Tracking and sorting in the Finnish educational system

DIAL Working Paper Series 12/2019

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Dynamics of Inequality Across the Lifecourse: structures and process

dynamicsofinequality.org

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 724363

NORFACE NETWORK

Tracking and sorting in the Finnish educational system

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Abstract

This report gives a brief overview of educational tracking and sorting in the Finnish educational system. In Finland, students are divided into different tracks relatively late even though between and within-school tracking exists at all educational levels in some forms. In this report, we present descriptive empirical analyses of long-term consequences of educational tracking by social origin using full population Finnish register data. According to our analyses, parental education and parental social class are associated with track choice at upper secondary and tertiary education. Track choice at upper secondary education is also associated with several outcomes at occupational maturity, such as final educational attainment, social class, earnings and unemployment. Track choice at tertiary education partly explains these associations but the coefficients remain statistically significant in most of the cases. Furthermore, our decomposition analyses show a direct effect of social origin on outcomes at occupational maturity which is not explained by track choice at upper secondary and tertiary education.

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1. Basic structure and reforms of the Finnish educational system

The Finnish educational system is internationally well-known and considered as high quality both in terms of educational outcomes and equality (e.g. OECD 2010). Compared to many other western countries, the system produces a relatively high amount of intergenerational educational mobility (Pfeffer 2008).

In Finland, all the students attend comprehensive school usually from the age of 7 to 16 where the students in most of the cases have the same curricula. Most students complete the nine-year comprehensive school on time without repeating grades (Välijärvi & Sahlberg 2008). There are no formal dead-ends in the Finnish educational system at any point, meaning that continuing education is always possible after receiving one degree.

The first formal tracking point is after comprehensive school. At this point, students have to choose between general upper secondary school, vocational upper secondary school or leaving the educational system. Secondary education usually lasts for three years and the enrollment rate in upper secondary education is very high compared to other OECD countries (OECD 2018). The first national examination is at the end of general upper secondary school (*matriculation examination*). A qualification from vocational or general upper secondary school is required to continue to tertiary education.

Tertiary education in Finland consists of universities and polytechnics (also called as universities of applied sciences). Universities and polytechnics operate as a diverse system of two tertiary-level institutions. Both provide teaching in almost all fields of studies, but universities are focusing more on academic research, and polytechnics are practical, more vocation-oriented institutions. Students who appreciate work-life orientation in their studies are more likely to enroll a polytechnic than a university program. The students who apply for polytechnics also consider that enrolling is easier to polytechnics than to university. (Vuorinen & Valkonen 2003.) Whereas almost all university programs allow students who acquire access automatically to continue to Master's level studies, the polytechnic programs stop at Bachelor's degree and only rarely provide Master's level programs. In order to continue further after a polytechnic Bachelor's degree, it is either necessary to use the small-volume of quotas for field specific studies or more typically take the general intake exam to access a university Master's program.

Education is free at all levels, and after compulsory schooling students receive a monthly student benefit which is limited in length and affected by parental and own income. The amount of the benefit also varies by age and level of studies. However, there has been growing concerns about fees requested for example for textbooks and other equipment at upper secondary school.

Historical overview of reforms

The most important reforms in the Finnish educational system are the comprehensive school reform in the 1970s and the establishment of polytechnics in 1990s. Like other Nordic countries, Finland renewed its compulsory and secondary education in the 1970s from a rather selective to a comprehensive system (Figure 1.1.). The comprehensive school reform

postponed the first tracking point (to vocational or general track) from the age of 10-11 to the age of 15-16. The reform aimed to decrease social background differences and create equal educational opportunities regardless of a student's place of residence (Pekkarinen 2008). The reform decreased the gender wage gap in occupational maturity income by 4 percentage points and increased "gender differences in the probability of choosing an academic secondary education and of continuing onto academic tertiary education" (Pekkarinen 2008), reduced the intergenerational income elasticity by 23 % (Pekkarinen, Uusitalo & Kerr 2009) and improved the test scores of students from less educated families (Kerr, Pekkarinen & Uusitalo 2013). Because of the political right wing suspected that the reform would decrease the skills of the well-performing students, in the beginning the comprehensive school system included ability groups. Those students in the lowest ability group student were not allowed to continue to general upper secondary education. Ability groups were abolished in 1985. (Kalalahti & Varjo 2012.)

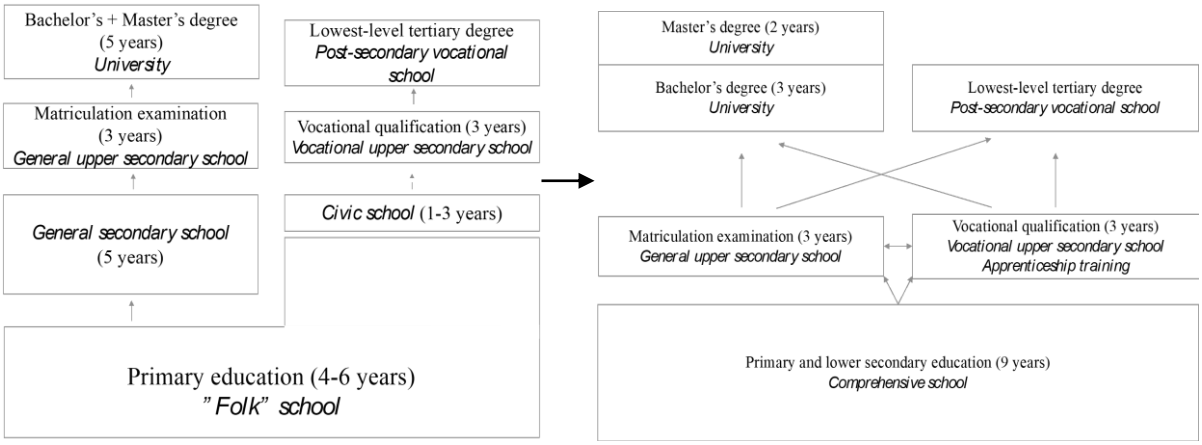

Figure 1.1. Finnish educational system before and after the comprehensive school reform.

