

# **When do Mothers Matter Most?**

How is the transmission of father's and mother's occupational status affected by institutional and normative contexts?

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# Earlier presentation

- ISA-RC28, August 2015
- Department of Sociology, Brisbane AU, October 2015
- Department of Sociology, Melbourne AU, November 2015
- PAA, Washington DC, April 2016
- ISSP, Kaunas LV, May 2016
- ECSR, Oxford UK, September 24, 2016

# Background – established facts

- Mothers matter: both men's and women's occupational attainment is influenced by their father's and mother's occupations.
- Gender Role Modeling: men take more after their father; women take more after their mother.
- Mothers' labor market participation has strongly increased in most (Western), but not as much in other (East-European, South-European, South-American) societies.

# Research Questions

- How has (rising) mothers' employment changed intergenerational occupational reproduction?
  - Has mother's occupation become more important (relative to father's) in determining men's and women's occupational attainment (trend)?
  - Does this change the total amount of intergenerational occupational reproduction?
  - How does gender role modeling depend on institutional and cultural contexts?
    - Institutional: Amount of mothers employed
    - Cultural: Gender Role Attitudes

# Research Design

- Intergeneration occupation reproduction micro-data from the International Social Survey Programme [ISSP] in 2009 (Social Inequality IV module);
- Four modules “Gender Roles and Family” on gender role attitudes in 1988, 1994, 2002 and 2012
- Data organized by country and cohorts

# Country by Cohort

- 45 countries x 15 cohorts = 675 contexts
- $N = 54040 = 24113 \text{ men} + 29927 \text{ women}$ .
- Average cell size:  $N = 80$
- Dropped ES PH (no first occ)
- Dropped EE SR UA (no xGRA)
- select if (age ge 22 and age le 74).
- select if (female ge 0).
- 40 countries,  $N = 22339$ .

# Answers / Conclusions

- Mother's employment (at R age 15) is on the rise, around the world.
- Intergenerational gender role modelling confirmed.
- Intergenerational occupational transmission is decreasing (more intergenerational) both with respect to mother's and father's occupation.
- **Weak** confirmation of institutional and normative effects:
  - As more mothers are employed, mother's occupation becomes relatively more important (for both men and women)
  - As Gender Role Attitudes are more egalitarian, mother's occupation becomes relatively more important (for men in particular)

# Institutional context: occupational gender segregation/ rising mothers' employment

- As mothers (and daughters) increase their labor market participation, there will be an *increase* of gender segregation in occupations.
  - Gender Role Modeling is facilitated by occupational gender segregation.
- With rising mother's employment (xMW), Gender Role Modeling ***increases***, in particular in gender-segregated labor markets.



# Normative context: Gender Role Attitudes

- Gender Role Attitudes: *public* opinion about division of labor of men and women.
  - Changes strongly (over cohorts) towards more egalitarian gender roles.
- Over time, and with more egalitarian Gender Role Attitudes (xGRA), Gender Role Modelling should ***decrease***.

# Micro-data: the intergenerational occupation transmission data

- ISSP 2009 (Social Inequality IV):
  - 40+ countries worldwide (N=60000 → N=29800 after selections)
  - Father's and mother's occupation *at age 15*
  - *First* occupations.
  - Occupations measured by ISEI08 (new, developed for men and women)
- Occupations in first job:
  - Allow for cohort comparisons next to country comparisons
  - Tap parental influences when they are at a maximum
- Within-country selection. All analyses restricted to:
  - Men and women aged 21-74
  - Who have ever entered the labor force
  - Who have a valid occupational information for their mothers
  - Those with valid occupational information on their fathers
- We end with about 50% of the original data: N = 25706 → N=22330.

# Macro-data: the Gender Role Attitudes xGRA

- Pooled cross-sections: countries \* cohorts (cross-national and historical variation)
- ISSP 1988-2012 (4 waves Family & Gender Roles):
  - Gender Roles Attitudes index (xGRA)
  - Cohort variation corrected for age effects (possible due to pooled cross-section design)
- Intergenerational reproduction data and Gender Role Attitudes are matched based on 3-year wide cohorts

# Macro-data: Gender Role Attitudes: xGRA

<b>GRA1</b>	A working mother can establish just as warm and secure a relationship with her children as a mother who does not work.
<b>GRA2r</b>	A pre-school child is likely to suffer if his or her mother works.
<b>GRA3r</b>	All in all, family life suffers when the woman has a full-time job.
<b>GRA4r</b>	A job is all right, but what most women really want is a home and children.
<b>GRA5r</b>	Being a housewife is just as fulfilling as working for pay.
<b>GRA6r</b>	A man's job is to earn money; a woman's job is to look after the home and family.

