outcomes across both cohorts and countries.

The following main activities are defined in our data: studying, employed, unemployed, disability beneficiary and a residual activity called 'other', which mainly consists of young people not found in any of the broad administrative registers from which our national datasets are compiled. If a young person appears in several registers at the same time, the following priority is given: activities in the labour force (employed/unemployed) override activities outside the labour force (disability beneficiary and 'other'). There is one important exception to this rule, however: those young people registered as full-time students are always treated in our datasets as students, even when they are in the employment or the unemployment register while studying.

Non-completion of secondary education

In our analysis, we define non-completion as not having completed secondary education by the year one turns 21 years-of-age. Instead of using the term 'drop-out' or 'early school leaver', which in this case would be somewhat misleading, we prefer to use in the following the term 'non-completer' for those who still five years after completed compulsory education have no secondary-level degree. In other words, their only formal education by age 21 is primary education.

Table 3 reports non-completion rates for our three cohorts. Non-completion is highest in Denmark, with 38 per cent of the 2003 cohort's young people not having completed secondary education by the age of 21. Finland has by far the lowest non-completion rate: in the 2003 cohort only about 18 per cent had not completed secondary education by the age of 21. Norway falls in between but is much closer to Denmark than to Finland. The Norwegian rates are comparable to those reported by Falch and Nyhus (2011) and Bratsberg et al. (2010) while the Danish rates are comparable to those reported by Jakobsen and Liversage (2010). Our findings are also comparable to those of Bäckman et al. (2011), who compare drop-out rates across the Nordic countries, measured seven years after the school start. They find drop-out from vocational tracks to be highest in Norway and the lowest in Finland.

Table 3. Non-completion rates for three youth cohorts

	Denmark	Finland	Norway
Cohort 1	34.7	16.0	28.0
Cohort 2	39.0	19.7	28.7
Cohort 3	38.3	18.4	32.2

Notes: Non-completion is defined as having reached 21 years-of-age without completing secondary education. Cohort 1 turns 16 during 1993, cohort 2 during 1998 and cohort 3 during 2003.

Source: Authors' own calculations.

How should we square these numbers with the high expected upper secondary completion rates reported by the OECD (Table 2 above)? The answer is that a sizeable fraction of young non-completers continues in school on a full-time basis, and eventually completes secondary education only later on, that is, after age 21. Table 4 therefore shows percentages of non-completers having completed their secondary education by the time they are 26 or 31 years-of-age.

Table 4. Completion of secondary education by age 26 and 31 among non-completers

	Denmark		Finland		Norway	
Age	26	31	26	31	26	31
Cohort 1	41.6	51.8	25.4	34.7	41.9	50.1
Cohort 2	42.9		29.7		29.1	

Notes: See Table 3 above.

Source: Authors' own calculations.

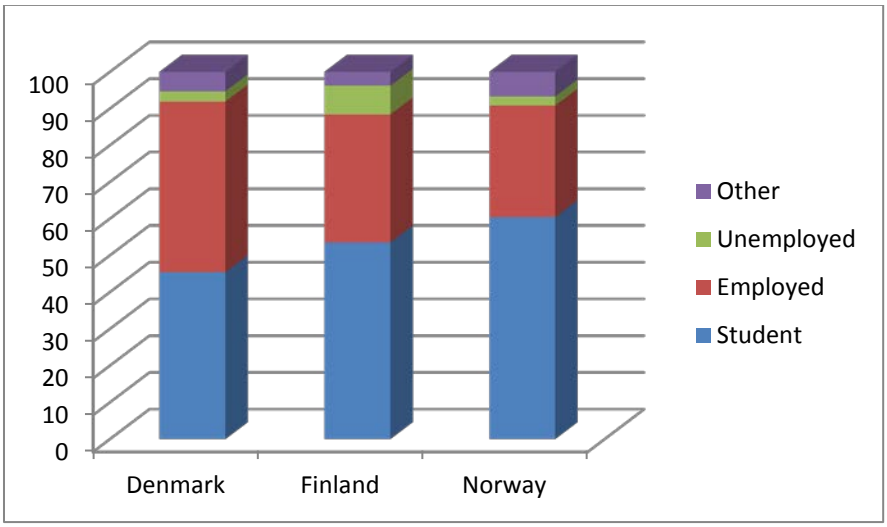
In Denmark and Norway, more than one-half of the non-completers from the 1993 cohort had eventually completed secondary school by the time they turned 31. More than 40 per cent of them had actually come around to complete secondary school before they turned 26. While this share is

repeated for the Danish 1998 cohort, it is remarkably lower for the Norwegian 1998 cohort and actually down at the same low level as for the Finnish 1998 cohort. On the whole, the completion rates for non-completers in Finland remain comparatively low with only about one-third of the 1993 cohort non-completers having completed a secondary-level degree by the time they turned 31. The fact that the overall non-completion rates are markedly lower in Finland than in Denmark and Norway (Table 3 above) can only explain part of this difference.