The other major educational reform in Finland was the establishment of professionally oriented polytechnics in the 1990s (Figure 1.2.). It attempted to increase participation rates in higher education and at the same time to create equal educational opportunities. It aimed at increasing the amount of vocationally-oriented and highly educated people in the business sector. The reform also raised the number of enrollment places for higher education in total.

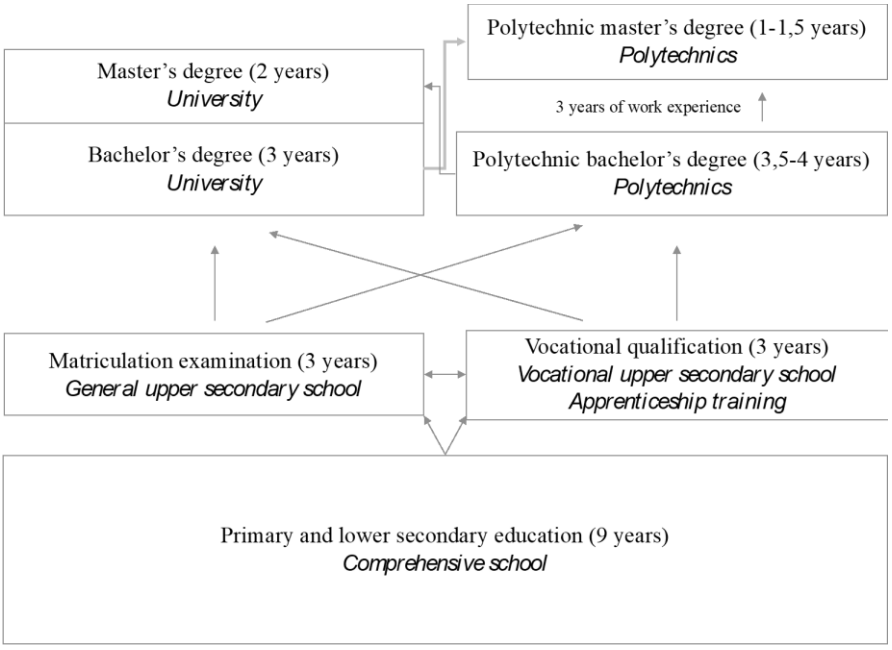

Figure 1.2. Finnish educational system nowadays after the polytechnics reform in the 1990s.

However, the establishment of polytechnics did not significantly change the participation rates at higher education if we consider that polytechnics mainly replaced post-secondary vocational education (which is considered as lowest-level tertiary education), as seen from the Figure 1.3.

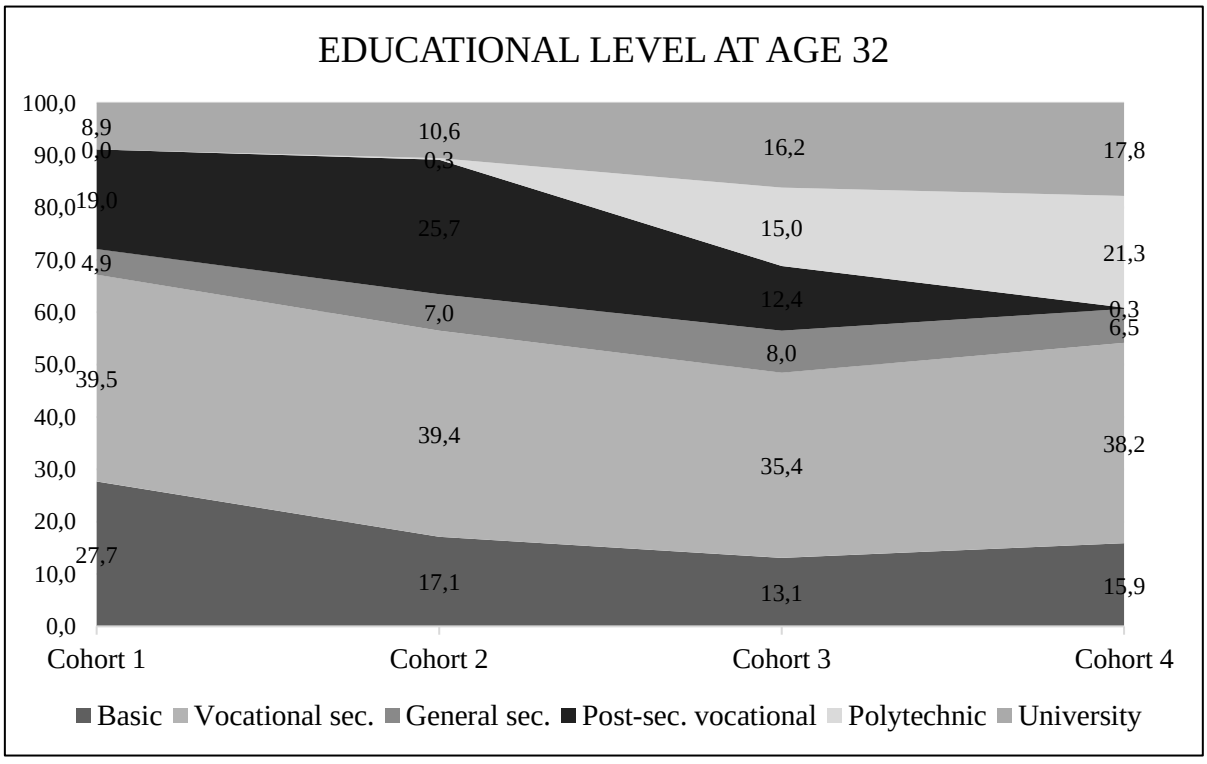

Figure 1.3. Distribution of the highest completed education at the age of 32 by cohort using full population register data from Statistic of Finland. Cohort 1 born in 1955, cohort 2 born in 1965, cohort 3 born in 1975 and cohort 4 born in 1985.