# Macro-data: Mother's Employment: xMW

- In ISSP Gender Role Modules:
- In ISSP 2009:

**MWORK\_12 Q28 Mother ever working for pay before respondent 14**

	Percent
1 Yes, she worked for pay	55.7
2 No	44.3
Total	100.0

**V58 Q16a When you were 15-years old did your mother work outside the household?**

	Percent
1 Yes, my mother did have a job when I was 15	57.6
2 No, my mother never had a job outside the household	31.3
3 No, my mother stopped working before she got married	2.7
4 No, my mother stopped working after she got married, but before her first child	3.7
5 No, my mother stopped working after her first child	4.8
Total	42862

**We combined the two measures after dichotomization**

# Models

## Modelling parent-offspring relationship

$$\text{ISEI1} = a_0 + a_1 * \text{MISEI} + a_2 * \text{FISEI}$$

$$\text{ISEI1} = a_0 + (a_1 + a_2) * (\text{MISEI} + \text{FISEI}) + (a_1 - a_2) * (\text{MISEI} - \text{FISEI})$$

$$\text{ISEI1} = b_0 + b_1 * \text{FMISEI} + b_2 * \text{MFISEI}$$

## Gender Role modelling

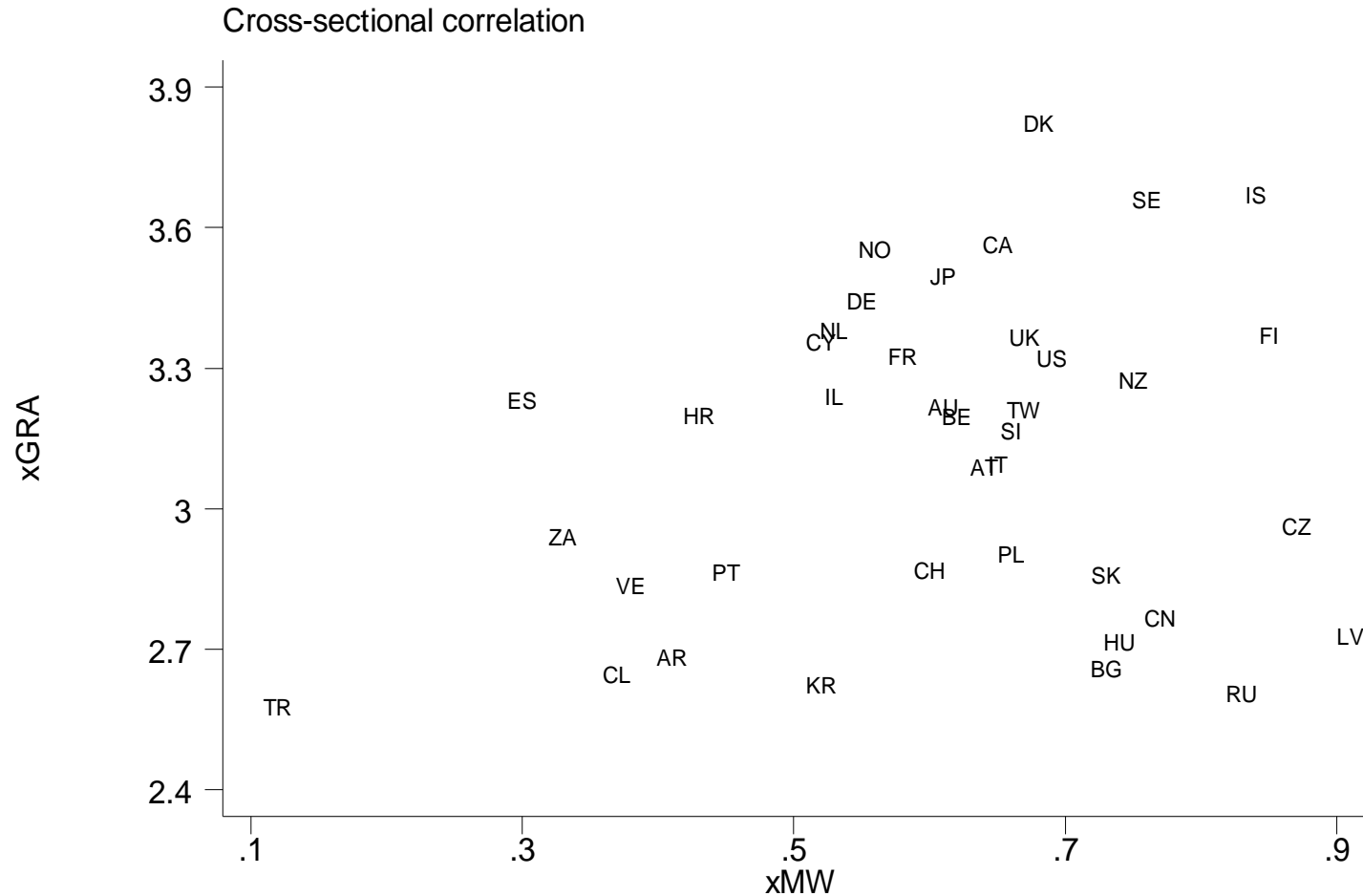
$$\begin{aligned} \text{ISEI1} = c_0 + c_1 * \text{FEMALE} & \quad + c_2 * \text{FMISEI} + c_3 * \text{FMISEI} * \text{FEMALE} \\ & \quad + c_4 * \text{MFISEI} + c_5 * \text{MFISEI} * \text{FEMALE}, \end{aligned}$$

