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Are low-skilled young people increasingly useless, and are men the losers among them?

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ABSTRACT

Claims that low-skilled young people, and especially the men among them, are being excluded from the labour market have been influential over recent decades, contributing to an increasing concern over the issue of early school leaving. In this study, we use high-quality administrative data and sequence analysis to investigate the school-to-work trajectories of three birth cohorts of early school leavers in Norway between the ages of 16 and 26. Our observation period (from 1994 to 2015) covers several structural transformations of the Norwegian economy, such as increased migration, labour market polarisation and automatisisation, widely held to have worsened the prospects of low-skilled young people. In accordance with expectations, we find some signs of increased labour market exclusion among early school leavers, relating to changes in welfare policy. However, the majority still follow trajectories characterised by employment and/or further education. Contrary to discourses on low-skilled men as losers, but in accordance with previous research, we find that male early school leavers consistently predominate in trajectories leading to middle and high incomes. Even in the comparatively gender equal country of Norway, the gender-segregated labour market consistently appears to be providing low-skilled men with more economically rewarding life course trajectories.

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Introduction

The pressure on young people to acquire education credentials at the minimum level of upper secondary school has increased over recent decades. Despite most young people seeking to fulfil these expectations, many fail and find themselves facing adult life with no or few formal qualifications. According to the OECD (2017b), this situation is one of the main challenges facing education systems today. Due to data and methodological limitations, research on early school leaving has predominantly focused on factors that contribute to noncompletion of upper secondary education (De Witte et al. 2013). Research has also demonstrated that this group tends to experience a disproportionate number of problems later in life and often depend on various forms of welfare support (Bäckman et al. 2015; Brunello and De Paola 2013; De Witte et al. 2013; Lamb and Markussen 2011). In light of ongoing technological and economic changes, and other changes such as the increased immigration that many countries experience, there has been much concern that the situation of early school leavers has become more difficult in recent years. With the education expansion coinciding with the loss of job opportunities in male-dominated industries, concerns have long been raised that low-skilled men are being squeezed out of the labour market (Bradley 1999).

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In this study, we investigate the work, education, and welfare trajectories of early school leavers in Norway between the ages of 16 and 26 years and compare the situation of young men and women belonging to three different birth cohorts (those born in 1978, 1983 and 1988). We address two questions: Has the situation become more difficult for more recent cohorts of early school leavers? How do the life course trajectories of early school leavers differ by gender, and has this changed across recent cohorts? We aim to make several contributions to existing research, both substantive and methodological. By using high-quality Norwegian population-level administrative data, not affected by the low response rates or high attrition rates typical of longitudinal survey data, we are able to examine an otherwise hard-to-reach group. Through holistic analysis of extended life course sequences, we investigate how trajectories develop over time. This contrasts with more conventional approaches in a research field dominated by cross-sectional analyses of single events and transitions. Likewise, our emphasis on gender comparison in itself constitutes a contribution, since there is limited research on the significance of gender for the opportunities and constraints faced by low-skilled young people (Blossfeld, Skopek, Kosyakova, Triventi, and Buchholz 2015, 348).

Norway is an interesting case for investigating the long-term situation of early school leavers. Measured against the EU definition of early school leavers, Norway's share of early school leavers is at the EU average (Eurostat 2019a). As elsewhere, the historical period under study (1994–2014) has entailed several structural transformations of the economy and the labour market, through processes of de-industrialisation, automatisisation, and labour migration. Norway was not as severely affected by the economic crisis following 2008 as other European countries and maintained low rates of youth unemployment throughout this study. The challenges facing early school leavers in Norway in our observation period are thus more likely to be smaller than in many other countries, and thus to reflect structural changes rather than short-term market fluctuations.

The results show some signs of increased labour market exclusion among early school leavers, relating to changes in welfare policy. However, the majority still follow trajectories characterised by employment and/or further education. Contrary to discourses on low-skilled men as losers, but in accordance with previous research, we find that male early school leavers consistently predominate in trajectories leading to middle and high incomes. Even in the comparatively gender equal country of Norway, the gender-segregated labour market thus appears to be providing low-skilled men with more economically rewarding life course trajectories. The results can partly be explained by the Norwegian context where a substantial share of early school leavers are in fact late finishers.

In the following, we first present the study's theoretical background and relevant findings from previous research. We then provide information about Norway's institutional context and present the data and methods used in the analysis. After presenting the results, we assess their broader implications in the concluding discussion.

Theory and previous research

This paper has been motivated by recent advances in combining a life course perspective and sequence analysis (see, e.g. Gauthier, Bühlmann, and Blanchard 2014). The life course perspective investigates the impact of historical context and institutional structures on individual life courses over time and the interdependencies between different spheres of life, such as education, work, and family life (Elder 1995). Although early school leavers are more likely than others to experience problems later in life, there is also evidence that a substantial share of early school leavers succeeds in gaining employment and completing education later in life (Høst and Skållholt 2013; OECD 2017). Thus, in a life course perspective, early school leaving should not be seen as a finite status, but rather as part of a process where individuals might enter the labour force and return to school multiple times. To grasp such complexity, there is a need for longitudinal methods that can investigate life courses in a more holistic way and investigate longer trajectories and multiple role transitions over time.

The period under study has seen several significant structural changes, which leads us to expect that the situation of early school leavers has become more difficult. At the same time, predictions that low-skill jobs will disappear have been widely challenged (Autor 2015; Brynjolfsson and McAfee 2014; Grugulis and Bozkurt 2011; Hislop 2013; Lloyd, Warhurst, and Dutton 2013; Thompson, Warhurst, and Callaghan 2001; Vogt 2016). There is more agreement, however, that workers with few formal skills have seen their employment conditions worsen over recent decades (Warhurst et al. 2012). While job quality in high-skill occupations has been stable, job quality in low-skill segments has become markedly worse (Carré et al. 2012; Kalleberg 2013). Job fragmentation and institutional erosion have had particularly severe impacts on the lower end of the labour market (Dølvik 2016, 7). Low-skilled young people have noticed the move towards 'increased flexibility' the most (Palier and Thelen 2010, 132), often getting trapped 'churning' in low-pay/no-pay cycles, between spells in insecure jobs and unemployment (Shildrick and MacDonald 2013). And as they age, today's young people are increasingly likely to run up against 'reduced possibilities of progression to better forms of employment' (Rubery, Keizer, and Grimshaw 2016). Thus, even though some early school leavers might find a job, there is still reason to expect that their work conditions might have become more difficult over the last decades.

Increased migration, especially labour migration in the wake of EU expansions in 2004 and 2007, is another critical labour market change in Europe over recent decades. There is much to suggest that it has significantly affected opportunities for young people with few formal qualifications. Norway has among the highest relative rates of immigration from Central and Eastern Europe (Friberg 2016, 20). Although receiving countries have overall reaped considerable benefits from this migration, the 'losers' have, in general, been 'less-skilled labour' (Dølvik 2016, 7). Research suggests that this labour migration has entailed 'displacement effects' for workers with few or no education qualifications (Friberg 2016a, 26). In addition, student labour has placed downward pressure on wages and working conditions in low-end work, partly crowding out early school leavers from the job market (Lloyd and Payne 2016, 179; Hovdhaugen 2015; Richardson, Evans, and Gbadamosi 2009).