Flowcharts

To explore educational trajectories, we display the flow of individuals through the educational system for the 1975 birth cohort in Finland using full population register data from Statistic of Finland (Figure 1.4.). In this flowchart, educational level is examined by completed qualifications at the age of 40. According to Figure 1.4., 12 % of the birth cohort did not gain any upper secondary qualification and left the educational system after comprehensive school, 47 % continued to general upper secondary school, and 41 % continued to vocational upper secondary school. Out of the students who finished general upper secondary school, 39 % continued to university, 26 % continued to polytechnic and 12 % continued to lowest-level tertiary education. Altogether, 77 % continued to tertiary education after completing general upper secondary education and 23 % left the educational system.

Only 1 % of the students who completed vocational upper secondary school continued to university, 12 % continued to polytechnic and 13 % continued to lowest-level tertiary education. Altogether, only 26 % continued to tertiary education after completing vocational upper secondary education and 74 % left the educational system.

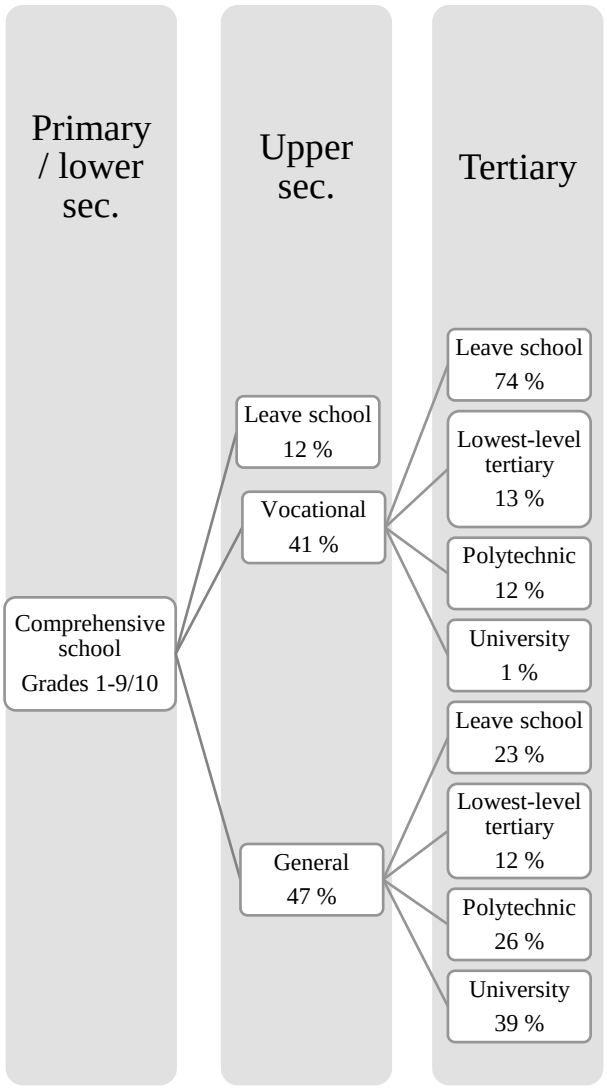

Figure 1.4. *Educational trajectories of the birth cohort 1975.*

2. Between and within-school tracking

Between-school tracking

There is no formal between-school tracking at comprehensive school, and the differences between schools are small. Private education has a minimal part of the Finnish educational system because there are only very few private schools like Steiner (Waldorf education) or international schools in Finland. Besides, also private schools have to provide education for free.

Municipalities automatically allocate students to the schools nearest to their home. However, the local school choice reform in the 1990s made it possible to choose any comprehensive school if there were free places available. As a consequence, there are growing concerns about urban segregation by family background between schools. Recent studies have found that privileged families consider the school choice more than less advantaged families also in Finland (Kosunen 2014; Kosunen & Seppänen 2015), that may indicate that there are good reasons for these concerns (see also Kosunen et al. 2016). Also, the PISA study shows that while the variance of performance between schools as a proportion of total performance in Finland is only 8 %, the family background differentiation between schools has been increasing (OECD 2016).

There are classes (and schools) that are specialized based on specific subjects such as music, arts, foreign languages, math and sports. Intake for those tracks is based on school performance or entrance exams that are open to all students. Applying for a specialized class is an opportunity for the student to enroll another school than the nominated one. Specialized classes might create variation by social background between schools (e.g. Seppänen, Rinne & Riipinen 2012), but unfortunately, there are no official statistics about the proportion of the birth cohorts that attend to these programs.

At the upper secondary level, between-school tracking exists. Students apply for a general upper secondary school, vocational upper secondary school or both, and intake is based on the teacher-given grades at the end of the comprehensive school. Selectivity (point limits required for intake) varies between upper secondary schools. There is also some knowledge about differences between general upper secondary schools because the media publishes ranking lists every year. Recent studies nonetheless show that there is no significant advantage in studying in an “elite” school for later educational outcomes (Tervonen, Kortelainen & Kanninen 2017; Tervonen, Kortelainen & Kanninen 2018). In rural areas, opportunities for track choices at the upper secondary level are more limited. In addition, long distance to school can be a reason to drop out of the educational system after compulsory education (Pekkarinen & Myllyniemi 2018).

At the tertiary level, there are entrance exams for both universities and polytechnics, but the exams and preparation for them vary a lot. For polytechnics, grades from secondary school are more important in the applying process as well as work experience and other qualifications (Thomsen et al 2017). For universities, the entrance exams have a more significant role. Until very recently, the university entrance exams have required more preparation, which has made the private preparatory courses very popular, to the extent that they are considered as necessary especially in the most prestigious fields, such as medicine, law and business (Kosunen, Haltia

& Jokila 2015). The costs of the courses can be several thousand euros, the most expensive ones promising to return the fee if a student cannot pass the test. Preparatory courses are usually organized in big cities, further increasing the inequality of opportunities between students from the center and periphery.

The University of Helsinki has been the most popular university in most of the fields for many years. Nonetheless, there are no elite universities or polytechnics in Finland. Universities are located in urban centers, but polytechnics are also spread to more rural areas.