The next 10 years

The next two figures illustrate the distribution of main activities at age 21 for two separate groups: completers of secondary education (Figure 3a) and non-completers of secondary education (Figure 3b) five years after leaving compulsory education (at age 16). We note that the distribution of main activities is highly different for non-completers and completers in all three countries. More than 85 per cent of all 21-year-old completers are either still studying or working. The share of full-time students is by far highest in Norway while the share of employed is highest in Denmark. The share of completers not in education or employment (so-called NEETs) is small in all three countries.

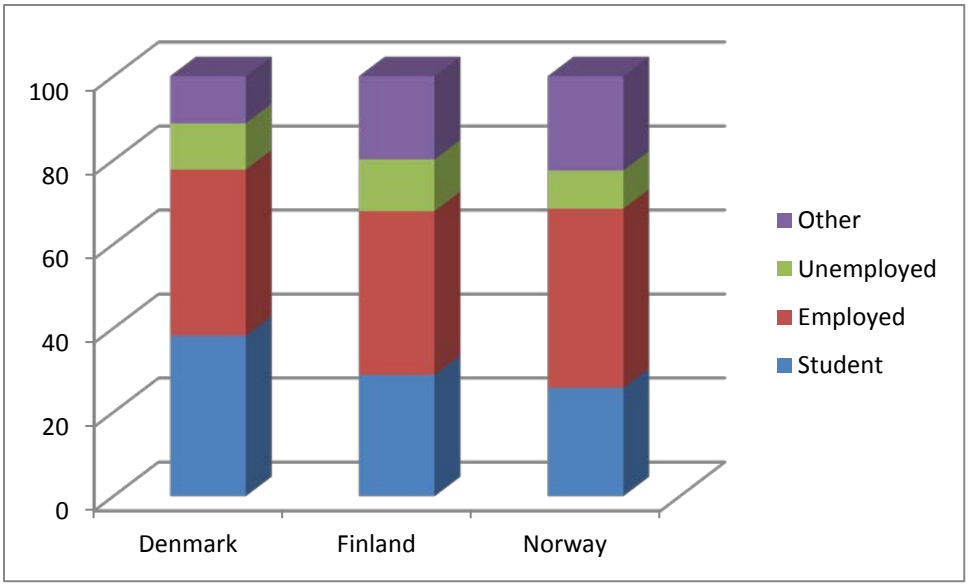
Figure 3a. Main activities at age 21 for completers of secondary education



Notes: Completion is defined as having completed secondary education by age 21. For definitions of the four main activity groups, see the text.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Figure 3b. Main activities at age 21 for non-completers of secondary education



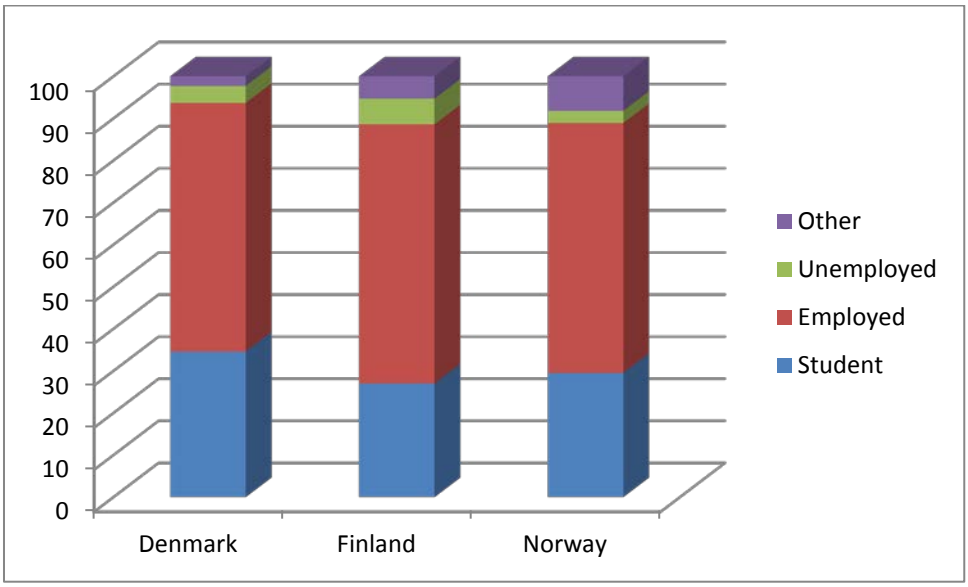
Notes: Non-completion is defined as having reached 21 years-of-age without completing secondary education For definitions of the four main activity groups, see the text.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

The most striking feature of Figure 3b is that the share of non-completers not in school or employment is significantly higher than for the category of completers. Nevertheless, we see that over 70 per cent of the Danish non-completers and more than 60 per cent of the Finnish and Norwegian non-completers are either full-time students or employed at age 21.

Next we pick up these completers and non-completers at age 26. This results in the distributions of main activities shown for completers in Figure 4a and non-completers in Figure 4b. Among the completers, employment has now clearly taken over as the dominant activity. Almost 95 per cent of the Danish completers are either in school or at work at this age. The corresponding share among both Finnish and Norwegian completers is almost 90 per cent.

