INTERGENERATIONAL TRANSMISSION OF OCCUPATIONAL CLASS AT ENTRY INTO THE LABOUR MARKET, SURINAME 1970-2015.

A Multivariate Scaled Association Model Estimated With Conditional Multinomial Logistic Regression

EFFECTS OF FATHERS AND MOTHERS

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Acknowledgements

- This presentation extends Sno, Tamira E & Harry BG Ganzeboom, “Status Attainment and Intergenerational Mobility in Suriname 2012”, Chapter 3 in Sno, Tamira E, “Status Attainment and Intergenerational Mobility in Suriname”, PhD thesis to appear.
- Earlier presentation of this paper: RC28, Sevilla ES, May 22 2026. See: www.harryganzeboom.nl. This earlier version deals primarily with the methodology and technicalities of the HG-CMLR model.

Conclusions (1)

- The intergenerational mobility literature focuses on a single measure of social origin: father's / main provider's occupation.
- The full OED model is easy to extend with multiple origins (father & mother) when estimated with OLS on linear variables, but this does not adequately represent the true OD association pattern.
- These problems can be countered using the Hauser-Goodman parametrization of the intergenerational association pattern, and embed this in a Condition Multinomial Logistic Regression model: HG-CMLR.
- See for an introduction in the HG-CMLR the earlier Sevilla presentation (available on www.harryganzeboom.nl).

Conclusions (2)

- The Hauser-Goodman model separates the intergenerational occupational association into **on-diagonal association** (immobility) and **off-diagonal association** (among the mobiles).
- In our data (Suriname), there is only modest gender-role modelling in intergenerational transmission of occupation.
- Main difference between fathers and mothers: mothers transfer their occupation much stronger via off-diagonal association than fathers.
- Main difference between men and women: women resemble their parents much more in the off-diagonal association than men.

Intergenerational transmission of father's and mother's occupation

- Much 'social mobility' research is restricted to the role of father / main provider in the process of stratification.
- [NB: I prefer to speak of "intergenerational transmission of occupation".]
- There have been quite a few complaints that mother's occupation should be taken into account (Beller, 2009). However, Beller's call has not been widely followed up, due to:
  - Lack of data
  - Inadequacy of standard 'social mobility analysis' to model the roles of father and mother simutaneously in a multivariate framewerk.
  - Many complication that considering father's and mother's class give rise to.

Dominant hypotheses about fathers and mothers.

- When you do not take mother's occupation into account, you **underestimate** the size if intergenerational transfer.
- Women take more after there mother, men after their father; **the underestimation is stronger for women than for men.**
- Women are more mobile than men.
- **Women's intergenerational transfer is more indirect** (via education) and less direct (via inheritance of firm / farm) than men's.
- Mother's occupation is **replacing** father's occupation in the process of statification

Contributions of this paper

- This paper illustrates the use of the Hauser-Goodman scaled-association model embedded in Conditional Multonomial Logistic Regression to examine **pattern**, s**trength, mechanism** and **variations** of intergenerational occupational transfer in a multivariate framework.
  - (These models are not new, but underused in the current 'social mobility literature.)
- **Pattern**: how men and women move relative to father's and mother's social class.
- **Strength**: how strongly father's and mother's occupations determine offspring's occupation (total and partial effects)
- **Mechanism**: to which degree are intergenerational associations mediated by education?
- **Variations**: how do pattern, strength and mechanism of intergenerational trander of occupational class vary by gender, by cohort

Application: Data from Suriname 1993-2023

- Data from six surveys 1993-2023. Five SURMOB surveys are part of the International Social Survey Programme [**ISSP]**
- Original N = 22,232. After selection on age (25-64), valid education and valid first job, N=**11,324**.
- Occupation data are coded in I**SCO-2008**. Occupation classes are 10 (sub)major ISCO groups: **ISCAT**
- **Education** ranges between 0 (No education) and (16) completed MA.
- Occupation in **first jobs**: cohort comparisons refer to historical changes.
- **Labour market entry cohort**. Six equally sized cohorts, ranging betwee. **1970 and 2015**.