Within-school tracking

There is some formal within-school tracking in Finland, but all in all the system is inclusive. Ability groups were formally abolished in the mid-1980s. The achievement gap between low and high performers began to decrease after abolishing the ability grouping (Sahlberg 2009). However, although official ability groups are no longer allowed, there are practices aiming to the same in a less apparent way: everyone is taught the same core curriculum defined by the government and students are in the same classroom, but separate groups are doing different exercises. In the Finnish educational literature, this is referred to as differentiation (Finnish National Agency for Education 2016).

As mentioned before, there are certain classes for specialization based on, for example, music, arts, foreign languages, math and sports. Those special classes also create within-school tracking, in addition to between-school tracking. The core curriculum is mostly the same for specialized and non-specialized classes, the specialized classes receiving 1-2 hours extra teaching at the maximum each week in the area of specialization.

Students can also choose some optional subjects like for example foreign languages at comprehensive and secondary education. At general upper secondary school, the choices influence A-level exam subjects (*matriculation examination*). These, in turn, influence the baseline points of the entrance for tertiary education at many fields. For instance, biology, chemistry and physics give points to the entrance to study medicine.

The rigidity of tracking and sorting in the Finnish educational system is quite loose because there are no formal dead-ends, so choosing the "wrong" track should not influence future choices substantially. However, there are recent policy changes especially in financial aid for students, which encourage students not to change the track at tertiary level. In addition, track choice at upper secondary level is strongly associated with obtaining tertiary degree, as will be seen in Chapter 4.

3. Tracking and social inequality (OE)

We use full population register data from Statistic of Finland and chose the birth cohort 1975 for our analysis of the long-term outcomes. We dropped individuals who died between the years 1975-2016 from our analysis. Social origin is measured by maximum parental education and maximum parental class using the dominance approach from years 1987-1995 when children were 12-20 years old. For track choice, we measure a qualification gained from upper

secondary or tertiary education because track placement and attendance are available only for younger cohorts.

First tracking point: upper secondary education

Figure 3.1. displays the distribution of individuals' track choice at upper secondary level by parental education. Parental education is divided into three groups: basic education (or less), secondary education and tertiary education. More than 67 % of students from families with tertiary education chose the general track at secondary level whereas only 29 % did the same from families where the highest educational level is basic education.

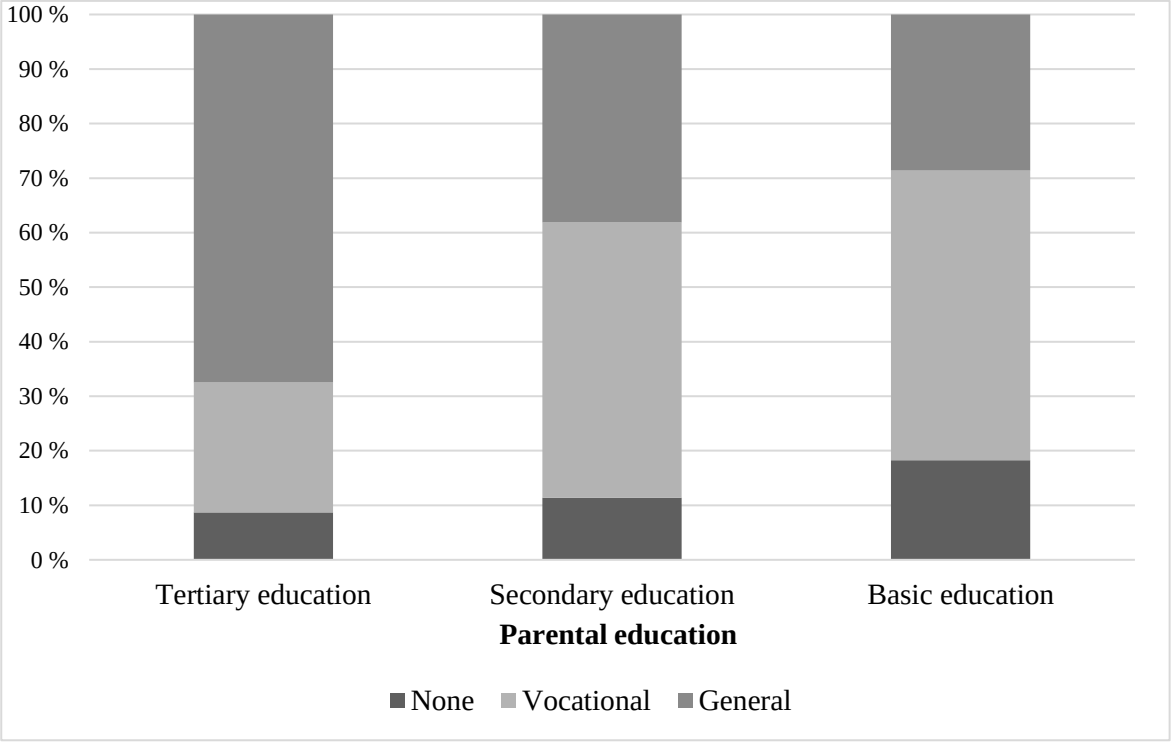

Figure 3.1. Distribution of completed upper secondary education by parental education, 1975 birth cohort.

Figure 3.2. displays the distribution of upper secondary track choice by parental class. Parental class is divided into six groups: service class, routine non-manual, self-employed, farmers, skilled manual and semi-skilled manual. The higher the parental class, the bigger the proportion of children for choosing the general track. Parental self-employment seems to be associated with leaving the educational system without an upper secondary degree.