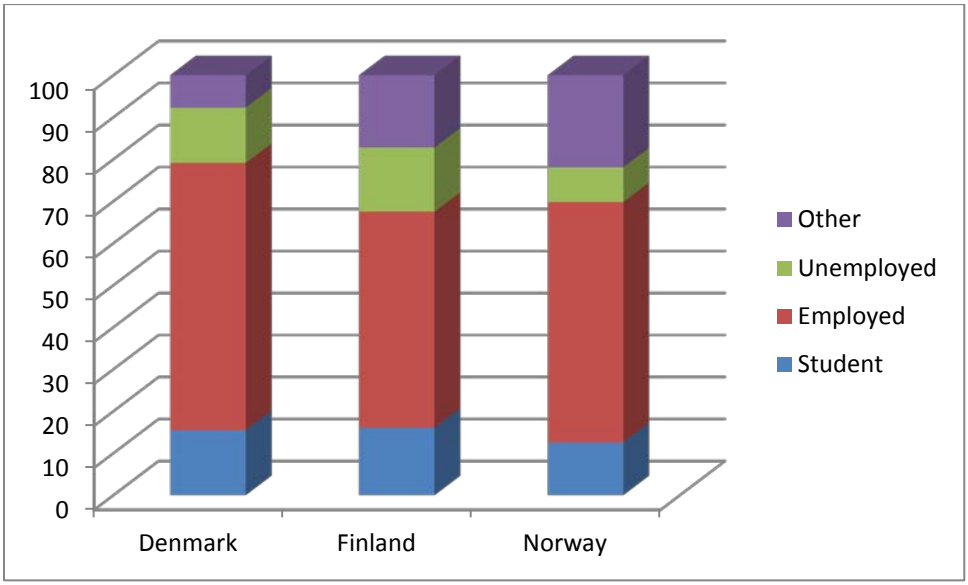
Figure 4a. Main activities at age 26 for completers of secondary education



Notes: See Figure 3a above.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Figure 4b. Main activities at age 26 for non-completers of secondary education

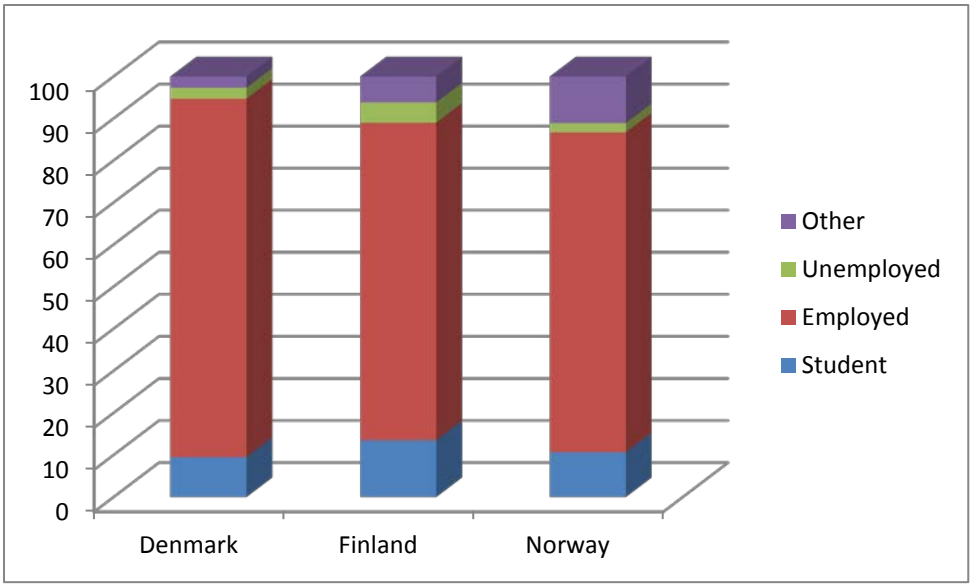


Notes: See Figure 3b above.
Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Among the non-completers of age 26, the total share in either education or employment is close to 80 per cent for Denmark and almost 70 per cent for Finland and Norway. Put differently, in Finland and Norway just over 30 per cent of the non-completers are either unemployed or in activities outside education and working life. The fraction of inactive 26-year-old non-completers is clearly highest in Norway.

Finally, at age 31 about 95 per cent of the Danish completers are either employed or still in education (Figure 5a). In Finland, this share is close to 90 per cent and in Norway about 87 per cent. At the age of 31, employment is the overwhelmingly most typical main activity among completers.