HG-scaled association model

- Hauser-Goodman parametrization of relative mobility pattern. separates **on-diagonal** association (IMM: Immobility) from **off-diagonal** association (U: scaled uniform association)
  - IMMk estimates on-diagonal association for categories (‘classes’) k
  - IMMt estimated differences in on-diagonal association by table t
  - Ui, Uj: scalings of categories in mobility distance. Larger distance = less exchange. constrained to be symmetric. Ui = Uj.
  - U: scaled uniform association = strength of the off-diagonal association
  - When Ui and Uj are Z-standardized, U resembles pearson correlation.
  - Ut: U estunated by tables t.
- Can be estimated in LEM (to find scalings) or SPSS GENLOG (using fixed scalings).

Table 1: Occupational categories, based on ISCO major groups (first jobs)

		FATHER	MOTHER	FATHER / MOTHER	MEN	WOMEN	Ui=Uj
2000	Professionals	3.6%	8.2%	5.9%	6.5%	18.5%	**1.350**
1100	Managers	4.0%	1.7%	2.5%	4.1%	3.2%	**1.308**
3000	Ass Professionals	6.7%	4.1%	5.2%	3.5%	4.2%	**1.134**
4000	Clerical	4.8%	6.5%	5.6%	8.3%	18.0%	**1.040**
1300	Small proprietors	3.5%	1.8%	2.5%	1.1%	.8%	**1.021**
5000	Personal Service	8.7%	5.6%	7.0%	11.4%	11.2%	**0.120**
7000	Skilled Manual	17.2%	4.3%	10.5%	19.9%	3.5%	**0.013**
5200	Sales Workers	2.9%	10.7%	6.9%	6.7%	13.8%	**-0.394**
8000	Semi-Skilled	10.5%	.3%	5.4%	14.4%	1.8%	**-0.480**
9000	Elementary	9.3%	28.1%	20.7%	12.5%	19.8%	**-1.218**
9200	Farm	28.9%	28.8%	27.6%	11.7%	5.2%	**-1.671**
Total valid (100%)		12723	7825	14281	6059	5791	

Source: SurMob 2012-2023. Only valid cases

Table 2a: Intergenerational occupational mobility of Men and Women relative to Fathers / Mothers. INFLOW

FATHER / MOTHERS	MEN & WOMEN										
	2000	1100	3000	4000	1300	5000	7000	5200	8000	9000	9200
2000	12.5%	9.1%	10.2%	12.2%	7.6%	7.7%	5.1%	5.6%	3.2%	2.4%	1.3%
1100	3.0%	8.1%	6.3%	3.6%	2.2%	2.3%	1.7%	2.9%	1.3%	1.8%	.6%
3000	9.0%	9.9%	5.8%	8.3%	5.4%	6.5%	5.6%	4.8%	3.6%	2.6%	2.0%
4000	8.0%	11.0%	8.9%	10.0%	6.5%	7.4%	5.3%	4.3%	3.6%	2.5%	3.1%
1300	3.4%	4.8%	4.6%	3.3%	17.4%	2.0%	2.2%	3.7%	1.7%	1.5%	.5%
5000	8.7%	11.0%	7.4%	8.2%	8.7%	10.1%	7.6%	6.3%	5.6%	5.8%	2.3%
7000	12.1%	8.9%	10.9%	11.7%	12.0%	9.5%	16.6%	10.1%	13.1%	8.8%	4.4%
5200	5.1%	5.1%	6.9%	5.5%	6.5%	7.2%	6.8%	13.6%	7.5%	7.7%	3.5%
8000	4.4%	4.0%	5.3%	4.9%	3.3%	5.2%	5.9%	6.0%	9.9%	6.0%	4.1%
9000	17.7%	15.3%	18.0%	17.1%	14.1%	25.0%	23.5%	22.5%	24.4%	25.1%	12.0%
9200	15.9%	12.6%	15.7%	15.2%	16.3%	17.2%	19.6%	20.1%	26.2%	35.7%	66.3%

Table 2b: Intergenerational occupational mobility of Men and Women relative to Fathers / Mothers. OUTFLOW