Or: by estimating model 1 for men and women separately

## Modelling historical changes and between-country differences (interacting country and cohort characteristics):

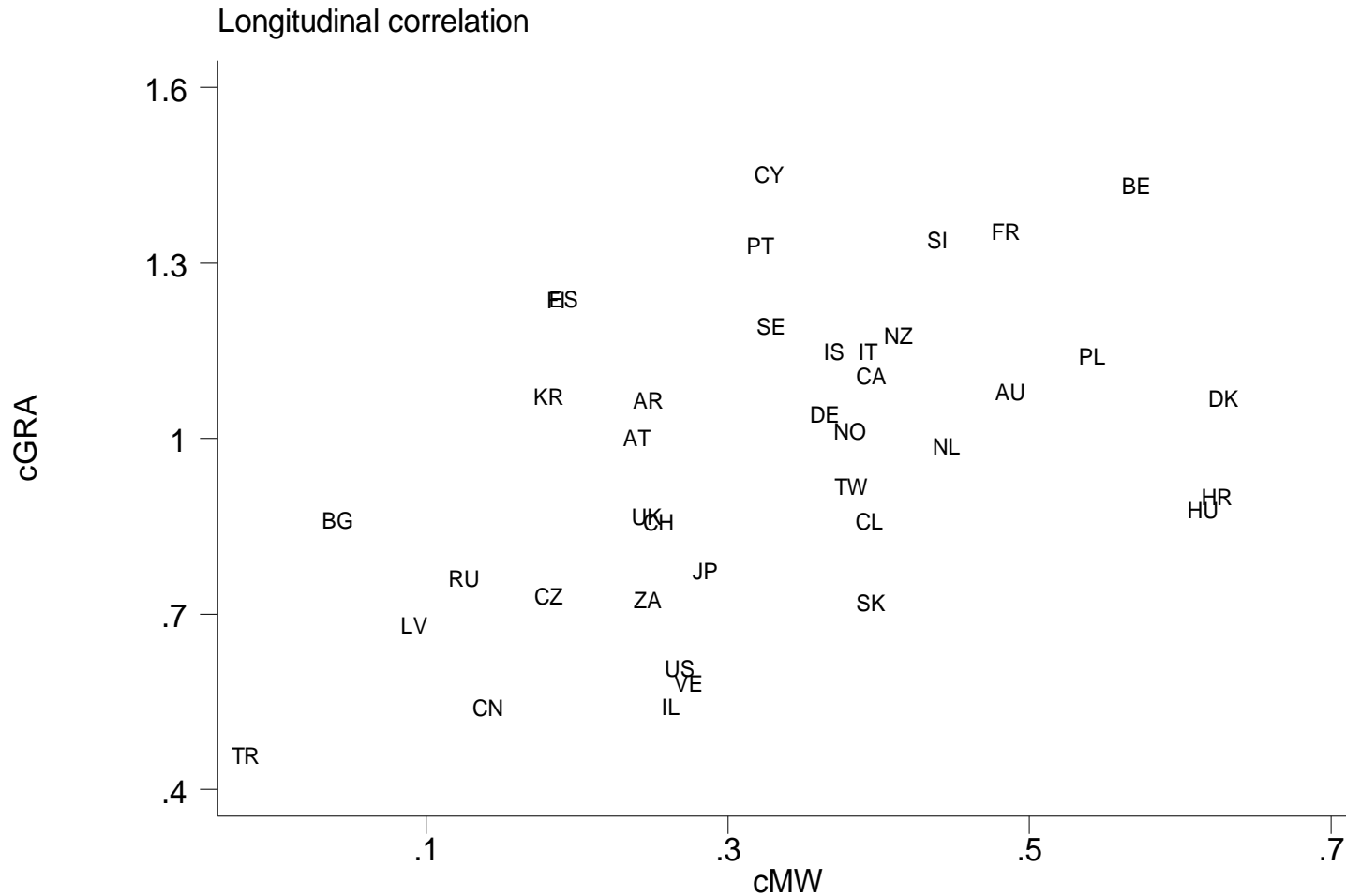
$$b_2 * \text{MFISEI} \sim \text{COUNTRY, COH, xGRA, xMW}$$