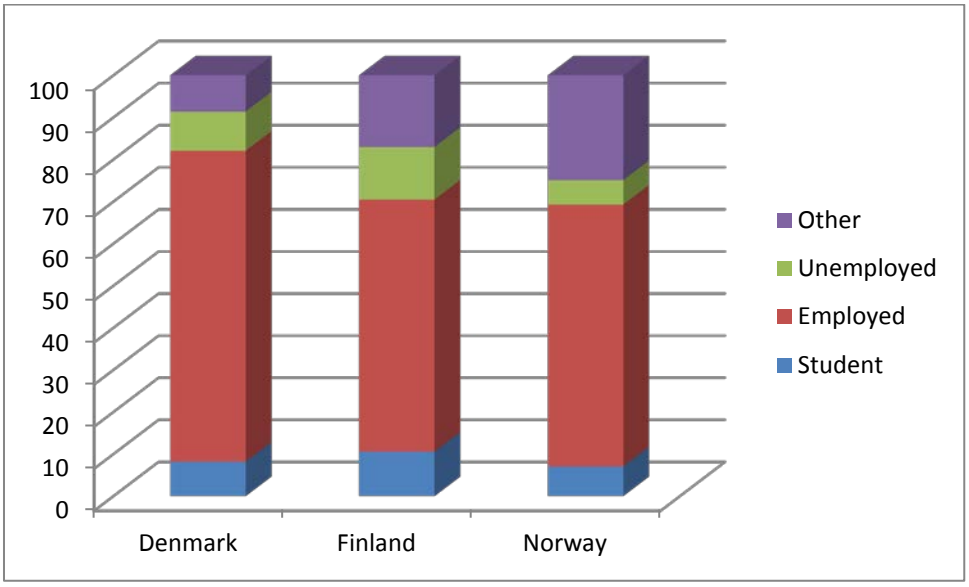
Figure 5a. Main activities at age 31 for completers of secondary education



Notes: See Figure 3a above.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Figure 5b. Main activities at age 31 for non-completers of secondary education



Notes: See Figure 3b above.
Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Even among the 31-year-old non-completers, some 82 per cent are employed or studying in Denmark with the corresponding share being almost 70 per cent in the other two countries. However, the Norwegian share of inactive non-completers remains the highest, which is consistent with the results reported by Bäckman et al. (2011). On the whole, not much seems to have changed in these shares compared with the situation at age 26.

The conspicuous "success rates" in terms of education or employment observed also for non-completers could be taken to indicate that, in the last resort, many of them fare reasonably well in the labour market as young adults. The highest success rates are obtained for Denmark. The difference in non-completer outcomes between Denmark and Finland could then be interpreted as a result of notable cross-country differences in the composition of the group of non-completers. The "hard core" of non-completers, that is, young people with disproportionally weak labour market prospects, tend to drop out from education at an early age in principally any country. If the number of non-completers increases, this most likely implies that also young people with less serious problems and, hence, with an obviously closer labour market attachment, are for some reason shifting into the group of non-completers. If this is the case, then the overall size of the group of non-completers could also tell us something about the composition of non-completers, for which reason we would expect Danish non-completers to do better on average. However, this interpretation does not get support when comparing Finland to Norway: a similar difference in non-completion rates does not result in different success rates of Finnish and Norwegian non-completers. Moreover, even in the case of relatively high employment rates also among non-completers, previous research has shown that there is a large and significantly negative wage differential between employed non-completers and employed completers (see Bratsberg et al., 2010).

6. Typical pathways through secondary education

Finally we take a closer look into the pathways through secondary education for each of our three countries under study. For these purposes, we classify the pathways through school – from age 16 to 20 – into a total of 16 categories based on two criteria: how long they stay in school and their main activity after completion. Table 5 shows these typical trajectories.

The numbers in the column labelled 'Typical paths' indicate the sequence of main activities over these five years, starting at age 16 and ending at age 20. Each number signifies a main activity: 1 stands for full-time student, 2 for being employed, 3 for being registered as unemployed, 4 for being on disability or related benefits and 5 for being in other activities (basically not in any administrative register). If registered for several main activities, the internal ordering of the numbers shows the priority given to each of them; if the young person is a full-time student but registered in our data as unemployed, s/he is (re-)coded with a 1; if s/he is registered as unemployed but also receives an ill-health-related benefit, the coding is according to unemployment (3), and so on. The sequence of the numbers, in turn, represents the year in which the activity took place. For instance, the first two paths under the heading 'Work' (11122 and 11222) include young people who continue in school during the first three or two years after completed compulsory education, and work in the next two or three years. There are, in reality, more than 3,000 possible combinations of pathways for young people during these first five post-compulsory-school years. Finally, in constructing the 16 trajectories displayed in Table 5, we have focused on pathways that represent typical trajectories for secondary-level non-completers. Those cohort youngsters who do not fit straight into one of these 16 pathways are allocated to the pathway that looks most similar to the one they have actually followed after completed compulsory education.