FATHER / MOTHERS	MEN & WOMEN										
	2000	1100	3000	4000	1300	5000	7000	5200	8000	9000	9200
2000	23.5%	5.1%	6.0%	23.4%	1.0%	12.7%	8.9%	8.3%	4.0%	5.4%	1.6%
1100	14.7%	11.6%	9.7%	17.8%	.8%	9.7%	7.7%	11.2%	4.2%	10.8%	1.9%
3000	20.4%	6.6%	4.1%	19.2%	.9%	12.9%	11.8%	8.6%	5.4%	7.0%	3.0%
4000	17.0%	6.9%	5.9%	21.8%	1.0%	13.8%	10.5%	7.3%	5.1%	6.4%	4.4%
1300	16.3%	6.8%	6.8%	16.0%	6.1%	8.4%	9.9%	14.1%	5.3%	8.7%	1.5%
5000	15.4%	5.8%	4.1%	14.9%	1.1%	15.7%	12.5%	8.8%	6.6%	12.5%	2.7%
7000	14.3%	3.1%	4.0%	14.1%	1.0%	9.8%	18.1%	9.4%	10.3%	12.5%	3.5%
5200	9.2%	2.7%	3.9%	10.2%	.9%	11.5%	11.5%	19.6%	9.1%	17.0%	4.2%
8000	10.1%	2.7%	3.8%	11.4%	.5%	10.5%	12.5%	10.8%	15.0%	16.6%	6.1%
9000	10.9%	2.8%	3.5%	10.7%	.6%	13.6%	13.4%	11.0%	10.0%	18.7%	4.9%
9200	8.2%	1.9%	2.5%	8.0%	.6%	7.8%	9.3%	8.2%	8.9%	22.1%	22.5%

Table 3: Parameters of the HG Scaled Association model

	Occupational categories										
	2000	1100	3000	4000	1300	5000	7000	5200	8000	9000	9200
Ui = Uj	**1.350**	**1.308**	**1.134**	**1.040**	**1.021**	**0.120**	**0.013**	**-0.394**	**-0.480**	**-1.218**	**-1.671**
U						**0.285**					
IMMk	**.126**	**.722**	**-.431**	**.208**	**1.726**	**.311**	**.475**	**.762**	**.585**	**-.185**	**1.297**

N = 9885, LR (88) = 182.3

CMLR: Conditional Multinomial Logistic Regression

- CMLR disaggregates the mobility tables into an individual level choice model.
- This allows for rebuilding loglinear models of association patterns into ‘status attainment’ models:
  - On-diagonal and off-diagonal associations IMM and U become part of a multivariate model .
  - Can be estimated with covariates (can be categorical or continuous) :
    - Confounders, such as survey controls, gender, cohort, age.
    - Mediators, in particular education.

Table 4: Stepwise CLMR models on HG parameters U and IMM. N=8593. Cohorts born 1947 - 1993

	Metric	M1	M2	M3	M4	M5	M6	M7
U	Z	**0.346**	**0.272**	**0.269**	**0.198**	**0.203**	**0.283**	**0.111**
U*FEMALE					**0.145**	**0.137**	**0.139**	**0.138**
IMM*FEMALE					**-0.359**	**-0.173**	**-0.174**	**-0.226**
FEMALE	0/1					**0.319**	**0.318**	**0.272**
COHx	0..1						**-0.043**	**-0.552**
U*COHx							**-0.167**	**-0.108**
IMM*COHx							**0.020**	**-0.086**
ZEDUC	Z							**0.896**
U*ZEDUC								**-0.084**
IMM*ZEDUC								**0.262**

Models estimated with Stata CLOGIT (Conditional (fixed-effects) logistic regression). Parameters in red NOT statistically significant ($p < .05$, two-tailed).

Total effects: combining father and mother in a single construct

- An interesting way to examine total effects is by combining father's and mother's occupation.s
  - Father only, mother only
  - Father dominant over mother | mother dominant over father
  - Father for men, mother for women
- The advantage of this approach is that we obtain a single estimate of the strength of parental transfers. This provides a useful benchmark for multiple parents models.

Table 5: Single Origin construction, total effects on first occupation

	AdjR2	N-avail	IMM-men	IMM-wom	U-men	U-wom	IMM * cohx	U * cohx
Father only	12.75%	97449	1	-0.173	0.283	+0.139	0.020	-0.167
Mother only	15.70%	61292	1	0.301	0.419	+0.094	0.196	-0.195
Father | Mother, Father dominant	12.48%	108735	1	-0.099	0.278	+0.137	0.124	-0.136
Father | Mother, Mother dominant	12.74%	108735	1	0.099	0.299	+0.113	0.124	-0.136
Father | Mother, gender-specific	12.85%	108735	1	0.136	0.283	+0.129	0.102	-0.143

Models estimated with Stata CLOGIT (Conditional (fixed-effects) logistic regression). Parameters in red NOT statistically significant ($p < .05$, two-tailed).

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