Nearly all EU Member States report a higher proportion of young men than young women as being early leavers (Eurostat 2019a). For this reason, early school leaving has often been framed within policy debates as predominantly affecting boys and men (Vogt 2008). Even though the question about gender differences among early school leavers has not yet been studied in ways enabling empirical investigation of changes over recent decades, there is ample evidence suggesting a more complex picture. Previous research on early school leavers in Scandinavia has suggested 'a gendered pattern by which female vocational track dropouts tend to fare worse than men' (Bäckman et al. 2015, 263). The fact that young women are more often not in education, employment or training (NEET) in the vast majority of European countries (Eurostat 2019b) also suggests that, overall, young women face a more difficult situation than young men relating to labour market exclusion and inclusion. Other research also points in this direction. In a recent study of transition sequences in ten European countries, young women were found to experience more 'long periods of inactivity' than men (Brzinsky-Fay 2015, 50). British research similarly suggests that women face more significant hindrances to career advancement from low-level entry jobs than men, and that this disparity has grown over the last decades (Bukodi and Dex 2010). A study based on data from Norway and the US demonstrates that the economic returns to education in both countries vary by gender; at any given level of education, women receive lower returns from their education than men (Reisel 2013). Related discrepancies have been documented in both British (Francis and Skelton 2005) and Nordic research: boys lower grades do not correspond to a subordinate social position with lower incomes and less power than females (Arnesen, Lahelma, and Öhrn 2008, 8). Several more general gender differences also raise doubt about the framing of early school leaving as a challenge mostly for boys and men. In Norway as elsewhere, the labour market participation rate of men is higher than that of women. In the age group between 15 and 74 years, 74% among men and 69% among women were in the labour force in 2019 (Statistics Norway 2019a), but whereas 35% of

employed women worked part-time, only 14% of employed men did the same (Statistics Norway 2019b). In a large-scale European comparison, Blossfeld et al. (2015, 375) were surprised to find that the Scandinavian countries had the largest share of women entering 'low-quality' jobs.

Institutional context

Like the other Nordic countries, the Norwegian education system relies on egalitarian and redistributive principles (Lamb et al. 2011). The policy has been that education should be free, reduce inequality, and hinder all forms of marginalisation (Imsen and Volckmar 2014; Nevøy et al. 2014). The education system is mainly public, and the principle of social inclusion is strong (Imsen and Volckmar 2014). All students have a right to education suited to their abilities, and most students who require individual instruction are integrated into ordinary schools (0.3% of pupils attend special needs schools) (Imsen and Volckmar 2014).

Children in Norway start school the year they are six years old. The first ten years are compulsory, and all students follow the same programme in the primary and lower secondary education system without any segregation based on abilities, skills or gender. All students have the right to undertake three years of upper secondary education. The vast majority (97.7%) start upper secondary education the year they turn 16, the same year they finish lower secondary education (Statistics Norway 2019d). In the upper secondary system, students can choose between either general academic studies that qualify them to enter the higher education system, or a vocational track that leads to different kinds of vocational competence (e.g. building and construction, health and social care). Which study programme they can enter depends on their previous grades, but all students are guaranteed to get a place in one of the existing programmes.

Young Norwegian's educational choices continue to reflect the gender-segregated labour market, and this is clearly reflected in the vocational tracks of upper secondary education. As elsewhere, recent tendencies towards alleviation of gender segregation have mostly been limited to high-skill occupational groups (Jensberg, Mandal, and Solheim 2012; Steinmetz 2012; Teigen and Skjeie 2017). In manual occupations, gender segregation has increased over recent decades (Steinmetz 2012, 118).

Like most other European countries, Norway operates with its own 'official definition' of early school leaving, in addition to the EU definition (European Commission 2014). Norway's national definition states that any person who has not completed upper secondary education within five years after starting is an early school leaver. Over the period studied in this article (1994–2015), nearly one-third of each birth cohort (28–32%) were in this category.

The completion rate for general academic tracks is higher than for students following vocational tracks and girls consistently have higher completion rates than boys. In addition, there is a clear social gradient. Students whose parents have completed university (or university college) have higher rates of completion in secondary education than students whose parents have only secondary or primary education (Statistics Norway 2019c).

Data

The study takes advantage of longitudinal administrative data collected and linked by Statistics Norway. These data cover the entire Norwegian population starting from the early 1990s, and contain detailed information on demography, social security benefits, means-tested social assistance, work activity, unemployment benefits, income, and education careers. This rich longitudinal data set is well suited to sequence analysis and the depiction of life-course phases from a holistic perspective. Since this is a study of early school leaving, we limit the population to persons who had started upper secondary school at age 16 years but had not finished by age 21 years. This definition corresponds with Norway's official definition (European Commission 2014, 27), which has formed the basis for public debates throughout the 2000s (Vogt 2017). In this study, we follow three complete

Table 1. Status alphabet, monthly statuses.

Disability	Registered with disability pension current month
Health related	Registered with either sickness benefit, temporary disability benefit, vocational or medical rehabilitation, or work assessment benefit current month
No work	Registered as unemployed or/and social assistance current month
Higher education	Registered in higher education current month
General upper sec.	Registered in general upper secondary education current month
Vocational upper sec.	Registered in vocational upper secondary education current month
Work, 1 st tertile	Monthly status is based on annual income in the 1 st income tertile (age 16–66)
Work, 2 nd tertile	Monthly status is based on annual income in the 2 nd income tertile (age 16–66)
Work, 3 rd tertile	Monthly status is based on annual income in the 3 rd income tertile (age 16–66)
Other	Registered if none of the other statuses apply current month

birth cohorts (born in 1978, 1983 and 1988) from the age of 16 to 26 years, a total of 42 775 persons. This sampling strategy allows for comparison of life-course trajectories in three different recent historical periods, over which structural transformations would be expected to have made a negative impact on the prospects of low-skilled young people.

The administrative data provide an abundance of information about social security, work, education, income, and family relations at any point in time. For this particular research topic, we have defined ten mutually exclusive states. These states reflect positions within the education system, at work, and as regards social welfare. The status alphabet has been defined in such a way that if two or more states occur at the same time, the topmost state in [Table 1](#) is given preference.

Methodology

The purpose of this study is to investigate the life course trajectories of young school leavers over time. This intention implies that event history analysis, which has been the dominant method in quantitative life course research is not appropriate, because of its focus on single transitions ([Aisenbrey and Fasang 2010](#)). We instead use sequence analysis, a more holistic approach that is more firmly grounded in life-course theory ([Sackman and Wiggins 2001](#)). Combined with cluster analysis, sequence analysis can be used to reduce complexity and create order from large numbers of seemingly chaotic individual sequences. Within sequence analysis, the unit of analysis is not the single transition, but the whole trajectory consisting of several interlinked transitions. As a result of this, sequence analysis has some clear benefits over alternative approaches when it comes to describing how life course trajectories diverge and change over time. Thus, as a mapping tool, sequence analysis is extremely useful. However, when it comes to circumstances where the analyst has causal ambitions, sequence analysis in its current form is less useful. Sequence analysis is not a replacement for regression-based approaches but may serve as a beneficial supplement.

The analysis follows a three-step procedure. The first step is to calculate pairwise distances between sequences. In short, this is the number of steps that must be performed to make two sequences similar ([Brzinsky-Fay 2007](#)). The second step follows the clustering procedure, whereby different types of trajectories are identified. The third and final step consists of multivariate descriptive analyses of the different types, and on this basis, identification of patterns across and within the three cohorts.

We start by calculating the pairwise distance or dissimilarity between sequences ([Gabadinho and Ritschard 2013](#)). Several approaches to the calculation of dissimilarity between sequences are available. Slightly simplified, one can place the different approaches along a scale, where the one side considers the order of events to be more important than their timing, and the other considers the timing of events crucial ([Lesnard 2010](#)). This allows the researcher to make theoretically guided choices of cost-setting schemes in the matching process. Thus, when calculating the pairwise distances, the interest is not in the actual transformation of one sequence

into another, but how they differ in socially meaningful aspects (Studer and Ritscard 2014). Our interest here, when studying early school leavers, lies less with the exact timing of the states than with the actual states and the order of the distinct states experienced. In accordance with this, sequences with the same states and order of states, e.g. starting work directly after interrupted upper secondary schooling, are considered similar irrespective of whether the interruption occurred at age 16 or 19 years. In consequence, our research interest guides us in the direction of a cost-setting scheme that emphasises the number of common attributes between sequences and puts less emphasis on the exact timing of states. In accordance with this, we have chosen to calculate the *longest common subsequence* (LCS), a cost scheme that emphasises order over timing. Within this approach, sequences are time warped by indel operations to identify spells in a similar order. Time warping means that events coded identically but occurring at different moments in time are considered almost equivalent, except for the weighted number of episodes that separates them (Lesnard 2010). When calculating the LCS distance, the distance between two sequences, x and y , is based on the length of the LCS (Gabadinho and Ritschard 2013). The fewer common elements there are between any two sequences, the greater the distance. Formally, the LCS is defined as:

$$d(x, y) = A(x, x) + A(y, y) - 2A(x, y)$$

where $d(x,y)$ defines the distance d between sequences x and y . This distance is based on $A(x, x)$ and $A(y, y)$, which are the maximum lengths of sequences x and y . The length of the LCS is multiplied by -2 , and then subtracted from the sum of the two maximum sequence lengths.