Table 5. Typical pathways for secondary-level non-completers, per cent of non-completers who follow these or highly similar trajectories from age 16 up to age 20

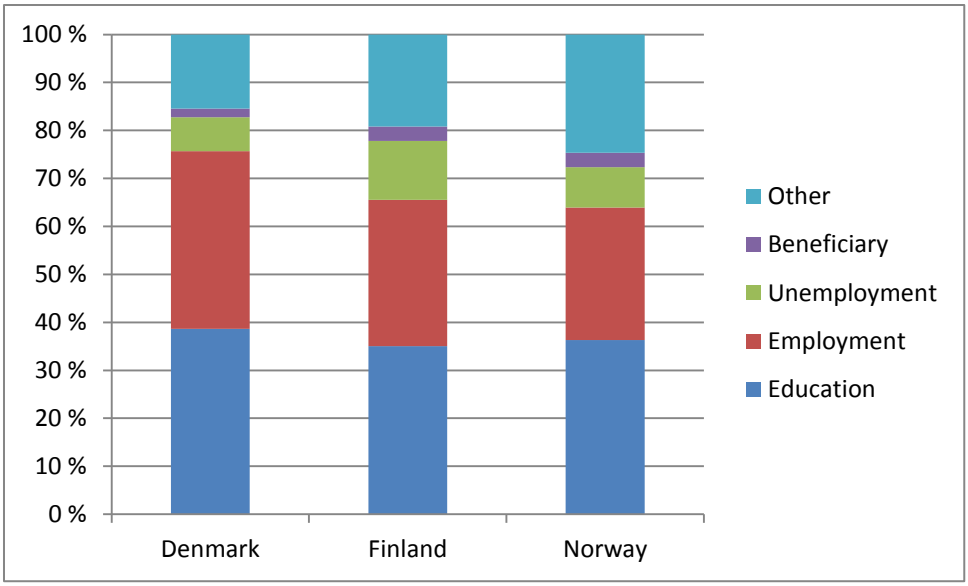
Main activity after leaving education:	*Drop-out after:*	Typical pathway	Denmark	Finland	Norway
Continue in education	5 years	[11111]	34.6	21.6	30.3
	5 years, late starter	[51111]	4.0	13.5	6.2
Employment	3 years	[11122]	10.6	11.1	14.6
	2 years	[11222]	12.3	8.8	9.4
	1 year	[12222]	9.9	4.4	2.7
	Non-starter	[52222]	4.2	6.2	0.9
Unemployment	3 years	[11133]	3.0	3.5	4.5
	2 years	[11333]	2.8	3.7	3.0
	1 year	[13333]	1.3	5.1	1.9
Disability beneficiary	3 years	[11144]	0.3	0.5	1.5
	2 years	[11444]	0.6	0.2	0.3
	1 year	[14444]	0.9	2.3	0.1
Other (inactive)	3 years	[11155]	5.1	7.4	13.3
	2 years	[11555]	3.7	2.2	6.0
	1 year	[15555]	3.9	1.7	3.5
	Non-starter	[55555]	2.7	7.9	1.7

Notes: Late starter refers to year spent in inactivity between primary and secondary education. Non-starter indicates that the young person never continued in secondary education.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

In a final step, we allocate these 16 non-completer pathways into four broad groups illustrating the young person's main activity after leaving education: remains a full-time student (Continue in education), starts working (Employment), becomes unemployed (Unemployment), is awarded disability or similar benefits (Disability beneficiary), or moves into some other form of inactivity (Other). In Table 5, the different pathways within each group differ from each other basically with respect to how long the young person stays in secondary education before s/he starts doing something else. Figure 6 illustrates the distribution of these broad groups by country.

Figure 6. Distribution of typical pathway groups for 16-to-20-year-old non-completers, by country



Notes: The shares are aggregates calculated based on the information provided in Table 5.
Source: Table 5.

Between 35 (Finland) and 40 (Denmark) per cent of the non-completers spend virtually all of the years from age 16 up to age 20 as full-time students. In other words, they typically go to school but nonetheless do not succeed in completing a secondary-level degree. In Denmark, about 35 per cent of the non-completers spend most of the remaining years (out of the five years up to age 20) in employment. In Finland and Norway, this share is somewhat lower with between 25 and 30 per cent of the non-completers following typical work-related paths. Note, though, that we here overlook the 'quality' of these employment spells. For Finland, for instance, employment also captures time spent in active labour market programs provided that they involve an employment contract.

The largest group of non-completers registered as unemployed is observed for Finland. Along with Norway, Finland also has more young people on disability benefit trajectories than Denmark (see further Chapter 6 of this report). The largest cross-country difference, however, occurs with respect to the group of non-completers' post-compulsory-school trajectories dominated by 'other' activities, that is, time spent outside education and the labour market. In Norway, approximately one in four non-completer follows these types of rather risky trajectories. In Finland, the corresponding share is about 19 per cent and in Denmark around 15 per cent.

Pathways through education and labour market outcomes at age 26

Table 6a reports the difference in the probability for non-completers, as compared to completers, of being in education at age 26 depending on the post-compulsory-school trajectory followed by the non-completer when aged 16 to 20. In calculating these probabilities, we have accounted for differences in gender and cohort (whether the young person belongs to the 1993, 1998 or 2003 cohort, as the three cohorts are pooled in our analysis), as well as in parental background measured by parental education and wage-income.

