

The effects of disadvantageous parental origins and early home leaving and early parenthood on secondary education attainment in Finland

Introduction:

The level of educational attainment is the key component in determining individual's adulthood social positions (Breen & Karlson 2013). Low education, measured by lack of post compulsory degree, increases the possibility of confronting various social problems, such as poverty, unemployment, exclusion from the labour market and early retirement (Brekke, 2014). In addition, completing secondary school can be seen as one of the most important prerequisites for both admission to any type of higher education and access to labour market in present-day Western societies. To date, extensive number of studies have indicated that disadvantageous parental origins and parental socio-economic disadvantages, such as parental poverty, unemployment and receipt of social assistance, are related to probability of a child completing secondary school. Some of the recent evidence has been expressed that material poverty does not explain the connection between other parental disadvantages and children's low education, but it is the non-material factors that matter (Vauhkonen et al. 2017). However, surprisingly little is known about how the non-material factors, including critical life events, such as early home leaving and transition to (early) parenthood, are associated with educational attainment of a child. We analyse how disadvantageous parental origins together with a child's early home leaving and transition to early parenthood are associated with the probability of a child to accomplish secondary education by the age of 30. Special attention is devoted to how disadvantaged family origins are connected with a school dropout in secondary education among those who leave the parental home early and adolescent mothers and fathers compared to those who moved out of the parental home at an older age and those who become parent in later life.

Our research questions are as follows:

- 1) How does disadvantaged parental background and critical life-course events, measured by moving parental home early and adolescent parenthood, predict dropout from secondary education?
- 2) How disadvantaged family background is connected with a school dropout in secondary education among those who leave the parental home early and become parent in early age compared to others?
- 3) Is there difference according to gender when direct connections and interactions of used explanatory factors are focused?

Theoretical background

Recent research suggests that transitions from youth to adulthood are experienced differently based on parental resources and therefore transition into adulthood can be seen as unequal process depending on individual's family background (Ilmakunnas 2018). This can be explained by several theories. For, instance, disadvantaged parents have less different kind of resources to help their children when critical life events occur. There is less room for *compensate* losses with parental resources and these parents may have great difficulties to help their children to get "second changes" in regards to for example unsuccessful educational choices or lengthened transitions to post compulsory education (Bernandi 2012). In addition to problems of compensation resource shortages during childhood can produce a "social imprint" on a child (Bäckman & Palme 1998). Concept of social imprint refers to mechanism that individuals who have confronted various social problems as children are more vulnerable or sensitive to social risks and events in adulthood (see also Bäckman & Nilsson 2011). This sensitivity can be understood also in the light of cumulative disadvantage theory which emphasizes that distinct life-course factors arise from childhood inequalities and are differently experienced based on early disadvantages (DiPrete & Eirich 2006). Based on theories of compensation, social imprint and cumulative disadvantage we assume that early home leaving and adolescent parenthood are not only more common among those who come from disadvantaged backgrounds but also have interaction effect meaning that disadvantaged parental background is more strongly related to early school leaving among those who move early and have their first child in a very young age.

Data and research methods:

For our analysis, we use high-quality register-based data from Statistics Finland. Data covers 25 per cent sample of persons born between 1980 – 1986 including information on their biological parents and siblings born in the same period. Our dependent variable is completion of a secondary degree by the age of 30. Depended variable indicates whether the person has completed degree after compulsory education. Socio-economic data for parents is taken from the year when sample person was 15 years old. Those sample persons who did not live with biological or adoptive parents at the age of fifteen, and sample person's siblings are excluded from the analysis. Additionally, those sample persons who did not live in Finland between the ages 15 and 30 (and their families) are removed from the data. Final dataset consists 149 837 individuals clustered into 97 339 families.

To study how disadvantaged parental background and critical life-course events predicts school dropout, we analyse data with sibling methods using random effect linear probability models. In order to study *how disadvantaged family background is connected with a school dropout among those who leave the parental home early and those who become parent in early age compared to others*, we model interaction effects. Finally, to shed light on possible gender differences, we conduct our analysis separately for males and females.

Preliminary results:

We begin the presentation of our findings by illustrating our descriptive results. Descriptive analysis shows, that among the individuals in our data 11 per cent had not completed secondary education by the age of 30. By gender, the lack of secondary education is more common among men than women. While about 7 percent of women lacked degree, approximately 14 percent of men were without secondary degree by the age of 30.

Women and men differ not only in the completing of a secondary degree, but also in the timing of observed critical transitions. As expected in the light of previous studies, women leave their childhood homes and start family life earlier than men. Both leaving parental home early and having a first child at the young age are linked of non-completion of a secondary education. However, there are notably differences by gender. For example, those men who have moved out from their parental home under the age of eighteen 27 percent have not completed secondary education by the age of 30. Correspondingly, young women who have left childhood home under the age of eighteen, 16 per cent are without secondary degree. According to descriptive results 37 percent of men and 35 percent of women who have become a parent in a very young age do not have secondary education by the age of 30.