The second step of the sequence analysis is to apply cluster analysis to the dissimilarity matrix to identify trajectory types. For this step, we follow a procedure recommended by Studer (2013), where the algorithm of Ward (hierarchical) clustering is combined with partitioning around medoids (PAM) clustering. Here, the results from the hierarchical clustering procedure is specified as the starting point for the PAM clustering. In our case, and in line with the results from Studer (2013), this leads to better quality cluster solutions than the solutions produced by Ward clustering. A ten-cluster solution maximised the average silhouette width (Kaufman and Rousseeuw 1990) for the population under study. For the purpose of labelling and describing the sequence type, we used chronograms depicting aggregate distributions of states over time (Figure 1), representative sequence plots (see Gabadinho and Ritschard 2013), as well as sequence index plots sorted by multi-dimensional scaling (Appendix Figure 1).

In the third and last step of the analysis, multinomial logistic regression is run on the trajectories identified by the clustering procedure (see table A1). This allows us to control for compositional changes over cohort and gender. Questions of causality are, however, left unanswered. Two sets of regression-based results are presented, where the first departs from questions related to cohort and changes over time, and the second to gender differences.

Results

The purpose of the sequence analysis is to identify the most typical trajectory types within education, work, and welfare state benefits among early school leavers. In Figure 1, we present the chronograms for the ten-cluster solution that maximised the silhouette coefficients. These can be compared to a series of stacked bar charts, and provide a depiction of the state distribution at any point in time for the ten trajectory types. For sequence index plots, see Appendix Figure 1.

Two of the ten trajectory types are unique to or strongly dominated by those who dropped out of upper secondary general academic education, while six are strongly dominated by those who dropped out of vocational education. The two remaining trajectory types have an even representation of early school leavers from both academic and vocational tracks.

On the uppermost row, we find the two trajectory types 'Long vocational -> high income' and 'Long vocational -> medium income', both characterised by long and mostly uninterrupted spells of vocational education at the upper secondary level leading into work with high- or mid-level income.

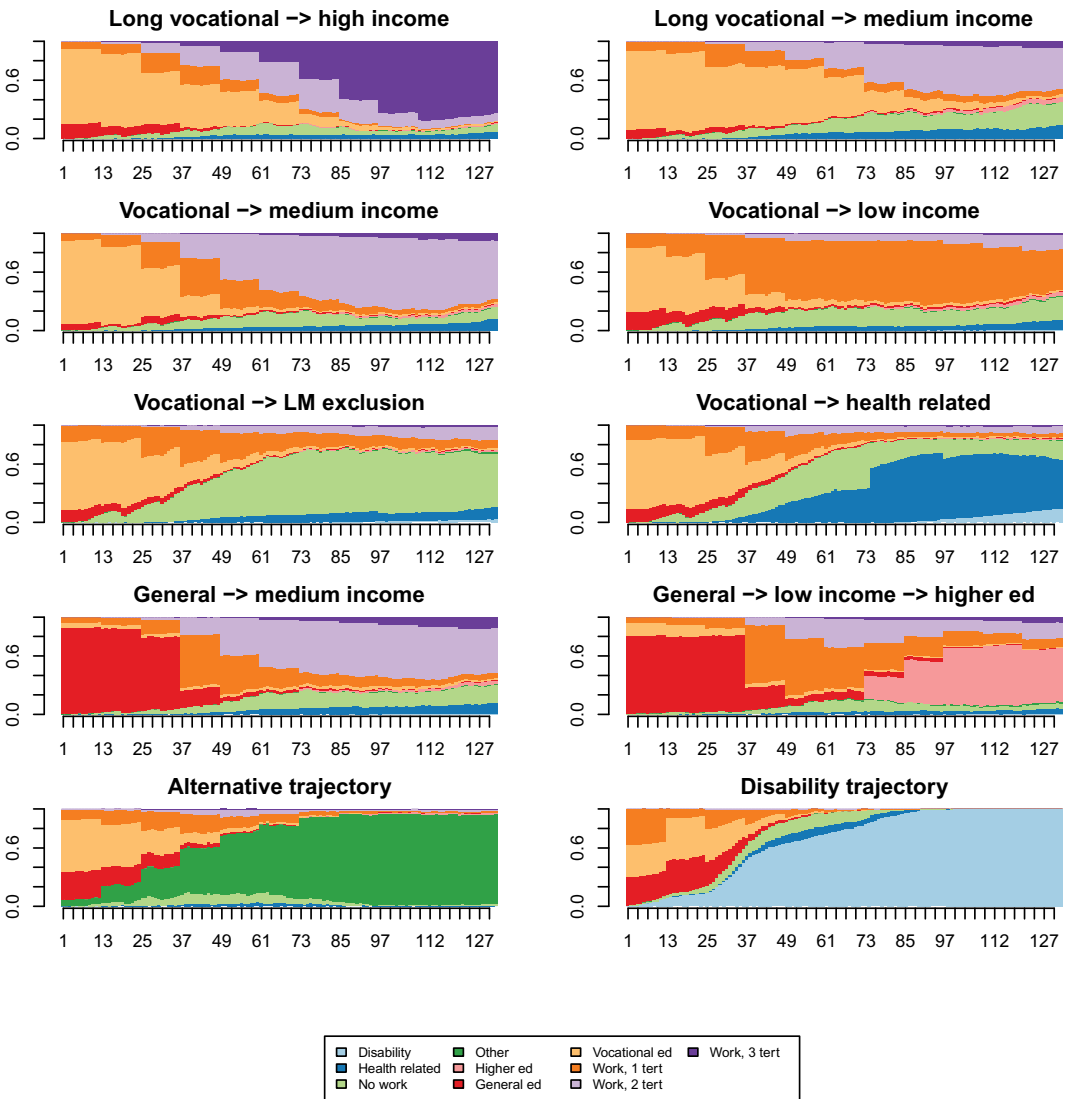


Figure 1. Cluster-specific chronograms, with all three cohorts pooled.

Notably, however, roughly half (46% and 54%) of the early school leavers in these two clusters had finished upper secondary education by the end of the observation period at age 26 years. Consequently, these are trajectory types where the official definition of early school leaving (completion after five years) yields a misleading picture. The average age of receiving a certificate of completed apprenticeship in Norway is 27 years (OECD 2017b).

In the second row to the left, we find those who dropped out of vocational education after a shorter time span (than those in the two previous clusters), and then entered the labour market. In this cluster, 85% still had no certificate of completed apprenticeship at age 26 years. Most of these reached a medium income rather quickly, and experienced stable uninterrupted income over most of the observation period.

In the second row to the right, we find those who left vocational education and then entered stable low-income work.

The 'Vocational -> Labour Market exclusion' trajectory is characterised by early school leaving from vocational education, followed by some periods of low income, but mostly unemployment and/or means-tested social assistance benefits. In this group, 88% still had no certificate of completed apprenticeship at age 26 years.

'Vocational -> health related' is characterised by early school leaving from vocational education leading into unemployment and then health-related benefits. There is a very pronounced increase in health-related benefits after approximately 76 months that will be scrutinised in more detail in the cohort-specific description and the multivariate analyses below.

In the fourth row to the left, we find the 'General -> medium income' trajectory. This trajectory type is characterised by early school leaving from academic upper secondary education leading into a short period of low-paid work which then leads into stable medium income. It is worth noticing that the process of leaving school is more abrupt for the general education typologies than for vocational tracks. Hence, in contrast to the vocational education dropouts, most of the general education dropouts have actually left the education system by age 21 years. By the end of the observation period, at age 26 years, 85% of those who follow this trajectory type still had not completed upper secondary education.