Table 6a. Non-completers' probability of studying at age 26, by main activity after leaving school; difference in probability when compared to completers

Main activity after leaving school:	*Drop out after:*	Typical pathway	Denmark	Finland	Norway
Continue in education	5 years	[11111]	-0.13	-0.03	-0.10
	5 years, late starter	[51111]	-0.09	-0.05	-0.14
Employment	3 years	[11122]	-0.12	-0.08	-0.11
	2 years	[11222]	-0.14	-0.11	-0.20
	1 year	[12222]	-0.16	-0.11	-0.22
	Non-starter	[52222]	-0.20	-0.13	-0.18
Unemployment	3 years	[11133]	-0.13	-0.07	-0.16
	2 years	[11333]	-0.15	-0.07	-0.22
	1 year	[13333]	-0.11	-0.11	-0.17
Disability beneficiary	3 years	[11144]	-0.01	-0.15	-0.08
	2 years	[11444]	-0.10	-0.19	-0.13
	1 year	[14444]	-0.14	-0.23	-0.06
Other (inactive)	3 years	[11155]	-0.05	-0.05	-0.08
	2 years	[11555]	-0.10	-0.07	-0.11
	1 year	[15555]	-0.10	-0.04	-0.16
	Non-starter	[55555]	-0.15	-0.09	-0.12

Notes: For explanations, see Table 5 and the text. A negative sign implies a weaker probability compared to completers. Low (high) absolute numbers indicate a small (large) difference to completers.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

The results imply that all groups of non-completers have a lower probability of being a student at age 26 as compared to completers (all numbers have a negative sign). Not surprisingly, the non-completer groups with the highest probability of being a student at age 26 are those young people who stayed longest in education (their probability compared with completers is negative but closest to zero). A delayed start in secondary education slightly weakens this probability for Finnish and Norwegian non-completers but not for Danish ones. The non-completers with the lowest probability of being a student at age 26 followed work-dominated trajectories already before turning 21. Indeed, the earlier the non-completer started working after completed compulsory education, the less likely s/he is in education at age 26, although this pattern is not equally evident for Norway as for Denmark and Finland. While there is no such clear-cut pattern for non-completers moving at some stage into registered unemployment, this outcome is most likely due to a relatively small number of young people following these tracks. Accordingly the results with respect to unemployment should be interpreted with some caution.

Young people experiencing serious health problems are typically not only non-completers but also belong to those who have a low probability of returning to education. Again we refer to our results presented in Chapter 6 of this report. The last rows in Table 6a, finally, reflect considerable heterogeneity among those young non-completers who follow post-compulsory-school trajectories dominated by time spent in inactivity. While many of these young people show a high probability of having returned to education by the time they turn 26, this probability declines rapidly with the years spent in secondary education before dropping out.

Table 6b presents corresponding information on differences between non-completers and completers but now in terms of employment probabilities at age 26. Non-completers having followed work-dominated post-compulsory-school trajectories before turning 21 are typically much more likely than completers to be employed also when turning 26. This holds true especially for Finland. For those having followed educational tracks, there is virtually no difference in employment probabilities at age 26 between completers and non-completers. By and large, this holds true also for those having experienced unemployment spells already before turning 21. Not surprisingly, non-completers having spent time on disability benefits or in inactivity already at a young age are much less likely to be employed at age 26 as compared to completers. While the gap in employment probability increases in both Finland and Norway with the early years spent on disability benefits or in inactivity, this is not necessarily so for Danish non-completers.

Table 6b. Non-completers' probability of being in employment at age 26, by main activity after leaving school; difference in probability when compared to completers

Main activity after leaving school:	*Drop out after:*	Typical pathway	Denmark	Finland	Norway
Continue in education	5 years	[11111]	0.07	0.08	0.00
	5 years, late starter	[51111]	-0.01	0.00	-0.02
Employment	3 years	[11122]	0.04	0.21	0.02
	2 years	[11222]	0.04	0.21	0.08
	1 year	[12222]	0.07	0.20	0.07
	Non-starter	[52222]	0.09	0.21	0.02
Unemployment	3 years	[11133]	-0.04	0.03	-0.02
	2 years	[11333]	-0.04	-0.02	0.02
	1 year	[13333]	-0.09	-0.03	-0.06
Disability beneficiary	3 years	[11144]	-0.12	-0.36	-0.17
	2 years	[11444]	-	-0.39	-0.46
	1 year	[14444]	0.05	-0.43	-0.16
Other (inactive)	3 years	[11155]	-0.08	-0.01	-0.07
	2 years	[11555]	-0.06	-0.11	-0.10
	1 year	[15555]	-0.08	-0.08	-0.07
	Non-starter	[55555]	-0.06	-0.17	-0.13

Notes: See Table 6a.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

As shown in table 6c, all groups of non-completers have a higher probability of being unemployed at age 26 as compared to completers. Not surprisingly, this holds true especially for those non-completers having experienced unemployment spells already before turning 21. While these probabilities seem large when compared with average youth unemployment ratios, it has to be kept in mind that young people with an unemployment history are more likely to be unemployed also later in life. Moreover, the probability of experiencing unemployment also as a young adult tends to increase with the number of early years spent in unemployment. This pattern is not as pronounced for Norway as it is for Denmark and Finland, though. Also for the other groups of main activities we

see a clear increase in unemployment probabilities with the duration of the 'disadvantageous' activity that the young person is engaged in.