In line with previous research the disadvantaged family background is connected to school dropout among men and women. Nearly one quarter (24 %) of those who have exposed to parental social assistance receipt in their childhood and 15 percent of those whose parents have been unemployed do not have secondary education by the age of 30. Approximately 17 percent of those whose mother had only compulsory degree or less have not completed secondary degree. Men from disadvantaged family background have more often dropped out from secondary education after nine-year compulsory education than women from similar background.

Next, we focus on the results from the random-effect linear probability models (see Table 1 and Table 2). Our analyses show that young men and young women with parents who had been unemployed and males and females from families receiving social assistance were more likely to dropout from secondary education. Also, persons with mothers who had only compulsory degree had notably higher probability not to complete secondary education than did those whose mothers had obtained tertiary degree. Based on the results, parental socio-economic disadvantages predict secondary school dropout more strongly for males than for women.

When focusing on critical transitions under consideration, we find that early home leaving is connected to secondary school dropout among both sexes (see Table 1 and 2). Based on full model (M9) those men who leave parental home early have circa 9 percentage points higher probability not to have secondary school by the age of 30 than those who have left parental home later. Among women, those who have moved out from parental home when they were 18 years old or less, have about 5 percentage points higher likelihood to accomplish only compulsory education than those who have left childhood home later. Also, becoming a parent in a very young age is strongly connected to the probability of dropping out of school among men and women. According to full model those men who entered parenthood at younger ages (at 15 – 19 years of age) have 14 percentage points larger risk to have only compulsory degree than those men who became parent later or do not have children at all. Those women who had their first child in a very young age have 22 percentage points higher probability to school dropout before graduation from secondary school than others. According to our results early home leaving is more harmful for men and early parenthood for women.

Table 1. The effects of family background, leaving home early and becoming parent at young age on the attainment of secondary education (single parenthood, number of children family and country of birth are controlled for in every model. Linear probability model with sibling correlations. (Subgroup: MALE)

	M1	M2	M3	M4	M5	M6	M7	M8	M9
TRANSITIONS									
Home leaving (ref. 19+)									
15 - 18	0.119*** (0.004)						0.101*** (0.004)		0.0924*** (0.004)
Parenthood (ref. 20+ or no children)									
15 - 19		0.211*** (0.013)						0.190*** (0.013)	0.139*** (0.014)
SOCIO-ECONOMIC FACTORS									
Parental unemployment (ref. no)									
At least one month			0.0571*** (0.003)			0.0219*** (0.003)	0.0186*** (0.003)	0.0216*** (0.003)	0.0186*** (0.003)
Parental receipt of SA (ref. no)									
At least one month				0.146*** (0.004)		0.116*** (0.005)	0.107*** (0.005)	0.114*** (0.005)	0.107*** (0.005)
Mothers education (ref. tertiary)									
Compulsory					0.149*** (0.004)	0.129*** (0.004)	0.126*** (0.004)	0.129*** (0.004)	0.126*** (0.004)
Secondary					0.0708*** (0.004)	0.0601*** (0.004)	0.0577*** (0.004)	0.0594*** (0.004)	0.0574*** (0.004)
Family variance	0.0263 (0.001)	0.0274 (0.001)	0.0272 (0.001)	0.0262 (0.001)	0.0256 (0.001)	0.0245 (0.001)	0.0236 (0.001)	0.0243 (0.001)	0.0235 (0.001)
Residual variance	0.0907 (0.001)	0.0905 (0.001)	0.0904 (0.001)	0.0903 (0.001)	0.0905 (0.001)	0.0902 (0.001)	0.0903 (0.001)	0.0902 (0.001)	0.0902 (0.001)
RHO	0.225 (0.008)	0.232 (0.008)	0.231 (0.008)	0.225 (0.008)	0.221 (0.008)	0.214 (0.008)	0.207 (0.008)	0.212 (0.008)	0.207 (0.008)
Log likelihood (df)	-26316.34 (9)	-26566.58 (9)	-26494.09 (9)	-26149.09 (9)	-26032.54 (10)	-25605 (12)	-25336.67 (13)	-25503.4 (13)	-25283.54 (14)
AIC	52650.69	53151.16	53006.19	52316.19	52085.09	51234	50699.34	51032.8	50595.07
BIC	52733.98	53234.45	53089.48	52399.48	52177.63	51345.06	50819.65	51153.11	50724.64
N	77 221	77 221	77 221	77 221	77 221	77 221	77 221	77 221	77 221

Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Empty model: family variance 0.0302 (0.001), residual variance 0.0903 (0.001), RHO 0.251 (0.008), Log likelihood (df) -27343.08 (3), AIC 54692.17, BIC, 54719.93. Model with control variables: family variance 0.0277 (0.001), residual variance 0.0905 (0.001), RHO 0.234 (0.008), Log likelihood (df) -26688.6 (8), AIC 53393.2, BIC 53467.24.