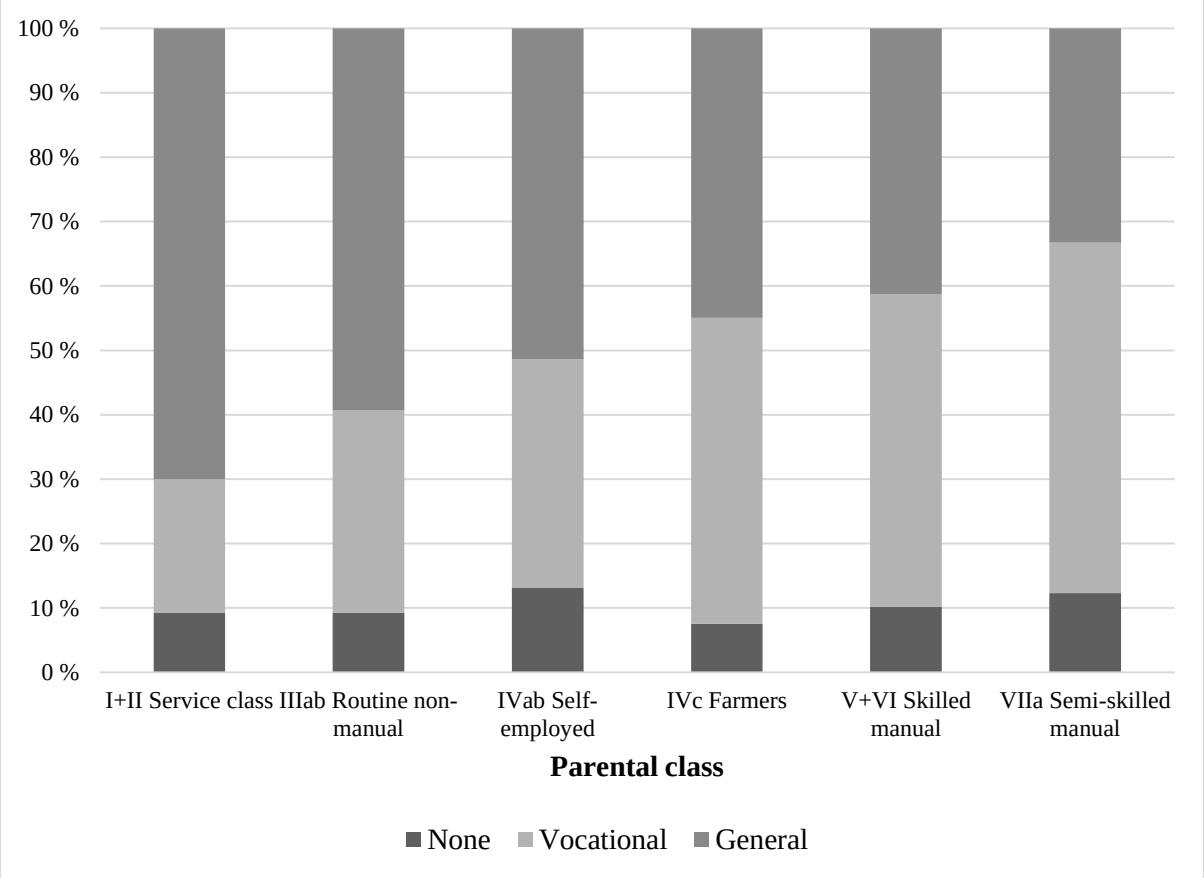

Figure 3.2. Distribution of completed upper secondary education by parental class, 1975 birth cohort.

Second tracking point: tertiary education

The following figures show the distribution of completed tertiary education at the age of 40 by parental education (Figure 3.3.) and parental class (Figure 3.4.) for the 1975 birth cohort. As Figure 3.3. details, one out of three children of tertiary educated parents obtained a university degree, while only 8 % of children with basic educated parents did the same. The higher the parental education, the bigger the proportion of children for obtaining a tertiary degree.

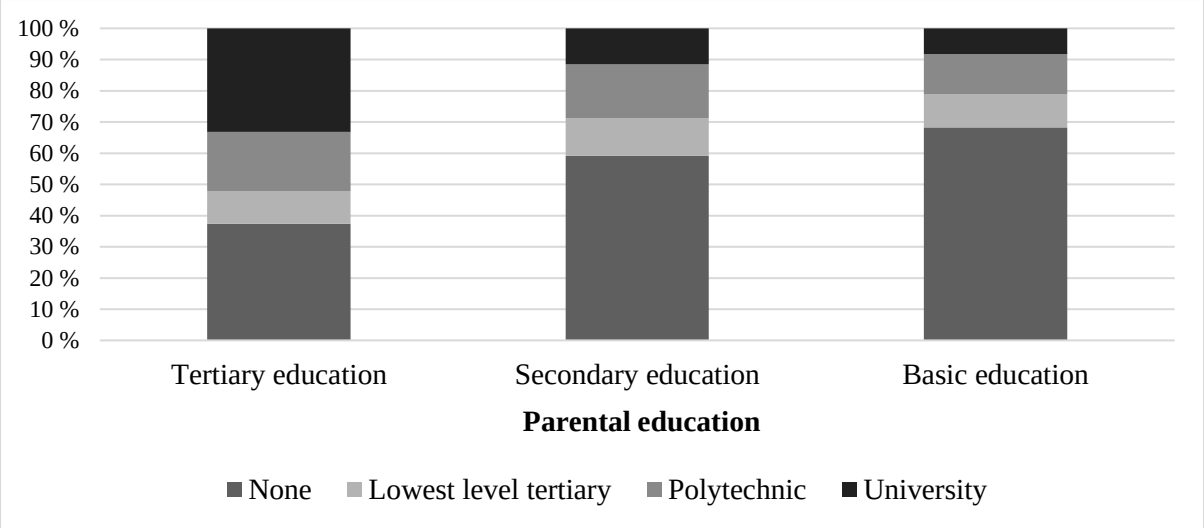

Figure 3.3. Distribution of completed tertiary education by parental education, 1975 birth cohort.

Figure 3.4. displays the distribution of completed tertiary education by parental class. The proportion of university graduates is greatest among the children whose parents belong to the service class. Altogether, the higher the parental class, the larger the share of students obtaining a tertiary degree. As can be seen in Figures 3.3. and 3.4., the biggest differences by parental background are among university graduates compared to a degree from polytechnics or lowest-level tertiary education.