Table 6c. Non-completers' probability of being registered as unemployed at age 26, by main activity after leaving school; difference in probability when compared to completers

Main activity after leaving school:	*Drop out after:*	Typical pathway	Denmark	Finland	Norway
Continue in education	5 years	[11111]	0.05	0.06	0.04
	5 years, late starter	[51111]	0.07	0.10	0.06
Employment	3 years	[11122]	0.06	0.02	0.04
	2 years	[11222]	0.07	0.02	0.05
	1 year	[12222]	0.06	0.03	0.06
	Non-starter	[52222]	0.07	0.03	0.06
Unemployment	3 years	[11133]	0.11	0.11	0.08
	2 years	[11333]	0.13	0.14	0.08
	1 year	[13333]	0.13	0.17	0.09
Disability beneficiary	3 years	[11144]	0.06	0.05	0.10
	2 years	[11444]	0.06	0.00	0.07
	1 year	[14444]	0.02	-0.05	0.11
Other (inactive)	3 years	[11155]	0.08	0.10	0.06
	2 years	[11555]	0.10	0.11	0.07
	1 year	[15555]	0.11	0.13	0.07
	Non-starter	[55555]	0.13	0.14	0.08

Notes: See Table 6a.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

Finally, we look at non-completers' probability of being outside both education, working life and unemployment at the age of 26 depending on their 16-to-20-year-old post-compulsory-school trajectory (Table 6d). In other words, the probabilities reported in Table 6d reflect the probability of a non-completer of being either disabled or otherwise inactive when turning 26.

Table 6d. Non-completers' probability of disability or other inactivity at age 26, by main activity after leaving school; difference in probability when compared to completers

Main activity after leaving school:	*Drop out after:*	Typical pathway	Denmark	Finland	Norway
Continue in education	5 years	[11111]	0.02	-0.11	0.06
	5 years, late starter	[51111]	0.03	-0.05	0.10
Employment	3 years	[11122]	0.03	-0.15	0.05
	2 years	[11222]	0.03	-0.13	0.07
	1 year	[12222]	0.03	-0.12	0.07
	Non-starter	[52222]	0.04	-0.11	0.08
Unemployment	3 years	[11133]	0.06	-0.07	0.11
	2 years	[11333]	0.06	-0.05	0.12
	1 year	[13333]	0.07	-0.04	0.15

Disability beneficiary	3 years	[11144]	0.08	0.46	0.15
	2 years	[11444]	-	0.57	0.26
	1 year	[14444]	0.08	0.72	0.11
Other (inactive)	3 years	[11155]	0.05	-0.04	0.10
	2 years	[11555]	0.06	0.07	0.14
	1 year	[15555]	0.07	-0.01	0.17
	Non-starter	[55555]	0.08	0.13	0.17

Notes: See Table 6a.

Source: Authors' own calculations based on pooled information on the three youth cohorts under study.

For Denmark and Norway, the probability for non-completers of being on disability benefits or otherwise inactive at age 26 is throughout clearly higher than for completers. Put differently, irrespective of the non-completer's post-compulsory-school experiences before turning 21, his/her probability of being on disability benefits or inactive at age 26 is notably higher than for those young people taking a secondary-level degree at an early age. However, while in Norway this probability declines slightly with the years spent in education before dropping out, no such pattern is observable for Denmark. Moreover, the disadvantage compared to completers is persistently clearly lower in Denmark compared to the situation observed for Norway.

The outcome is conspicuously different for non-completers in Finland. In particular, non-completers with long records in education or in the labour market have a notably lower probability than completers of being on disability benefits or inactive at age 26. Indeed, the longer this record is, the lower the probability of non-completers' having moved into inactivity at age 26. At the other extreme we have non-completers who were on disability benefits already before turning 21 for whom this state seems to be almost absorbing (cf. Chapter 6 of this report). The outcome is less clear-cut for those having followed early post-compulsory-school trajectories dominated by time spent in inactivity. Again this finding highlights the large heterogeneity that seems to characterize young people following such tracks, not least in Finland.

7. Concluding remarks and discussion

Education has traditionally been a high priority issue at the policy agenda in all Nordic countries. At the same time, the Nordic countries are characterized by strong labour market attachment of young people. In terms of official youth unemployment rates, on the other hand, the performance of the Nordic countries is only average, with Norway as a positive outlier with low youth unemployment rates and Sweden as an outlier with high youth unemployment rates. However, if measuring youth unemployment by means of the youth unemployment ratio (unemployed as a percentage of the youth population) for non-students, the Nordic countries rank among the best performing within the European and OECD areas. This observation is consistent with comparatively low rates of Nordic youth not in employment, education or training (NEETS).