The 'General -> low income -> higher education' trajectory is characterised by leaving general education at age 19 years without having received a certificate, followed by mostly low-income work from age 19 to 23 years, then followed by higher education. This trajectory type reflects one of the distinctive regulations in the Norwegian education system, the '23/5-rule'. This rule states that if you are 23 years of age or more, have successfully passed the examination of six specified upper secondary subjects (but received no school-leaving certificate), and have a combined school and work experience of five years, you will be admitted into the system of higher education. This trajectory type provides a very clear visualisation of how historically specific institutional contexts contribute to shaping individual life courses, a central concern within the life course perspective (Elder 1995).

For the 'Alternative trajectory', comprising only 1.6% of each cohort (see Table 2), the heterogeneous 'other' status dominates. This status covers situations that are otherwise not explicitly defined in the status alphabet. Thus, in this trajectory type, we find persons who emigrate, go to prison, or otherwise leave the registers under study.

Persons following the last trajectory type, the 'Disability trajectory' (3.2% of early school leavers) go more or less directly from early school leaving onto a disability pension, which for the great majority is a permanent state that very seldom leads back into employment.

Table 2 shows the aggregate characteristics of the ten trajectory types. Starting with the totals at the bottom of the table, we see that on average across all three cohorts approximately 29% of those who by the official definition are classified as early school leavers follow trajectories characterised by labour market exclusion and/or support by social welfare benefits. Conversely, 71% had followed trajectories characterised predominantly by employment and/or further education. Comparing the cohort-specific distributions along the top rows of the table gives an overall impression of stability. However, the cohort average of 29% in trajectories dominated by labour market exclusion conceals notable developments across the three cohorts. These most problematic trajectory types were followed by 26% in the two oldest cohorts, but 32% in the youngest cohort. The change between the two latest cohorts is largely accounted for by an almost fourfold increase in the share following the 'Vocational -> health related' trajectory type between the 1999–2009 cohort and the 2004–2014 cohort. This increase must be seen in light of the introduction of the Work Allowance Benefit in 2010. This benefit replaced previous temporary health-related benefits and had broader inclusion criteria than those for the benefits it replaced. It is also worth noticing that the trajectory of 'General -> medium income' shows a marked decrease over time, thus signalling less favourable labour market conditions for those lacking general formal qualifications. This topic is further scrutinised in the multivariate analyses where potential compositional changes are taken into account.



Table 2. Aggregate characteristics of clusters.

Cohort	Long vocational -> high income	Long vocational -> medium income	Vocational -> -> low income	Vocational -> LM exclusion	Vocational -> health related	General -> medium income	General -> low income -> higher ed	Alternative trajectory	Disability trajectory	Total
1994-2004	11,5	13,9	9,4	14,3	6,4	14,9	6,8	1,7	3,5	100 (12920)
1999-2009	11,2	15,9	9,7	17,4	4,0	11,9	5,2	1,8	3,2	100 (13483)
2004-2014	8,7	15,7	7,7	13,0	15,1	9,7	6,0	1,3	3,1	100 (16372)
Country background										
Norway	10,8	15,6	8,4	14,8	8,9	11,5	5,7	1,3	3,2	100 (36119)
Western Europe	8,3	12,9	9,5	15,6	9,4	13,5	7,1	3,3	3,6	100 (3404)
Non- Western	6,6	12,9	12,7	14,2	9,2	14,9	7,7	2,6	3,6	100 (3252)
Gender										
Male	16,4	15,3	5,7	15,1	7,0	11,2	5,3	1,6	3,1	100 (25344)
Female	1,6	15,0	13,5	14,4	11,8	13,0	6,9	1,5	3,4	100 (17431)
Highest achieved edu at 26										
Not completed upper sec	7,5	9,0	10,4	17,5	10,4	13,7	3,2	2,1	4,3	100 (31679)
Completed upper sec	20,7	36,2	4,6	7,1	5,1	7,5	6,5	0,2	0,1	100 (9755)
Higher education	1,0	10,4	3,6	6,0	3,4	2,2	67,7	0,2	0,0	100 (1341)
Family status at 26										
Single	12,4	13,6	5,1	16,6	10,3	12,7	5,2	0,1	4,7	100 (18884)
Couple w/o children	11,4	15,8	5,8	10,7	9,0	16,9	6,4	0,0	1,1	100 (746)
Couple w children	11,0	18,1	10,0	11,2	7,4	12,4	6,4	0,1	2,0	100 (14720)

(Continued)

Table 2. (Continued).

	Long vocational -> high income	Long vocational -> medium income	Vocational -> medium income	Vocational -> low income	Vocational LM exclusion	Vocational -> health related	General -> medium income	General -> low income -> higher ed	Alternative trajectory	Disability trajectory	Total
Single parent	4,9	15,1	15,5	17,4	18,9	9,6	9,5	7,2	0,1	1,9	100 (7367)
Other	1,2	4,1	3,3	2,9	7,7	4,0	4,8	6,5	60,0	5,5	100 (565)
Father's income quartile											
Unknown	7,7	12,2	16,4	10,9	19,3	11,3	9,8	4,9	3,7	3,7	100 (3298)
Income quartile 1	7,5	13,3	17,3	9,8	20,3	12,1	9,9	4,4	1,5	3,8	100 (6691)
Income quartile 2	9,0	16,2	20,3	9,5	16,6	8,6	10,5	4,8	1,3	3,3	100 (8815)
Income quartile 3	11,6	16,7	20,6	8,1	13,8	8,2	11,9	5,0	1,3	2,9	100 (12179)
Income quartile 4	12,3	14,8	18,5	8,1	10,1	7,7	14,9	9,1	1,6	3,1	100 (11792)
Parental education											
Not completed upper sec	10,5	14,8	21,4	9,4	17,5	8,8	9,6	3,3	1,5	3,3	100 (19855)
Completed upper sec	11,3	17,2	19,1	8,2	13,9	9,3	11,8	5,1	1,3	2,7	100 (14021)
Higher education	8,3	13,0	14,1	8,6	10,3	8,9	17,4	13,4	2,1	3,9	100 (8899)
Total	10,3	15,2	19,1	8,8	14,8	9,0	12,0	6,0	1,6	3,2	100 (42775)

Table 2 also shows that early school leavers of non-Western origin are less prone to following the long vocational track leading to high income work than their Norwegian or Western European peers. Likewise, persons of non-Western origin are less likely to follow the two vocational tracks leading to medium income. On the other hand, early school leavers of non-Western immigrant origins are more likely to follow the 'Vocational -> low income' trajectory.

The perhaps most striking result in Table 2 is the gender distribution along the income trajectories. More than 16% of the male early school leavers follow a trajectory that leads to high income, while only 1.6% of the women do the same. In contrast, more than twice as many women follow the 'Vocational -> low income' trajectory. Women are also strongly overrepresented among those who end up on health-related benefits. In the following multivariate analyses, we look more closely at gender effects net of potential compositional differences between men and women.

Scrutinising education credentials towards the end of the observation period at age 26 years can cast light on the accuracy and relevance of the official definition of early school leaving where the outcome is measured at age 21 years. As described earlier, the majority of those who had completed upper secondary education at age 26 years can be found in the trajectories of 'Long vocational -> medium income' and 'Long vocational -> high income'. For these clusters, delayed vocational education is perhaps a better term than early school leaving.

Family status at age 26 years is distributed quite evenly between the trajectory types, although there is a tendency for single parents to be overrepresented along the more problematic trajectories.

Father's income when respondents were 18 years reveals a strong social gradient in relation to the trajectory types. Early school leavers with high-income fathers are overrepresented among the vocational trajectories leading to high and medium income, as well as the trajectory from general education to work followed by high education. Contrasting this, persons coming from families with low income are overrepresented among those excluded from the labour market and those on health-related benefits. A somewhat different pattern can be found for parental education, where those coming from high-education homes are more prone to ending up along the two trajectory types involving general education.

In the following, we look further into some of the pronounced gender and cohort differences revealed in Table 2 net of potential compositional differences and confounders. For ease of presentation, predicted probabilities of cluster membership for selected variable combinations are presented. The full multinomial logistic regression model can be found in Appendix Table A1. Interactional terms between gender and cohort did not improve the overall model fit and have therefore not been included.