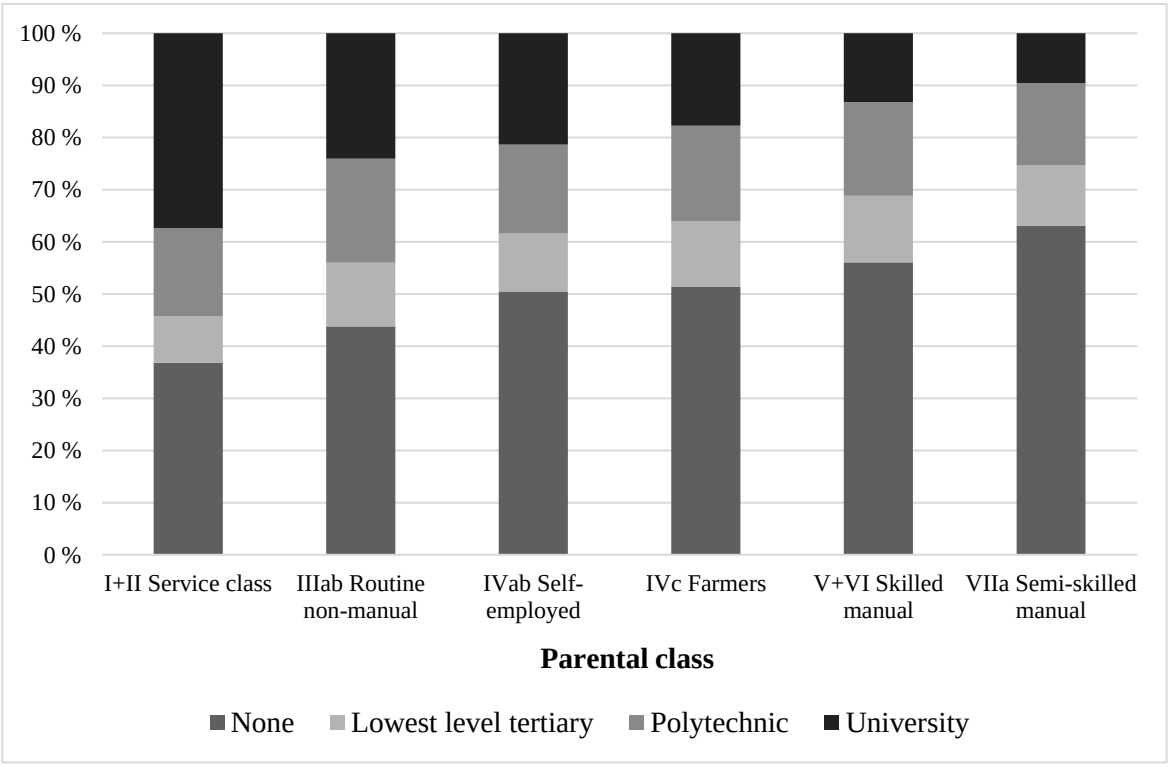

Figure 3.4. Distribution of completed tertiary education by parental class, 1975 birth cohort.

For comparative analyses, we also examined the track choice at upper secondary and tertiary education by parental education and class reporting the proportion of variance explained (pseudo-R^2).

Table 3.1. Track choice at upper secondary and tertiary education by parental education and class. Multinomial logistic regression, pseudo-R2 reported.

	Model 1 (Parental education: basic or less/ secondary/ tertiary)	**Model 2** (Parental class: service class/ routine non-manual/ self-employed/farmers/ skilled manual/ semi-skilled manual)
Outcome: Track choice at upper secondary education		
None/vocational/general	.	.
pseudo-R^2	0.057	0.040
N	64,877	60,369
Outcome: Track choice at tertiary education		
None/lowest-level tertiary/polytechnic/university	.	.
pseudo-R^2	0.040	0.026
N	64,877	60,369

4. Long-term consequences of tracking (ED)

In this chapter, we explore the education (E) - destination (D) association. Education is measured as a qualification gained from upper secondary or tertiary education and destination is measured at occupational maturity by completed higher education, social class, long-term unemployment, ISEI (International Socio-Economic Index) and earnings.

Higher education attainment is measured at age 40. Social class and ISEI are measured at age 35-40 using the highest achieved position during these years. For unemployment analyses, individuals out of the labor force were dropped. Individuals who received unemployment benefit more than 6 months in the year 2015 when the individuals were 40 years old are counted as unemployed. For earnings, we use the logarithm of earnings from total earned income subject to state taxation in the year 2015. That variable includes all income that is not capital income: wage income, entrepreneurial income and other income subject to state taxation (such as unemployment benefits and other social security benefits). Table 4.1. displays summary statistics for these outcomes.

Table 4.1. Education and labor market outcomes at occupational maturity (age 40), 1975 birth cohort.

	Mean (%)	Std. dev.
Higher education (completed)		
University	0.19	
Other tertiary	0.28	
Tertiary total	0.47	
Social class		
I Higher service	0.17	
II Lower service	0.28	
IIIab Routine non-manual	0.23	
IVab Self-employed	0.09	
IVc Farmers	0.02	
V+VI Skilled manual	0.09	
VIIa Semi-skilled manual	0.13	
Unemployment	0.08	
ISEI (International Socio-Economic Index)	47.8	17.5
Earnings, 1,000 € (2015EUR)	37.5	23.6

Table 4.2. displays OLS models (linear probability models for binary outcomes) regressing outcomes at occupational maturity on educational attainment. Model 1 includes upper secondary level track choice, measured as qualification gained at age 40 – no secondary degree being the reference group. In model 2 we added tertiary education as a control variable, measured as completed tertiary education at age 40 (none, lowest-level tertiary, polytechnic, university). Coefficients are reported only for the upper secondary track choice.

All these long-term outcomes are associated with track choice at upper secondary level and the differences are statistically significant. Individuals who completed the general upper secondary track are the most likely to enroll in university or any tertiary education, access higher service class or service class and have higher ISEI and earnings. From model 2, we can see that tertiary education explains partly the associations but the coefficients remain statistically significant in most of the cases. Individuals who graduated from the vocational upper secondary track are more likely to access the manual class and the semi-skilled manual class than individuals with general secondary degree or no upper secondary degree. Individuals with no upper secondary degree are most likely to be unemployed compared to individuals with a degree.