The major reasons for the rather dramatic drop in Nordic youth unemployment when shifting from official unemployment rates to unemployment ratios calculated for unemployed and, finally, for unemployed non-students only are as follows. First, because of high school attendance, employment among young people is relatively low. This means that the total labour force (sum of employed and

unemployed) going into the denominator of the unemployment rate is typically quite small. Accordingly, also smaller numbers of unemployed youth may result in quite high youth unemployment rates. Second, working or looking for part-time work while studying is frequent among Nordic students. As a consequence, a full-time student may easily fulfil the conditions for being recorded in the Labour Force Survey (the source for official unemployment rates) as employed or unemployed, even though his/her main activity is full-time studying. In view of this, a first policy-relevant conclusion would be that even if the unemployment rate is a relevant measure for assessing conditions in the labour market, the unemployment ratio of non-students is likely to be a more relevant measure for assessing youth policies in relation to investments in human capital, long-term labour market prospects and welfare.

The results reported in this chapter are based on longitudinal information on three full cohorts of young people for three Nordic countries: Denmark, Finland and Norway. More specifically, we have tracked young people who turned 16 either in 1993, 1998 or 2003 up to the year 2008. This means that we have been able to follow all three cohorts for a minimum of five years (up to age 21), two cohorts for 10 years (up to age 26) and one cohort for 15 years (up to age 31). We have thereby paid particular attention to these young persons' early experiences after completion of compulsory education, that is, their way through secondary education up to age 20. A split is further made between those having completed a secondary-level degree by the time they turn 21 (completers) and those not having succeeded in achieving such a degree by this age (non-completers).

Our measure of completers and non-completers results in Denmark having a comparatively high share of non-completers and Finland by far the lowest share of non-completers, with Norway being much closer to Denmark than to Finland. This outcome seems to stand in sharp contrast to the high expected upper-secondary completion rates reported by the OECD and the early-school-leaving and drop-out rates reported by, respectively, Eurostat and the OECD especially when it comes to Denmark: both sources rank Denmark among the countries with the lowest early drop-out rates. The answer is uncomplicated, though: a sizeable fraction of Nordic young non-completers continue in school on a full-time basis and achieve their secondary-level degree only later on, after age 21.

A crucial question addressed in our chapter then is: Can we observe a clear-cut difference in subsequent labour market outcomes between those who completed a secondary-level education by age 21 and those who did not so (but possibly at a later age)? The answer seems to be that the difference in outcomes is surprisingly small for a majority of the young people under study. Moreover, the pattern is highly similar in the three Nordic countries investigated. In particular, by the time our young people reached the age of 26, a large majority of both the completers and the non-completers was either in employment or still in school. The shares of young people engaged in these two activities had improved further by the time they turned 31. About 95 per cent of the Danish and close to 90 per cent of the Finnish and Norwegian young people who had completed their secondary education by the time they turned 21 (completers) were either employed or still studying on a full-time basis. The corresponding shares for the non-completers were 82 per cent for Denmark and close to 70 per cent for Finland and Norway.

The high "success rates" of also non-completers suggest that they cover a highly diverse group of young people. Indeed, as shown by our calculations, a remarkable number of the non-completers continue in school or re-enter education to complete a secondary-level degree at a later age. Put

differently, had we measured our completers and non-completers at a later age, say, at age 26, then the share of non-completers would have been substantially lower, especially for Denmark and Norway, and the observed cross-country differences in non-completion rates accordingly much smaller. Indeed, Finnish youngsters seem on average to use less years for achieving their secondary-level degree (much higher share of completers by age 21) than Norwegian and especially Danish youngsters (much lower share of completers by age 21). Indeed, many young Danes seem to have a prolonged secondary education career. This finding of notable differences between our three countries with respect to the time that young people typically devote to completing their secondary education indicates that our non-completion rate, measured at age 21, is as much a measure of speed as a measure of drop-out rates. In view of this, a second policy-relevant conclusion from our analysis is the importance of approaching the early-school-leaving problem not only from a rather static point-of-view as in the Eurostat and OECD statistics but also from a more dynamic perspective.

However, all young people labelled non-completers at age 21 do not fare equally well as those following strong education or employment trajectories despite late or no completion of a secondary education. Compared to completers, non-completers tend to face a much higher risk of becoming unemployed, of moving onto disability benefits (cf. Chapter 6 of this report) or of being for other reasons outside both education and working life. This risk seems to be extraordinarily high for Norwegian non-completers but is by no means negligible for Danish or Finnish non-completers, either. Moreover, this risk of a non-negligible share of the non-completers moving, on a more or less permanent basis, outside both education and working life is, in effect, well reflected in their early post-compulsory-school trajectories up to age 20. Hence, a third policy-relevant conclusion from our analysis is the importance of improved systems for following-up young people on a regular basis also after completion of compulsory education, with the view of making the most in terms of targeting and early interventions of the information and signals of later problems that such tracking would produce.

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