Figure 2 presents predicted probabilities of cluster membership over cohort after controlling for compositional changes. More specifically, it shows cluster membership across the cohorts of Norwegian women whose father had income in the third quartile, and father and/or mother had higher education. The multinomial regression (Appendix Table A1) reveals that the cohort effects are highly significant for several of the outcomes, but perhaps the most substantial one is the effect on the 'Vocational -> health related' trajectory. The net probability of following this trajectory increases from 5% for the 1999–2009 cohort to 18% for the 2004–2014 cohort. Another very noticeable development over time is the decreased probability of following the 'General -> medium income' trajectory. Over the period from 1994–2004 to 2004–2014, the predicted probability went down from 23% to 14%. Thus, the chance of succeeding in the labour market after dropping out of general academic upper secondary education has fallen over the period. Interestingly, after controlling for compositional changes, there is no similar development over time within the vocational typologies. On the contrary, the probabilities of following any of the vocational trajectories leading to medium income has increased over time.

In Figure 3, we present the predicted probabilities of cluster membership over gender for persons born in Norway, belonging to the 2004–2014 cohort, whose father had income in the third quartile, and whose father and/or mother had completed at least three years of higher education. The most conspicuous gender difference in Figure 3 is the gender difference in the predicted probability of

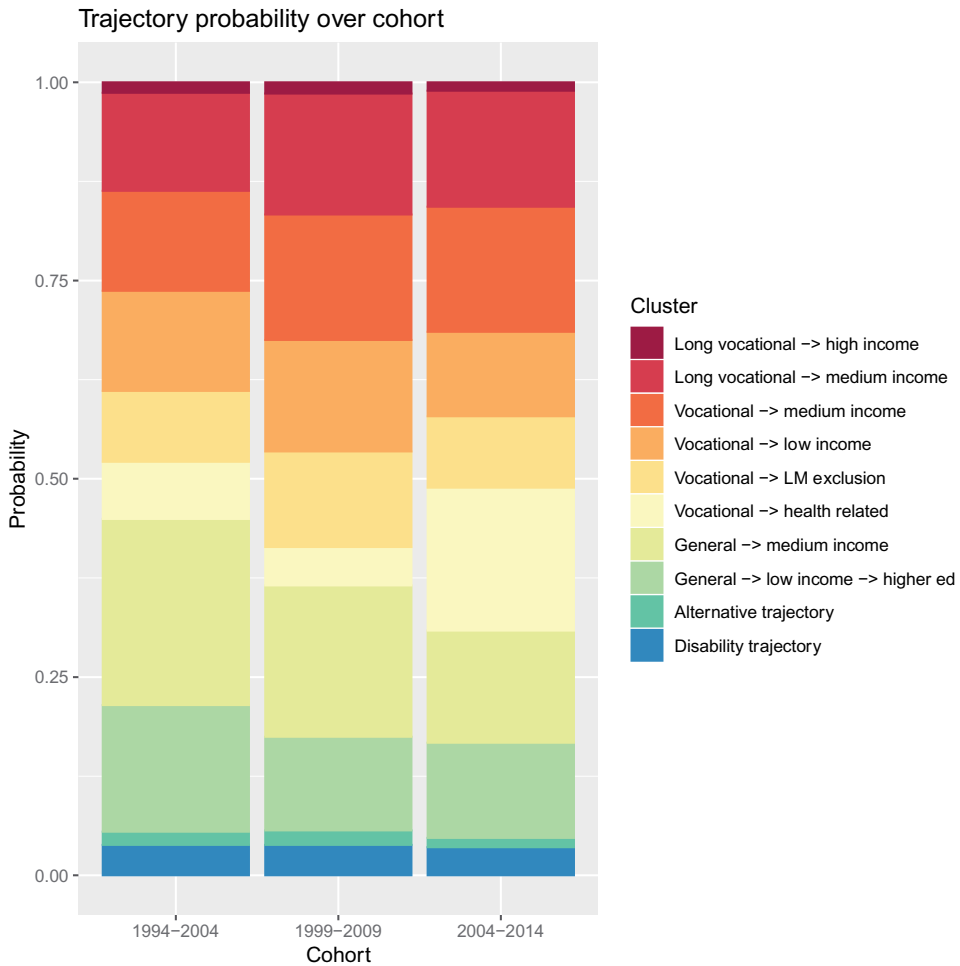


Figure 2. Predicted probabilities of cohort and cluster membership.

ending up in the ‘Long vocational -> high income’ trajectory. After controlling for potential confounders, men have a 13% probability of following this trajectory, while women have a 1% probability. Strengthening the impression of gendered disadvantage is the fact that women are far more likely (11%) to follow the ‘Vocational -> low income’ trajectory than men (5%). Women are also more likely to follow the trajectory leading to health-related benefits. Here, the proportion of women and men is 18% versus 12%.

Discussion

The purpose of this study has been to investigate education, work, and welfare trajectories of three different birth cohorts of early school leavers in Norway. We have addressed two main questions: Has the situation become more difficult for more recent cohorts of early school leavers? How do the life course trajectories of early school leavers differ by gender and has this changed across recent cohorts? In light of previous studies, we expected that the situation of early school leavers had become worse over time, and that they would tend to rely more on support from the welfare state. We also assumed that even though young men are more likely to be early school leavers than young women, the labour market situation would be more difficult for young women. Using high-quality

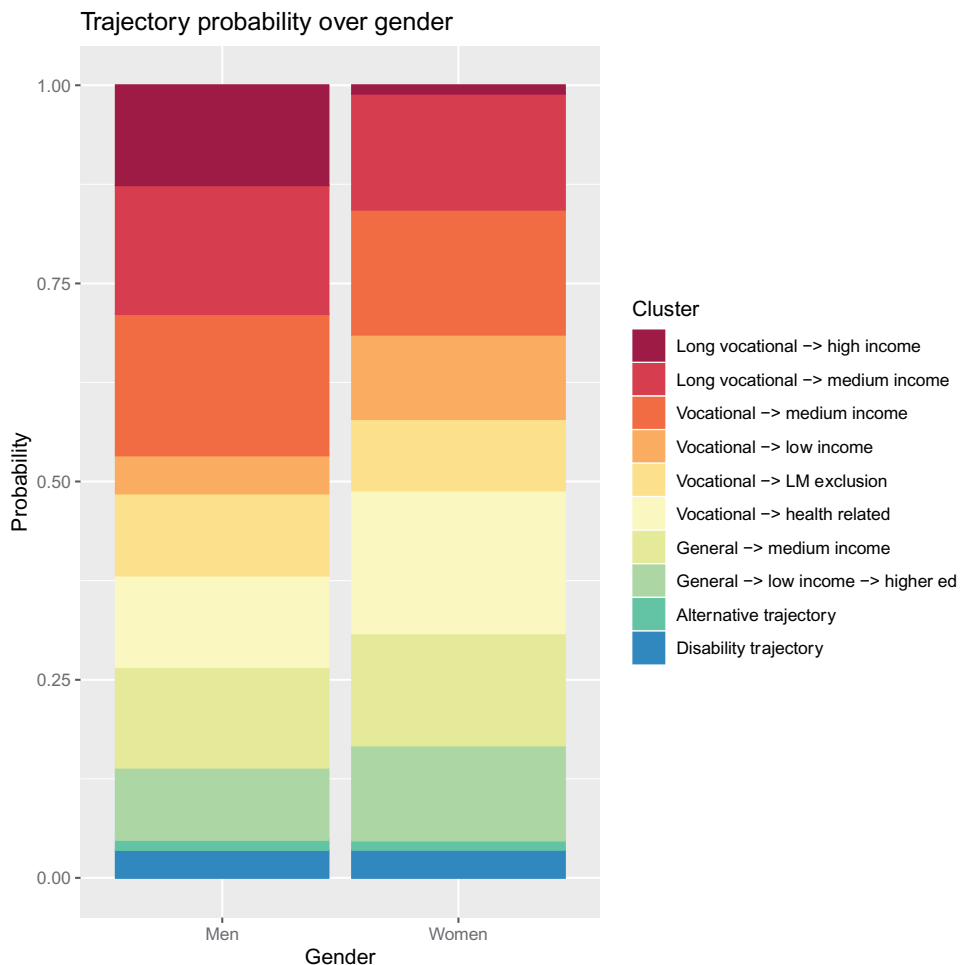


Figure 3. Predicted probabilities of gender and cluster membership.

