The composition of family background:

The influence of the economic and cultural resources of both parents on the offspring's educational attainment

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Introduction

► There is a long research tradition that studies the influence of family's socioeconomic status or class on the offspring's education or other characteristics.

► The typical variables are parental occupational status or class and parental education.

► So which parent matters?

  ► the father and/or the mother,
  ► the parent with the highest and/or lowest education or occupation,
  ► the parent with the same-sex and/or different sex as the respondent, or
  ► any combination of these?

► Have the relative strengths of these contributions changed over time?

What resource? occupational status or class

- ▶ Occupational status (class) can be seen as just a way of assigning values to (groupings of) occupations
- ▶ What is it about the occupations of parents that influences the education of the children?
    - ▶ Occupations lead to income
    - ▶ Stress from working conditions, job security

What resource? education

- ▶ What is it about parental education that influences the education of the children?
  - ▶ knowledge that can help with making the 'right' decisions or supplement the teacher (e.g. with homework)
  - ▶ Proxy for cultural capital

Prediction 1: The effect of parental occupation declined faster than the effect of parental education

- ▶ I expect the effect of parental occupation to decline because:
    - ▶ Subsidies and grants have increased making education cheaper
    - ▶ Expansion of the welfare state is likely to have decreased the worst effects of stressful occupations
- ▶ I do not expect a similar decline in the effect of parental education mainly because it is a much harder problem.

Which parent? sex of the parent

- ▶ The simplest form is the "conventional view", according to which it is the father that matters.
- ▶ This does not fit well with the mechanisms discussed for parental occupation or education:
    - ▶ If occupation works because of the material resources earned with an occupation, than I would expect the sum of those resource to matter
    - ▶ If occupation works because the (lack of) stress from an occupation, than I would expect again that the sum to matter
    - ▶ If parental education works through the ability to help children do well at school, than I would expect the mother to matter more
    - ▶ If parental education works through cultural capital, than I again expect the mother to matter more

Prediction 2: The occupation of both parents matter, and their effects are equal

- ▶ The idea is that it is the resources that are brought in the family that matters, not who is bringing them in the family.
- ▶ The latter part of this prediction may be a bit optimistic, traditional roles may still play a role:
  - ▶ In the Netherlands the sex of the parent is a pretty good proxy for part-time work. In that case we would expect that the occupation of the mother contributes less than the occupation of the father.

Prediction 3: Mother's education matters more than father's education, especially when mother is homemaker

- ▶ The idea is that traditional role patterns are still very much present when it comes to interacting with the children and the children's schooling.
- ▶ And that the traditional role patterns are stronger in families where the mother is the homemaker.
    - ▶ in part because the presence of a homemaker is an indicator for how traditional the family is
    - ▶ in part because there is a larger difference in the amount of time the father and mother *can* spent with the children when the mother is a homemaker.

Which parent? the dominant parent

- ▶ The idea is that the parent with the highest occupation or education are dominant.
- ▶ A strong version of this says that it is only the dominant parent that matters.
- ▶ Choosing one 'representative' parent for occupational status still does not fit well with the mechanisms.
- ▶ A weaker version in which the dominant parent has a larger effect than the non-dominant parent fits better with these mechanisms.

Which parent? sex role model

- ▶ The idea is that boys look at their fathers for guidance and daughters to their mothers.
- ▶ Mainly works through the interaction of parents with their children and not through the resources present in the family.
- ▶ So this is more relevant for parental education than occupation

Further predictions

Prediction 4 The effect of the parent with the highest
occupation or education is stronger than the effect
of the parent with the lowest occupation or
education.

Prediction 5 The effect of the education of the parent with the
same sex as the child is stronger than the
education of the other parent.

Data

- ▶ International Stratification and Mobility File (ISMF) on the Netherlands.
- ▶ 11 surveys held between 1992 and 2006 with information on cohorts that where 12 in 1939-1991.
- ▶ 11,500 respondents aged between 24 and 65 have complete information on child's, father's and mother's education and father's and mother's occupation.
- ▶ Number of cases are unequally distributed over cohorts.

- ▶ One of the question is whether the relative strengths of the influence of the different parental characteristics changed over time.
- ▶ It is useful to imagine what the world would look like if these relative strengths did *not* change. This would be the null hypothesis.
- ▶ The effect of parental education and occupation could still go down, but if the effect of parental education was initially 75% of parental occupation, than that has to remain true for all subsequent years.
- ▶ The way to do that is to impose a proportionality constraint: The effect of the parental characteristics can change over time, but they have to change by the same proportion.
- ▶ This is a non-linear constraint, so needs a bit of extra work `propcnsreg`

Family background

$$ed = coh + fem + coh * fem + (coh + fem + coh * fem) * par\_ses$$

$$
\begin{aligned}
par\_ses \ = \ & fed + med + \\
& hi\_ed + low\_ed + \\
& same\_sex\_ed \\
& med * homemaker + \\
& foc + moc + homemaker + \\
& hi\_oc + low\_oc \\
& same\_sex\_oc + homemaker * female + \\
& homemaker * foc
\end{aligned}
$$

$$par\_ses \ = \ fed + med +$$

The proportionality constraint

The hypothesis that the relative contributions of each background variable has not changed over time cannot be rejected: $\chi^2(47) = 50.16$, p = 0.349

Constraints on the effects of the parents (Wald tests)

Null hypothesis	occupation			education		
	χ^2	df	p	χ^2	df	p
mother = 0	25.67	1	0.000	32.83	1	0.000
father = mother	1.64	1	0.201	0.44	1	0.507
highest = same = lowest	0.12	2	0.941	16.50	2	0.000
same sex = different sex	4.33	2	0.115	0.07	1	0.793
compensation homemaker = 0	6.65	1	0.010	4.91	1	0.027

The effects of parental occupation

	effect	se
father	3.331	0.24
mother	3.331	0.24
highest		
lowest		
same sex		
homemaker	-0.61	0.21
home $\times$ female		
home $\times$ father	1.905	0.42

The effects of parental education

	effect	se
father	2.396	0.19
mother	2.396	0.19
highest	1.207	0.22
lowest	-1.109	0.40
same sex		
home × mother	0.918	0.44

Changes in the effects of parental occupation

	effect	se
year$_{1939-1970}$	-0.135	0.01
year$_{1970-1991}$	0.002	0.03
female		
year$_{1939-1970}$ × female		
year$_{1970-1991}$ × female		
constant	1	

Conclusions

Prediction 1 The effect of parental occupation declined faster than the effect of parental education Rejected

Prediction 2 The occupation of both parents matter, and their effects are equal Supported

Prediction 3 Mother's education matters more than father's education, especially when mother is homemaker Supported

Prediction 4 The effect of the parent with the highest occupation or education is stronger than the effect of the parent with the lowest occupation or education. Partially supported

Prediction 5 The effect of the education of the parent with the same sex as the child is stronger than the education of the other parent. Rejected

Discussion

- ▶ There have been worries that using one measure of family SES can bias the estimates of trends in the effect of SES if that one measure (typically father's occupation status) has become less representative of the families status.

- ▶ These findings indicate that this is not a problem (for the Netherlands).

- ▶ However, the test I used is likely to have low power, so the failure to reject the null hypothesis is not as informative as one would want.

Where to go from here?

- ► Add information from different sources, i.e. increase the power of the test.
- ► Measure the different mechanisms more directly, e.g. add measures for income and work conditions instead of (in addition to) occupational status.
- ► Study to what extend these findings generalize to other countries.