Table 4.2. OLS models regressing outcomes at occupational maturity on educational attainment, 1975 birth cohort. Pseudo-R2 reported from logistic regression models for binary outcomes.

	Model 1 (Upper sec. track choice)		**Model 2** (+Tertiary level)	
Outcome: Tertiary education				
Upper secondary education (ref. None)				
Vocational	0.262***	(0.005)		
General	0.770***	(0.005)		
Constant	0.000***	(0.004)		
R^2	0.347			
pseudo-R^2	0.196			
N	64,877			
Outcome: University education				
Upper secondary education (ref. None)				
Vocational	0.013***	(0.004)		
General	0.388***	(0.004)		
Constant	0.000***	(0.004)		
R^2	0.234			
pseudo-R^2	0.250			
N	64,877			
Outcome: I Higher service class				
Upper secondary education (ref. None)				
Vocational	0.014***	(0.003)	-0.003	(0.003)
General	0.138***	(0.003)	0.024***	(0.004)
Constant	0.013***	(0.003)	0.013***	(0.003)
R^2	0.053		0.118	
pseudo-R^2	0.101		0.185	
N	64,877		64,877	
Outcome: I+II Service class				
Upper secondary education (ref. None)				
Vocational	0.097***	(0.005)	0.028***	(0.005)
General	0.466***	(0.005)	0.133***	(0.006)
Constant	0.051***	(0.005)	0.051***	(0.004)
R^2	0.183		0.333	
pseudo-R^2	0.158		0.280	
N	64,877		64,877	
Outcome: V+VI+VIIab Manual class				
Upper secondary education (ref. None)				
Vocational	0.129***	(0.005)	0.202***	(0.005)
General	-0.186***	(0.005)	0.046***	(0.006)
Constant	0.288***	(0.005)	0.288***	(0.004)
R^2	0.115		0.189	
pseudo-R^2	0.107		0.189	
N	64,877		64,877	
Outcome: VIIab Semi-skilled manual				
Upper secondary education (ref. None)				
Vocational	0.032***	(0.005)	0.080***	(0.005)
General	-0.158***	(0.005)	-0.007	(0.005)
Constant	0.226***	(0.004)	0.226***	(0.004)
R^2	0.061		0.104	
pseudo-R^2	0.073		0.135	
N	64,877		64,877	

Table 4.2. Continued

Outcome: Unemployment				
Upper secondary education (ref. None)				
Vocational	-0.055***	(0.004)	-0.042***	(0.004)
General	-0.091***	(0.004)	-0.055***	(0.004)
Constant	0.147***	(0.003)	0.147***	(0.003)
R^2	0.011		0.016	
pseudo-R^2	0.019		0.029	
N	59,578		59,578	
Outcome: ISEI				
Upper secondary education (ref. None)				
Vocational	3.079***	(0.311)	0.016	(0.278)
General	20.09***	(0.307)	6.680***	(0.298)
Constant	36.12***	(0.292)	36.12***	(0.258)
R^2	0.247		0.412	
N	49,310		49,310	
Outcome: Log earnings				
Upper secondary education (ref. None)				
Vocational	0.411***	(0.012)	0.344***	(0.011)
General	0.660***	(0.011)	0.376***	(0.012)
Constant	9.853***	(0.010)	9.853***	(0.010)
R^2	0.070		0.111	
N	61,343		61,343	

Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001.

5. Decomposition of long-term social inequalities (OED)

For decomposing the associations between social origin (O), education (E) and destination (D), we examined the proportion of the social origin coefficient explained after the inclusion of the tracking variable. This mediation analysis shows, how much of the association between parental education or class (O) and long-term outcomes (D) is explained by the track choice at upper secondary and tertiary education (E). As in the previous chapter, upper secondary and tertiary track choices are measured as qualification gained at age 40. Parental education and class are measured by using the dominance approach from years 1987-1995 when children were 12-20 years old.

Table 5.1. displays OLS models (linear probability models for binary outcomes) regressing outcomes at occupational maturity at age 40 on parental education. Model 1 is an unadjusted model, which shows the gross effect of parental education on long-term outcomes. For the next model, we added upper secondary track choice and in the last model, we added tertiary education as a control variable.

Track choice at upper secondary level accounts for ca 69% of the association between parental education and tertiary education completion. The proportions are a bit smaller for other outcomes, higher service class having the smallest number (39%). As can be seen from model 3, tertiary education completion also explains these associations, but in all of the outcomes there remains a gap between parental education and the long-term outcomes that is not explained by track choices at upper secondary and tertiary education.

Table 5.1. OLS models regressing outcomes at occupational maturity on parental education, 1975 birth cohort. Pseudo-R2 reported from logistic regression models for binary outcomes.

	Model 1 (Unadjusted)	**Model 2** (+Upper sec. track choice.)	**Model 3** (+Tertiary level)
Outcome: Tertiary education			
Parental education (ref. Tertiary)			
Upper secondary	-0.218***	68%	
Compulsory	-0.309***	69%	
N	64,877	64,877	
R^2	0.062	0.352	
pseudo-R^2	0.046	0.203	
Outcome: University education			
Parental education (ref. Tertiary)			
Upper secondary	-0.216***	46%	
Compulsory	-0.250***	53%	
N	64,877	64,877	
R^2	0.080	0.252	
pseudo-R^2	0.081	0.273	
Outcome: I Higher service class			
Parental education (ref. Tertiary)			
Upper secondary	-0.083***	39%	67%
Compulsory	-0.101***	43%	68%
N	64,877	64,877	64,877
R^2	0.025	0.061	0.121
pseudo-R^2	0.041	0.114	0.189
Outcome: I+II Service class			
Parental education (ref. Tertiary)			
Upper secondary	-0.190***	54%	83%
Compulsory	-0.253***	56%	81%
N	64,877	64,877	64,877
R^2	0.051	0.192	0.335
pseudo-R^2	0.041	0.166	0.282
Outcome: V+VI+VIIab Manual class			
Parental education (ref. Tertiary)			
Upper secondary	0.145***	57%	72%
Compulsory	0.179***	57%	73%
N	64,877	64,877	64,877
R^2	0.031	0.121	0.191
pseudo-R^2	0.029	0.113	0.191
Outcome: VIIab Semi-skilled manual			
Parental education (ref. Tertiary)			
Upper secondary	0.095***	53%	68%
Compulsory	0.128***	50%	65%
N	64,877	64,877	64,877
R^2	0.020	0.065	0.106
pseudo-R^2	0.024	0.078	0.137