Norwegian population-level administrative data, we found evidence that provides support for both hypotheses.

The literature review indicated a worsening labour market situation for recent cohorts of early school leavers. In support of this, our results suggest an increase in labour market exclusion among early school leavers in Norway over recent decades. The share of early school leavers following problematic trajectories (characterised by labour market exclusion) increased from 26% to 32% between the two youngest cohorts. Even though our investigation does not provide causal evidence or provide evidence of the exact mechanism behind this observation, our findings provide support for those who are worried that the situation of young individuals who face problems in their early life course has become more difficult in recent decades. Thus, we might here see the result of the high-skill economy affecting the supply of available medium or high-income work for those with few or no formal qualifications. More research is needed to establish how this development relates to trends in job quality more widely and trends towards a polarised of the labour force as a whole.

The overall increase in the share of early school leavers following problematic trajectories is largely accounted for by a strong increase in the probability of following trajectories leading from vocational education to health-related social benefits. To understand this finding, one has to look into changes in the institutional design of the welfare system. In 2010, the new health-related Work

Assessment Benefit was introduced. As suggested in previous research (see Hansen and Lorentzen 2019), this reform may have led to an increased medicalisation of low-skilled young people's challenges relating to labour market integration. Interestingly, there has also been a substantial decrease in the probability of following a trajectory leading from dropping out of general education to medium income in the labour market. Thus, the labour market situation for those lacking general academic credentials have worsened over the period. These findings thus present an example of the usefulness of the life-course perspective by showing how (changes in) institutional and historical circumstances interact with individual life courses.

Another notable finding is that a relatively high number of those who, by the official Norwegian definition, are classified as early school leavers might more precisely be classified as late finishers. A substantial share of the 'vocational dropouts' never actually left the education system before receiving their credentials in their mid to late 20s. In other words, the reasons for concern over high vocational dropout rates might not be as grave as often believed. The strong decrease over time in the probability of following a successful income trajectory for those dropping out of general academic education might likewise warrant a shift in focus. Thus, instead of worrying about high dropout rates within vocational education, which in many cases relate to deficiencies in the official definition, one might instead look into the situation of those who drop out of general academic tracks. Our findings indicate that the social policy focus may be directed to the wrong group of early school leavers.

Finally, the analysis presented above confirms and adds to previous evidence demonstrating that gender plays a central role in low-skilled young people's transitions from school to work (Arnesen, Lahelma, and Öhrn 2008; Blossfeld et al. 2015; Brzinsky-Fay 2015; Bukodi and Dex 2010; Francis and Skelton 2005; Reisel 2013). Male school leavers are overrepresented in the high-income and middle-income trajectories. Female school leavers, on the other hand, are overrepresented among those who follow low-income trajectories and/or receive temporary health-related benefits. Some of the conceptions prominent in research and debate on the challenges facing low-skilled young people thus appear to have been misconstrued. In particular, although only presenting evidence from one country, this paper suggests that in a life-course perspective, there are good reasons to nuance one-sided concern over the prospects of young *men* with few formal qualifications. Even in the comparatively gender equal country of Norway, the gender-segregated labour market consistently appears to be providing low-skilled men with more economically rewarding life course trajectories.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Aisenbrey, S., and A. E. Fasang. 2010. "New Life for Old Ideas: The "Second Wave" of Sequence Analysis Bringing the "Course" Back into the Life Course." *Sociological Methods and Research* 38 (3): 420–462. doi:[10.1177/0049124109357532](https://doi.org/10.1177/0049124109357532).
- Arnesen, A.-L., E. Lahelma, and E. Öhrn. 2008. "Travelling Discourses on Gender and Education." *Nordisk Pedagogik* 28 (1): 1–14.

- Autor, D. H. 2015. "Why are There Still so Many Jobs? The History and Future of Workplace Automation." *The Journal of Economic Perspectives* 29 (3): 3–30. doi:10.1257/jep.29.3.3.
- Bäckman, O., V. Jakobsen, T. Lorentzen, E. Österbacka, and E. Dahl. 2015. "Early School Leaving in Scandinavia: Extent and Labour Market Effects." *Journal of European Social Policy* 25 (3): 253–269. doi:10.1177/0958928715588702.
- Blossfeld, H.-P., J. Skopek, Y. Kosyakova, M. Triventi, and S. Buchholz. 2015. "Gender, Education and Employment: Lessons Learned from the Comparative Perspective." In *Gender, Education and Employment: An International Comparison of School-to-Work Transitions*, edited by H.-P. Blossfeld, J. Skopek, M. Triventi, and S. Buchholz, 347–381. Cheltenham: Edward Elgar.
- Bradley, H. 1999. *Gender and Power in the Workplace: Analysing the Impact of Economic Change*. Basingstoke: Palgrave Macmillan.
- Brunello, G., and M. De Paola. 2013. *The Costs of Early School Leaving in Europe: Discussion Paper No. 7791*. Bonn: Institute for the Study of Labor.
- Brynjolfsson, E., and A. McAfee. 2014. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: WW Norton & Company.
- Brzinsky-Fay, C. 2007. "Lost in Transition? Labour Market Entry Sequences of School Leavers in Europe." *European Sociological Review* 23 (4): 409–422. doi:10.1093/esr/jcm011.
- Brzinsky-Fay, C. 2015. "Gendered School-to-work Transitions? A Sequence Approach to How Women and Men Enter the Labour Market in Europe." In *Gender, Education and Employment: An International Comparison of School-to-Work Transitions*, edited by H.-P. Blossfeld, J. Skopek, M. Triventi, and S. Buchholz, 39–61. Cheltenham: Edward Elgar.
- Bukodi, E., and S. Dex. 2010. "Bad Start: Is There a Way Up? Gender Differences in the Effect of Initial Occupation on Early Career Mobility in Britain." *European Sociological Review* 26 (4): 431–446. doi:10.1093/esr/jcp030.
- Carré, F., P. Findlay, C. Tilly, and C. Warhurst. 2012. "Job Quality: Scenarios, Analysis and Interventions." In *Are Bad Jobs Inevitable?* edited by F. Carré, P. Findlay, C. Tilly, and C. Warhurst, 1–22. Basingstoke: Palgrave Macmillan.
- De Witte, K., S. Cabus, G. Thyssen, W. Groot, and H. M. van den Brink. 2013. "A Critical Review of the Literature on School Dropout." *Educational Research Review* 10 (December): 13–28. doi:10.1016/j.edurev.2013.05.002.
- Dølvik, J. E. 2016. "Introduction: Transnational Labour Mobility – Engine for Social Convergence or Divergence in Europe?" In *Labour Mobility in the Enlarged Single European Market*, edited by J. E. Dølvik and L. Eldring, 1–17. Bingley: Emerald.
- Elder, G. H., Jr. 1995. "The Life Course Paradigm: Social Change and Individual Development." In *Examining Lives in Context: Perspectives on the Ecology of Human Development*, edited by P. Moen, G. H. Elder Jr., and K. Liischer, 101–139. Washington, DC: APA Press.
- European Commission. 2014. *Tackling Early Leaving from Education and Training in Europe: Strategies, Policies and Measures*. Eurydice and Cedefop Report: Luxembourg.
- Eurostat. 2019a. "Early Leavers from Education and Training by Sex." Accessed 10 January 2020. https://ec.europa.eu/eurostat/databrowser/view/t2020_40/default/table?lang=en
- Eurostat. 2019b. "NEET Young People neither in Employment nor in Education and Training by Sex, Age, and Labour Status." Brussels. Accessed 10 January 2020. <https://ec.europa.eu/eurostat/databrowser/view/tesem150/default/table?lang=en>
- Francis, B., and C. Skelton. 2005. *Reassessing Gender and Achievement: Questioning Contemporary Key Debates*. London: Routledge.
- Friberg, J. H. 2016. "New Patterns of Labour Migration from Central and Eastern Europe and Its Impact on Labour Markets and Institutions in Norway: Reviewing the Evidence." In *Labour Mobility in the Enlarged Single European Market*, edited by J. E. Dølvik and L. Eldring, 19–43. Bingley: Emerald.
- Friberg, J. H. 2016a. "Arbeidsmigrasjon: Hva Vet Vi Om Konsekvensene for Norsk Arbeidsliv, Samfunn Og Økonomi?" Rapport 02/2016: Fafo.
- Gabardin, A., and G. Ritschard. 2013. "Searching for Typical Life Trajectories Applied to Childbirth Histories." In *Gendered Life Courses - between Individualization and Standardization. A European Approach Applied to Switzerland*, edited by R. Levy and E. Widmer, 287–312. Vienna: LIT.
- Gauthier, J. A., F. Bühlmann, and P. Blanchard. 2014. "Introduction: Sequence Analysis in 2014." In *Advances in Sequence Analysis: Theory, Method, Applications*, edited by P. Blanchard, F. Bühlmann, and J. A. Gauthier, 1–17. Life Course Research and Social Policies, Vol. 2. Dordrecht Springer.
- Grugulis, I., and Ö. Bozkurt. 2011. *Retail Work*. Basingstoke: Palgrave Macmillan.
- Hansen, H.-T., and T. Lorentzen. 2019. "Work and Welfare-state Trajectories in Norway over Two Decades: Has the Goal of Getting More People into Work Been Achieved?" *International Journal of Social Welfare* 28: 246–259. doi:10.1111/ijsw.12354.
- Hislop, D. 2013. *Knowledge Management in Organizations: A Critical Introduction*. 3rd ed. Oxford: Oxford University Press.
- Høst, H., and A. Skålholt. 2013. "Tilpasning Mellom Yrkesfag Og Arbeidsliv." In *Videregående Opplæring - Tilstrekkelig Grunnlag for Arbeid Og Videre Studier?* edited by E. Hovdhaugen, H. Høst, A. Skålholt, P. O. Aamodt, and S. Skule, 37–60. Rapport 50/2013. Oslo: NIFU.
- Hovdhaugen, E. 2015. "Working while Studying: The Impact of Term-time Employment on Dropout Rates." *Journal of Education and Work* 28 (6): 631–651.