# Cross-sectional Correlation



Mean Gender Role Attitudes by Mean Mothers Employment

# Longitudinal correlation



Change Gender Role Attitudes by Change Mothers Employment



# Cohort trends

**Table 3a: Effects of father's and mother's occupation on men's and women's occupation by country and cohort, with explicit controls of country-specific and cohort-specific levels of the dependent variable.**

	<u>Men &amp; Women. N=22339</u>			<u>Men. N=10118</u>			<u>Women, N=12220</u>		
	B	SE	t	B	SE	t	B	SE	t
FEMALE	.792	.544	1.5						
FEMALE*COHx	3.028	.877	3.5						
FISEI	.302			.306			.306		
FISEI*COHx	<b>-.136</b>	.026	-5.3	-.131	.037	-3.5	-.149	.035	-4.2
MISEI	.307			.267			.338		
MISEI*COHx	<b>-.137</b>	.027	-5.1	-.130	.039	-3.3	-.149	.035	-4.2
Adj.R2	20.5%			18.4%			22.3%		

Main effects of FISEI and MISEI calculated as average across countries

# Cohort trends

**Table 3b: Effects of mean and differences of father's and mother's occupation on men's and women's occupation by country and cohort, with +explicit controls of country-specific and cohort-specific levels of the dependent variable.7**

	<u>Men &amp; Women. N=22339</u>			<u>Men. N=10118</u>			<u>Women, N=12220</u>		
	B	SE	t	B	SE	t	B	SE	t
FMISEI	.312			.287			.312		
FMISEI*FEMALE	0.030	0.007	4.3						
FMISEI*COHX	<b>-0.131</b>	.018	-7.1	-0.131	.018	-7.1	-0.145	.017	-8.4
MFISEI	.026			.029			.026		
MFISEI*FEMALE	<b>0.063</b>	0.013	4.3						
MFISEI*COHX	<b>-0.002</b>	.023	-0.1	.000	.034	0.0	.005	.032	0.2
Adj.R2	20.5%			18.4%			22.3%		

`/design=cntry cohort female female*cohx fmisei*cntry fmisei*cohx mfisei*cntry mfisei*cohx  
fmisei*female mfisei*female female female*cohx fmisei*cntry fmisei*cohx mfisei*cntry  
mfisei*cohx fmisei*female mfisei*female`

# Contextual effects

**Table 3c: Effects of mean and differences of father's and mother's occupation on men's and women's occupation by country and cohort, with explicit controls of country-specific and cohort-specific levels of the dependent variable.**

	<u>Men &amp; Women. N=22339</u>			<u>Men. N=10118</u>			<u>Women, N=12220</u>		
	B	SE	t	B	SE	t	B	SE	t
FMISEI	.288			.295			.311		
FMISEI*FEMALE	0.030	0.007	4.3						
FMISEI*COHX	-.135	.018	10.8	-.128	.018	-6.9	-.144	.017	-8.3
MFISEI	.048			.104			.026		
MFISEI*FEMALE	0.061	0.013	4.8						
MFISEI*COHX	-.186	.023	-3.3	-.310	.082	-3.8	-.085	.007	-1.1
MFISEI*xMW	.232	.112	2.0	.240	.168	1.4	.232	.168	1.5
MFISEI*xGRA	.167	.075	2.2	.351	.109	3.2	.021	.104	0.2
Adj.R2	20.6%			18.5%			22.3%		

xGRA and xMW centered.

# Answers / Conclusions

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- Intergenerational gender role modelling confirmed.
- Intergenerational occupational transmission is decreasing over cohorts (more intergenerational mobility) both with respect to mother's and father's occupation.
- **Weak** confirmation of institutional and normative contexts effects:
  - As more mothers are employed, mother's occupation becomes relatively more important (for both men and women).
  - As Gender Role Attitudes are more egalitarian, mother's occupation becomes relatively more important (for men in particular).

# SILC additions

- The effects of xGRA and xMW are only marginally significant. This will not survive multi-level. Also the difference between men and women cannot be evaluated – not enough power.
- I have tortured the data in many ways to arrive at these “significant” results:
  - Omitting and adding countries,
  - Played around with how the macro-variables are created.
  - Different age-selections

# Discussion / Further questions

- Cross-sectional variation: countries are independently sampled, you cannot predict an observation from another.
- Longitudinal variation: cohorts resembles their neighbours (even Markov): you can predict observation from the previous one (“autocorrelation”).
- How do I take into account that longitudinal variation works different from cross-sectional variation?
  - (Hierarchical?) multi-level: “cohorts nested within countries”?
  - XTREG on meta-analytical file (weighted by  $1/se^{**2}$ ): will not accept weights, variable within countries.