Table 5.1. Continued

Outcome: Unemployment			
Parental education (ref. Tertiary)			
Upper secondary	0.022***	46%	56%
Compulsory	0.036***	45%	56%
N	59,578	59,578	59,578
R^2	0.003	0.012	0.017
pseudo-R^2	0.005	0.020	0.029
Outcome: ISEI			
Parental education (ref. Tertiary)			
Upper secondary	-9.761***	50%	74%
Compulsory	-12.45***	51%	73%
N	49,310	49,310	49,310
R^2	0.089	0.267	0.418
Outcome: Log earnings			
Parental education (ref. Tertiary)			
Upper secondary	-0.173***	53%	78%
Compulsory	-0.248***	54%	75%
N	61,343	61,343	61,343
R^2	0.019	0.073	0.112

* p<0.05, ** p<0.01, *** p<0.001.

Table 5.2. displays the same models as in the previous table but for the associations between parental social class and long-term outcomes. Track choice at upper secondary level explains 72-82% of the association between parental class and tertiary education completion but only 29-47% of the association between parental class and university education. As with parental education (Table 5.1.), there remains a gap between parental class and the long-term outcomes that is not explained by track choices at upper secondary and tertiary level.

Table 5.2. OLS models regressing outcomes at occupational maturity on parental social class, 1975 birth cohort. Pseudo-R2 reported from logistic regression models for binary outcomes.

	Model 1 (Unadjusted)	**Model 2** (+Upper sec. track choice)	**Model 3** (+Tertiary level)
Outcome: Tertiary education			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-0.070***	76%	
IVab Self-employed	-0.137***	75%	
IVc Farmers	-0.145***	82%	
V+VI Skilled manual	-0.193***	75%	
VIIab Semi-skilled manual	-0.262***	72%	
N	60,369	60,369	
R^2	0.033	0.343	
pseudo-R^2	0.024	0.199	
Outcome: University education			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-0.134***	29%	
IVab Self-employed	-0.160***	41%	
IVc Farmers	-0.197***	45%	
V+VI Skilled manual	-0.242***	42%	
VIIab Semi-skilled manual	-0.279***	47%	
N	60,369	60,369	
R^2	0.057	0.248	
pseudo-R^2	0.056	0.270	
Outcome: I Higher service class			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-0.046***	27%	65%
IVab Self-employed	-0.057***	39%	70%
IVc Farmers	-0.086***	33%	56%
V+VI Skilled manual	-0.087***	38%	69%
VIIab Semi-skilled manual	-0.103***	42%	70%
N	60,369	60,369	60,369
R^2	0.016	0.058	0.120
pseudo-R^2	0.026	0.106	0.185
Outcome: I+II Service class			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-0.091***	41%	80%
IVab Self-employed	-0.152***	45%	72%
IVc Farmers	-0.209***	41%	61%
V+VI Skilled manual	-0.198***	51%	80%
VIIab Semi-skilled manual	-0.253***	52%	78%
N	60,369	60,369	60,369
R^2	0.035	0.187	0.333
pseudo-R^2	0.028	0.160	0.279

Table 5.2. Continued

Outcome: V+VI+VIIab Manual class			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	0.058***	55%	66%
IVab Self-employed	0.068***	75%	*n.s.*
IVc Farmers	0.120***	63%	71%
V+VI Skilled manual	0.154***	55%	66%
VIIab Semi-skilled manual	0.207***	51%	62%
N	60,369	60,369	60,369
R^2	0.029	0.126	0.199
pseudo-R^2	0.027	0.118	0.199
Outcome: VIIab Semi-skilled manual			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	0.040***	47%	58%
IVab Self-employed	0.049***	65%	*n.s.*
IVc Farmers	0.073***	61%	69%
V+VI Skilled manual	0.093***	54%	65%
VIIab Semi-skilled manual	0.145***	44%	54%
N	60,369	60,369	60,369
R^2	0.019	0.069	0.111
pseudo-R^2	0.022	0.083	0.144
Outcome: Unemployment			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	0.004	*n.s.*	*n.s.*
IVab Self-employed	0.004	*n.s.*	*n.s.*
IVc Farmers	-0.010*	-63%	-74%
V+VI Skilled manual	0.010**	*n.s.*	*n.s.*
VIIab Semi-skilled manual	0.027***	45%	56%
N	55,673	55,673	55,673
R^2	0.002	0.011	0.016
pseudo-R^2	0.004	0.019	0.029
Outcome: ISEI			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-4.845***	41%	74%
IVab Self-employed	-5.637***	58%	89%
IVc Farmers	-12.02***	39%	55%
V+VI Skilled manual	-10.27***	49%	74%
VIIab Semi-skilled manual	-13.22***	48%	70%
N	46,631	46,631	46,631
R^2	0.073	0.268	0.422
Outcome: Log earnings			
Parental social class (ref. I+II Service)			
IIIab Routine non-manual	-0.070***	46%	*n.s.*
IVab Self-employed	-0.122***	50%	76%
IVc Farmers	-0.201***	32%	48%
V+VI Skilled manual	-0.158***	53%	82%
VIIab Semi-skilled manual	-0.223***	51%	74%
N	57,435	57,435	57,435
R^2	0.012	0.068	0.109

* p<0.05, ** p<0.01, *** p<0.001. The mediation percentages are computed only for coefficients significant at the 5% level or above; otherwise they are displayed as *n.s.*

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