- Imsen, G., and N. Volckmar. 2014. "The Norwegian School for All: Historical Emergence and Neoliberal Confrontation." In *The Nordic Education Model. Policy Implications of Research in Education Volume 1*, edited by U. Blossing, G. Imsen, and L. Moos, 35-55. Dordrecht: Springer. Accessed 10 January 2020. doi:10.1007/978-94-007-7125-3_3.
- Jensberg, H., R. Mandal, and E. Solheim. 2012. *Det Kjønnssdelte Arbeidsmarkedet 1990–2010: Kontinuitet Eller Endring?* Trondheim: Sintef.
- Kalleberg, A. L. 2013. *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States 1970s to 2000s*. New York: Russell Sage Foundation.
- Kaufman, L., and P. J. Rousseeuw. 1990. *Finding Groups in Data: An Introduction to Cluster Analysis*. New York: Wiley.
- Lamb, S., and E. Markussen. 2011. "School Dropout and Completion: An International Perspective." In *School Dropout and Completion: International Comparative Studies in Theory and Policy*, edited by S. Lamb, E. Markussen, R. Teese, N. Sandberg, and J. Polesel, 1–20. Dordrecht: Springer.
- Lamb, S., E. Markussen, R. Teese, N. Sandberg, and J. Polesel, eds. 2011. *School Dropout and Completion: International Comparative Studies in Theory and Policy*. Springer: Dordrecht.
- Lesnard, L. 2010. "Setting Cost in Optimal Matching to Uncover Contemporaneous Socio-Temporal Patterns." *Sociological Methods and Research* 38 (3): 389–419. doi:10.1177/0049124110362526.
- Lloyd, C., and J. Payne. 2016. *Skills in the Age of Over-Qualification: Comparing Service Sector Work in Europe*. Oxford: Oxford University Press.
- Lloyd, C., C. Warhurst, and E. Dutton. 2013. "The Weakest Link? Product Market Strategies, Skill and Pay in the Hotel Industry." *Work, Employment and Society* 27 (2): 254–271. doi:10.1177/0950017012460310.
- Nevøy, A., A. Rasmussen, S. E. Ohna, and T. Barow. 2014. "Nordic Upper Secondary School: Regular and Irregular Programmes – Or Just One Irregular School for All?" In *The Nordic Education Model. Policy Implications of Research in Education, Vol 1*, edited by U. Blossing, G. Imsen, and L. Moos, 191-210. Dordrecht: Springer. doi:10.1007/978-94-007-7125-3_11.
- OECD. 2017. "Education at a Glance 2017." OECD Indicators, Paris: OECD Publishing. Accessed 10 January 2020. <http://dx.doi.org/10.1787/eag-2017-en>
- Palier, B., and K. Thelen. 2010. "Institutionalizing Dualism: Complementarities and Change in France and Germany." *Politics and Society* 38 (1): 119–148. doi:10.1177/0032329209357888.
- Reisel, L. 2013. "Is More Always Better? Early Career Returns to Education in the United States and Norway." *Research in Social Stratification and Mobility* 31: 49–68. doi:10.1016/j.rssm.2012.10.002.
- Richardson, M., C. Evans, and G. Gbadamosi. 2009. "Funding Full-time Study through Part-time Work." *Journal of Education and Work* 22 (4): 319–334. doi:10.1080/13639080903277394.
- Ruby, J., A. Keizer, and D. Grimshaw. 2016. "Flexibility Bites Back: The Multiple and Hidden Costs of Flexible Employment Policies." *Human Resource Management Journal* 26 (3): 235–251. doi:10.1111/1748-8583.12092.
- Sackmann, R., and M. Wingens. 2001. "Theoretische Konzepte Des Lebenslaufs: Übergang, Sequenz Und Verlauf [Theoretical Concepts of the Life Course: Transition, Sequence, and Trajectory]." In *Strukturen Des Lebenslaufs [Structures of the LifeCourse]*, edited by R. Sackmann and M. Wingens, 17–50. Berlin: Juventa.
- Shildrick, T., and R. MacDonald. 2013. "Poverty Talk: How People Experiencing Poverty Deny Their Poverty and Why They Blame 'The Poor.'" *The Sociological Review* 61 (2): 285–303.
- Statistics Norway. 2019a. "Labour Force Survey." Accessed 10 January 2020. <https://www.ssb.no/en/aku>
- Statistics Norway. 2019b. "Part-time Employment as a Proportion of Total Employment." Table 09368. Accessed 10 January 2020. <https://www.ssb.no/en/statbank/table/09368/tableViewLayout1/>
- Statistics Norway. 2019c. "Completion Rates of Pupils in Upper Secondary Education." Table 09254. Accessed 10 January 2020. <https://www.ssb.no/statbank/table/09254/>
- Statistics Norway. 2019d. *Facts about Education in Norway 2019: Key Figures 2017*. Oslo/Kongsvinger: Statistisk Sentralbyrå. Accessed 10 January 2020. https://www.ssb.no/en/utdanning/artikler-og-publikasjoner/_attachment/373651?_ts=16813a35da0
- Steinmetz, S. 2012. *The Contextual Challenges of Occupational Sex Segregation: Deciphering Cross-National Differences in Europe*. Wiesbaden: Springer, VS Verlag für Sozialwissenschaften.
- Studer, M. 2013. "WeightedCluster Library Manual: A Practical Guide to Creating Typologies of Trajectories in the Social Sciences with R." *LIVES Working Papers* 2013 (24): 1–32. doi:10.12682/lives.2296-1658.2013.24.
- Studer, M., and G. Ritschard. 2014. "A Comparative Review of Sequence Dissimilarity Measures." *LIVES Working Papers* 2014 (33): 1–47. doi:10.12682/lives.2296-1658.2014.33.
- Teigen, M., and H. Skjeie. 2017. "The Nordic Gender Equality Model." In *The Nordic Models in Political Science. Challenged, but Still Viable?*, edited by O. Knutsen, 20–41. Oslo: Fagbokforlaget.
- Thompson, P., C. Warhurst, and G. Callaghan. 2001. "Ignorant Theory and Knowledgeable Workers: Ingerrogating the Connections between Knowledge, Skills and Services." *Journal of Management Studies* 28 (7): 923–942. doi:10.1111/1467-6486.00266.
- Vogt, K. C. 2008. "Er Frafall I Videregående Et Kjønnssproblem? (Is Dropout from Upper Secondary Education a Gender Problem?)." *Tidsskrift for Samfunnsforskning* 49 (4): 517–541.
- Vogt, K. C. 2016. "The Postindustrial Society: From Utopia to Ideology." *Work, Employment and Society* 30 (2): 366–376. doi:10.1177/0950017015577911.