Controlling parental socio-economic factors had minor effect on associations between observed critical transitions and drop out from the educational system, which suggest that early home leaving and early parenthood have relatively strong direct and independent effect on the completion of secondary school. Also, interesting detail when models are compared to each other is, that among men who have children in young age have 19 percentage points higher probability to school dropout (see model 8 in Table 1) but when early home leaving is introduced to model the probability gets 5 percentage points smaller. Among the women difference between models 8 and 9 is smaller (3 percentage points).

Table 2. The effects of family background, leaving home early and becoming parent at young age on the attainment of secondary education (single parenthood, number of children family and country of birth are controlled for in every model. Linear probability model with sibling correlations. (Subgroup: FEMALE)

	M1	M2	M3	M4	M5	M6	M7	M8	M9
TRANSITIONS									
Home leaving (ref. 19+)									
15 - 18	0.0931*** (0.002)						0.0795*** (0.002)		0.0544*** (0.002)
Parenthood (ref. 20+ or no children)									
15 -19		0.271*** (0.005)						0.251*** (0.005)	0.221*** (0.005)
SOCIO-ECONOMIC FACTORS									
Parental unemployment (ref. no)									
At least one month			0.0427*** (0.002)			0.0187*** (0.002)	0.0130*** (0.002)	0.0157*** (0.002)	0.0121*** (0.002)
Parental receipt of SA (ref. no)									
At least one month				0.109*** (0.003)		0.0876*** (0.004)	0.0768*** (0.004)	0.0768*** (0.004)	0.0707*** (0.004)
Mother's education (ref. tertiary)									
Compulsory education					0.0951*** (0.003)	0.0798*** (0.003)	0.0696*** (0.003)	0.0715*** (0.003)	0.0655*** (0.003)
Secondary education					0.0368*** (0.003)	0.0287*** (0.003)	0.0213*** (0.003)	0.0245*** (0.003)	0.0199*** (0.003)
Family variance	0.0110 (0.001)	0.0106 (0.001)	0.0120 (0.001)	0.0115 (0.001)	0.0114 (0.001)	0.0106 (0.001)	0.00973 (0.001)	0.00931 (0.001)	0.00891 (0.001)
Residual variance	0.0554 (0.001)	0.0547 (0.001)	0.0555 (0.001)	0.0554 (0.001)	0.0555 (0.001)	0.0555 (0.001)	0.0553 (0.001)	0.0546 (0.001)	0.0546 (0.001)
RHO	0.165 (0.008)	0.162 (0.008)	0.178 (0.008)	0.172 (0.008)	0.171 (0.008)	0.161 (0.008)	0.150 (0.008)	0.146 (0.008)	0.140 (0.008)
Log likelihood (df)	-4324.563 (9)	-3775.289 (9)	-4921.973 (9)	-4602.55 (9)	-4623.717 (10)	-4205.167 (12)	-3642.899 (13)	-3048.302 (13)	-2794.664 (14)
AIC	8667.126	7568.577	9861.946	9223.099	9267.434	8434.334	7311.797	6122.605	5617.328
BIC	8749.863	7651.314	9944.683	9305.836	9359.364	8544.649	7431.306	6242.113	5746.03
N	72 616	72 616	72 616	72 616	72 616	72616	72 616	72 616	72 616

Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Empty model: family variance 0.0136 (0.001), residual variance 0.0552 (0.001), RHO 0.198 (0.008), Log likelihood (df) -5578.153 (3), AIC 11162.31, BIC, 11189.88. Model with control variables: family variance 0.0124 (0.001), residual variance 0.0554 (0.001), RHO 0.183 (0.008), Log likelihood (df) -5102.178 (8), AIC10220.36, BIC, 10293.9.

Finally, we modelled the interaction effects (interaction plots not shown in here due to a lack of space) in order to investigate how does the effect of early home leaving and early parenthood among male and female vary according to parental socio-economic factors. According to our analyses the effect of early home leaving and early parenthood on non-completion of secondary school dropout do not vary remarkably by parental unemployment or parental receipt of social assistance. However, among those male and female who had left their childhood home at young age and whose mothers had obtained tertiary degree the probability of dropping out of secondary school was notably lower than among those whose mothers had completed only basic compulsory degree. Also, among those females who had their first child as teenagers and whose mothers had completed tertiary education had lower risk of lacking post compulsory education compared to those whose mothers had completed only basic education. The results suggest that maternal education can act as a protective factor against negative effects of early home leaving and early parenthood.

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