Vogt, K. C. 2017. "Vår Utålmodighet Med Ungdom." *Tidsskrift for Samfunnsforskning* 58 (1): 105–119. doi:10.18261/.1504-291X-2017-01-05.

Warhurst, C., F. Carrè, P. Findlay, and C. Tilly, Eds. 2012. *Are Bad Jobs Inevitable? Trends, Determinants and Responses to Job Quality in the Twenty-First Century*. Basingstoke: Palgrave Macmillan.

Appendix

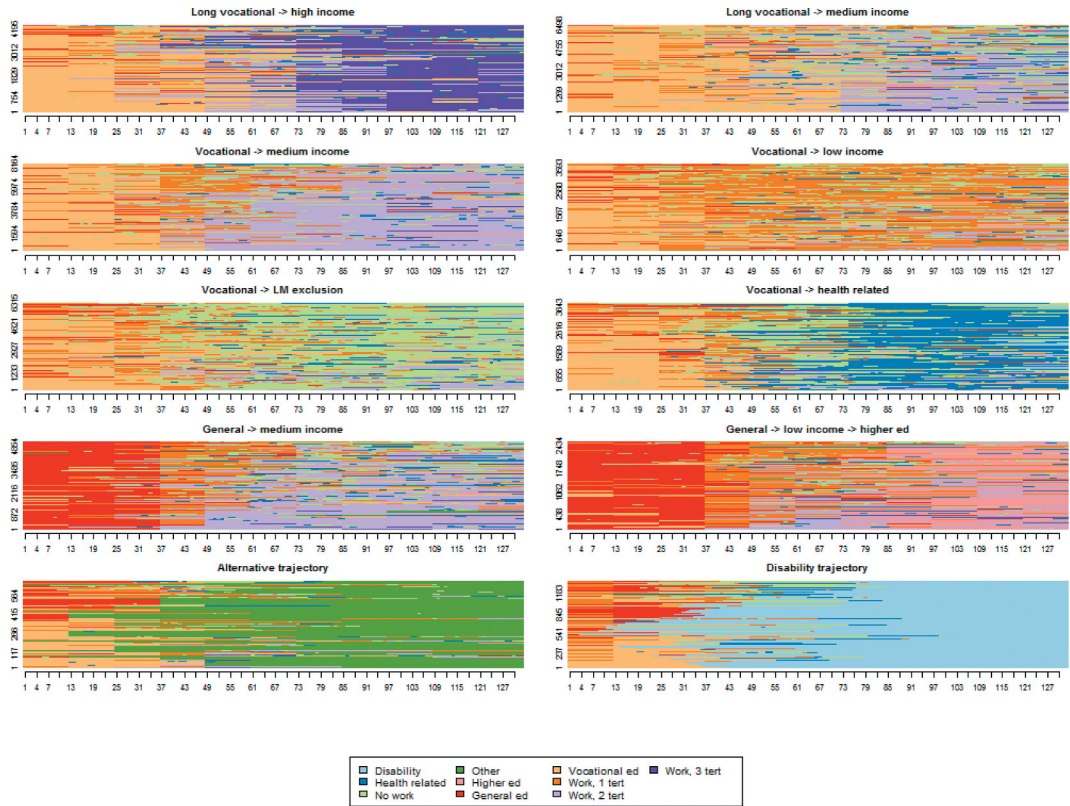


Figure 1. Sequence index plots, sorted by mds.

Table A1. Multinomial logistic regression (ref. Long vocational -> high income).

	Dependent variable:								
	Long vocational -> medium income (1)	Vocational -> medium income (2)	Vocational -> low income (3)	Vocational -> LM exclusion (4)	Vocational -> health related (5)	General -> medium income (6)	General -> low income -> higher ed (7)	Alternative trajectory (8)	Disability trajectory (9)
Cohort 1999-2009	0.149*** (0.050)	0.165*** (0.048)	0.047 (0.057)	0.237*** (0.050)	-0.458*** (0.068)	-0.268*** (0.052)	-0.363*** (0.065)	0.036 (0.100)	-0.064 (0.079)
Cohort 2004-2014	0.382*** (0.050)	0.437*** (0.048)	0.045 (0.058)	0.221*** (0.051)	1.128*** (0.058)	-0.293*** (0.053)	-0.072 (0.063)	-0.130 (0.105)	0.134* (0.078)
Western Europe	0.042 (0.081)	0.091 (0.077)	0.317*** (0.089)	0.280*** (0.079)	0.174** (0.089)	0.349*** (0.081)	0.288*** (0.095)	0.999*** (0.123)	0.338*** (0.115)
Non-Western	0.280*** (0.088)	0.263*** (0.085)	0.872*** (0.091)	0.373*** (0.087)	0.334*** (0.096)	0.721*** (0.087)	0.646*** (0.100)	1.025*** (0.139)	0.519*** (0.122)
Female	2.361*** (0.068)	2.346*** (0.067)	3.265*** (0.072)	2.327*** (0.068)	2.914*** (0.071)	2.576*** (0.069)	2.743*** (0.075)	2.379*** (0.100)	2.477*** (0.084)
Father inc missing	-0.119 (0.099)	-0.084 (0.094)	0.064 (0.105)	-0.099 (0.092)	-0.084 (0.103)	-0.080 (0.105)	0.045 (0.128)	0.771*** (0.156)	-0.090 (0.137)
Father inc quart 2	0.041 (0.073)	0.029 (0.070)	-0.128 (0.080)	-0.333*** (0.070)	-0.444*** (0.079)	-0.090 (0.078)	-0.028 (0.097)	-0.193 (0.147)	-0.267** (0.105)
Father inc quart 3	-0.219*** (0.067)	-0.222*** (0.065)	-0.578*** (0.076)	-0.780*** (0.065)	-0.814*** (0.074)	-0.296*** (0.072)	-0.406*** (0.091)	-0.553*** (0.139)	-0.682*** (0.100)
Father inc quart 4	-0.423*** (0.068)	-0.376*** (0.066)	-0.677*** (0.077)	-1.150*** (0.068)	-0.973*** (0.075)	-0.251*** (0.072)	-0.084 (0.088)	-0.505*** (0.137)	-0.764*** (0.101)
Parent edu upper sec	0.084* (0.046)	-0.193*** (0.044)	-0.071 (0.054)	-0.173*** (0.046)	-0.088 (0.054)	0.250*** (0.050)	0.459*** (0.067)	-0.005 (0.101)	-0.152** (0.076)
Parent edu uni	0.243*** (0.058)	-0.059 (0.056)	0.431*** (0.065)	-0.014 (0.060)	0.356*** (0.065)	1.011*** (0.058)	1.792*** (0.069)	0.763*** (0.107)	0.635*** (0.084)
Constant	-0.151** (0.067)	0.190*** (0.064)	-0.863*** (0.075)	0.378*** (0.063)	-0.759*** (0.074)	-0.414*** (0.071)	-1.638*** (0.091)	-2.368*** (0.134)	-1.361*** (0.097)
Akaike Inf. Crit.	175,481.000	175,481.000	175,481.000	175,481.000	175,481.000	175,481.000	175,481.000	175,481.000	175,481.000

*p < 0.1; **p < 0.05; ***p < 0.01